EXPLORING THE POTENTIAL

OF ACTIVE LEARNING

IN THE APPRENTICESHIP SCHEME IN SWITZERLAND

C. MORO

PhD

2022

EXPLORING THE POTENTIAL OF ACTIVE LEARNING IN THE APPRENTICESHIP SCHEME IN SWITZERLAND

CRISTIAN MORO

A thesis submitted to The University of Gloucestershire in accordance with the requirements of the degree of Doctor of Philosophy in the School of Education and Humanities

July, 2022

Word Count: 80 761

Abstract

The purpose of this thesis was to suggest a change in Switzerland's apprenticeship scheme by changing the pedagogical approach adopted by in-company coaches in Switzerland's labour market because of the high noncompletion of apprenticeship.

The literature review showed that there is a gap in the literature covering in Switzerland's apprenticeship scheme. Nevertheless, pedagogy and andragogy provide a useful orientation even if apprentices are – because of their age – in transition form childhood to adulthood and therefore not children anymore but not adult yet. The pedagogical tool to promote active learning will therefore be a fusion between pedagogy and andragogy. Along the research questions, the principal tenets/presupposition of constructivism as a theory of learning were identified.

Using a deductive approach and a qualitative design, the methodology used in this thesis is participatory action research by adopting the position of reflective practitioner. A suggestion of a process or practical instructional approach (called IPERKA) is used as a foundation to be developed to IAZPERKA and set of principles that flow from constructivism's learning theory for the development of in-company coaches towards being reflective practitioners have been proposed.

Implementing IAZPERKA as pedagogical tool derived from constructivism and embedded in active learning, has been proven to be an effective way to enhance the professional partnership between in-company coaches and apprentices.

It can be stated that IAZPERKA encourages and values the personal understanding/knowledge construction by apprentices, and the design of learning is apprentice-centred. Understanding that there are multiple ways that knowledge is absorbed and constructed, there are several conditions in the learning setting that should be encouraged and seen/felt by in-company coaches as essential to constructivism. Learning is iterative and lifelong; fosters active, higher-level thinking and reflections and is social in nature. It builds upon shared negotiated meaning and upon the apprentice's interests. It is situated within realistic authentic tasks and complex problem-solving based on and found in the world outside the 'classroom'. In-company coaches share authority and assist apprentices in adopting intellectual responsibility for their own learning process. In-company coaches are flexible in their

support of apprentices' expressions of varying levels of knowledge while critically merging the learner's knowledge with disciplinary insights and personal experiences. Assessment should include apprentices' reflection on their goals and accomplishments and avoid overly narrow measurements of skills or knowledge without a complete context of interpretation.

In addition, recommendations are included for further research, and suggestions are made for the use of IAZPERKA as a pedagogical tool of active learning in light of constructivism in Switzerland's apprenticeship scheme.

Author's Declaration

I declare that the work in this thesis was carried out in accordance with the regulations of the University of Gloucestershire and is original except where indicated by specific reference in the text. No part of the thesis has been submitted as part of any other award. The thesis has not been presented to any other education in the United Kingdom or overseas.

Any views expressed in the thesis are those of the author and in no way represent those of the University.

Signed: ███████████████████████   Date: 12th July, 2022

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Glossary of acronyms

BERA	British Educational Research Association
CET	continuing education and training
CINTERFOR	Inter-American Centre for Knowledge Development in Vocational Training
IAZPERKA	Informieren, Analysieren, Ziele setzen, Planen, Entscheiden, Realisieren, Kontrollieren, Auswerten
MP3	a coding format for digital audio developed largely by the Fraunhofer Society in Germany, with support from other digital scientists in the United States and elsewhere.
NVIVO	a software program used for qualitative and mixed-methods research
OPET	Federal Office for Professional Education and Technology
PAR	Participatory Action Research
PET	professional education and training
SERI	State Secretariat for Education, Research, and Innovation

SFSO	Swiss Federal Statistical Office
SVIFET	Swiss Federal University for Vocational Education and Training
TVET	Technical Vocational Education and Training
UNESCO	United Nations Educational, Scientific and Cultural Organization
VET	vocation education and training
VPET	Vocational and Professional Education and Training

Dedication

I dedicate this work and everything that is associated with it to the Black Madonna in the Basilica of Montserrat, Catalunya, Spain, with high respect and even more thanks.

Acknowledgements

No man is an island, and this PhD has not been achieved in isolation. I am indebted to several people without whom this thesis would not have happened.

My first main supervisor, Dr Jenny Fryman, as well as my second main supervisor, Dr Colin Forster, who gave me guidance, advice and support above and far beyond the call of duty; my first second supervisor, Prof Mary Fuller, who introduced me to the world of philosophy and made some valuable suggestions to my thesis; my second supervisor, Dr Paul Vare, who challenged my perception of science and science in education; and to Nadine Larsson, responsible for the in-company coaches who so admirably took on the role and supported the stages of my research from the very beginning.

It is to the numerous in-company coaches and colleagues who remain nameless that I am most indebted, for without them, my research and my professional workload would have been lifeless.

Thank you all.

Cristian

1. Introduction to the thesis

With this thesis, I suggest a change in Switzerland's apprenticeship scheme by changing the pedagogical approach adopted by in-company coaches in Switzerland's labour market because of the high noncompletion of apprenticeship. The purpose of this chapter is to build a solid foundation for any reader not familiar with the specific setting of the Swiss apprenticeship scheme. I want to allow a better understanding of the several partners involved in training apprentices and those directly in charge of this training setting as well as briefly explain constraints and conditions given by Swiss law for the apprenticeship scheme. Furthermore, it has the purpose to briefly explain my position as a professional behavioural trainer of in-company coaches, working as self-employed, and to inform about the origin of my thesis. Finally, I want to promote an understanding from the beginning of the thesis, why I am proposing a change in the pedagogical approach of how Swiss apprentices should not only be trained but educated, as well as why I am focussing this change on in-company coaches. Winch made an important observation when he stated that *'education and training are different process'* (Winch, 2000, p. 84). Nevertheless, it seems that in Switzerland, the two concepts of educating and training are seen at the same level of education (see Image 1). Indicative of this perspective is the denomination of the level of the education I am looking at in this thesis: Swiss Vocational and Professional Education and Training (VPET). I want to point out that this introduction chapter presents the situation of Switzerland's apprenticeship scheme as it is. Challenges and critical thoughts as well as challenging ideas are going to be discussed from Chapter 2 onwards. Where possible, I expanded the range of literature consulted for this first chapter, but most of the time, as I am writing about the Swiss apprenticeship scheme, the literature cited is limited to Switzerland. Nevertheless, the following chapters include a broader choice of sources.

1.1. History of Switzerland's apprenticeship scheme – setting

The education system in Switzerland is divided into various levels of education based on the principle of no dead-end qualifications (Wettstein et al., 2017, p. 97). This principle means that the programs and educational paths offered in Switzerland allow for permeability to ensure that graduates are employable and that talented

VPET and VET graduates have rich opportunities to continue in education (OPET, 2006). Switzerland's levels of education are as follows:

- Primary school level, including preschool or school-entry stage (as a rule, eight school years);
- Lower-secondary level (three school years: schools with middle- and low-performance groups and high-performance groups);
- Transitional option (between lower-secondary level and upper-secondary level);
- Upper-secondary level: vocation education and training (VET) and general education upper-secondary schools;
- Tertiary level: higher-education institutions (tertiary level A) and professional education and training (PET, tertiary level B);
- Continuing education and training (CET).

Compulsory education ends with the completion of the lower-secondary level; after the ninth or eleventh school year, there is generally the transition to postcompulsory education and training at upper-secondary level. This opens up access to the tertiary level, which more and more people are using today. Originally, the education system was, in many areas, based on two separate pillars. One represents the classic academic education system; the pathway goes via general education at an upper-secondary level baccalaureate school to university. The other is characterised by the VPET. To better understand the Swiss education system, Image 1 provides an overview of possible pathways after compulsory education. This thesis focuses on VPET; one educational path can be started at the age of 16 and, after successful qualification process and completion, leads to a Federal Diploma.

Image 1: Swiss education system

| PROFESSIONAL EDUCATION | | UNIVERSITIES | | |

| Advanced Federal Diploma of Higher Education Federal Diploma of Higher Education | Advanced Federal Diploma of Higher Education | Master's degree Bachelor's degree | Master's degree Bachelor's degree | PhD/doctorate Master's degree Bachelor's degree |
| FEDERAL EXAMINATIONS | COLLEGES OF HIGHER EDUCATION | UNIVERSITIES OF APPLIED SCIENCES | UNIVERSITIES OF TEACHER EDUCATION | UNIVERSITIES FEDERAL INSTITUTES OF TECHNOLOGY |

Federal Vocational Baccalaureate / Specialised Baccalaureate / Baccalaureate

Federal Diploma of Vocational Education and Training

Specialised School Certificate

Federal Certificate of Vocational Education and Training

HOST COMPANIES, VOCATIONAL SCHOOLS, BRANCH COURSES / HOST COMPANIES, VOCATIONAL SCHOOLS, BRANCH COURSES / SPECIALISED SCHOOLS / BACCALAUREATE SCHOOLS

VOCATIONAL EDUCATION AND TRAINING / GENERAL EDUCATION SCHOOLS

TRANSITIONAL OPTIONS

COMPULSORY EDUCATION

Usual pathway   Possible pathway

CONTINUING EDUCATION AND TRAINING — TERTIARY LEVEL — UPPER-SECONDARY LEVEL

SERI 2019

Source: State Secretariat for Education, Research and Innovation (SERI): Swiss Education System. Retrieved from the Internet 16 July 2021.

The most common way to introduce young people to the working market in Switzerland is still the VPET (Swiss Federal Statistical Office, SFSO, 2020). Switzerland seems to be proud of this pathway as 'the trademark and strength of the Swiss Vocational and Professional Education and Training system is its direct correlation with the Swiss labour market' (Strahm et al., 2016, p. 2). For a long time, the dual VPET system, combining school and work, has been regarded as one of the best ways to provide employers with the needed workforce and enable young people to smoothly and successfully enter upper-secondary education and establish their pathway from education to employment (Dubs, 2006). A VPET curriculum has therefore the aim to prepare young people for the labour market.

The dual-track VPET system is the core of the Swiss success model relating to work quality and industrial competitiveness. This combination of apprenticeship in a company and in-classroom instruction at a federal VPET school is a type of public–private partnership (Strahm et al., 2016, p. 13). Therefore, apprentices in Switzerland have a double status: they are not yet 'full' workers but are no longer pure students

(Tynjälä et al., 2012, p. 118). Apprenticeship in Switzerland is seen as a success, as more than two-thirds of school leavers enrol in VPET programmes (Tynjälä et al., 2012, p. 118). Unlike in other countries, where apprenticeship is mainly associated with a low-qualified employment (Winch, 2000), VPET programmes hold a good reputation among the Swiss population but with great differences in popularity depending on the linguistic region (SFSO, 2020).

According to the Swiss Federal Statistical Office, 78.7% of the 25- to 64-year-old Swiss resident population have followed vocational and professional training (in everyday language called apprenticeship); still, every year, more than 50% of students leaving compulsory school select vocational and professional training to continue their education (SFSO, 2020) even if also in Switzerland more and more adolescents invariably insist on enrolling at baccalaureate schools and universities (SFSO, 2020). According to Strahm et al. (2016), in the mainstream of the academic world, everyone lives with the belief that young people would later fare better if they were to obtain an academic title. This opinion needs to be emphatically scrutinised based on two rationales:

First, the university education path in Switzerland very often qualifies and educates young people further away from the requirement of the labour market: their learned skills are not needed in the labour market (Strahm et al., 2016, p. 13).

Second, much of the full-time school education path tends to neglect the practical human qualities similar to the qualification of practical and emotional intelligence, reliability, accuracy, precision and responsibility (Strahm et al., 2016, p. 14).

1.2. The partners and places involved in training apprentices

The provision of the VPET is a mission shouldered by the Confederation, the cantons and professional organisations. These three partners are jointly committed to the highest possible standard of quality within the VPET system (OPET, 2006). VPET programmes come with a VPET ordinance and corresponding educational/training plan, which presents the teaching concept and lists targets and contents for the given VPET programme (Knutti, 2012) over the three or four years of apprenticeship. There are three different types of teachers in charge of apprentices (Strahm et al., 2016). In this thesis the reader encounter two terms: teacher and in-company coach. It is

important to make a distinction to understand the two roles. This fact is due to the following reasons:

- In the literature review most of the time teacher and coach were used as a synonym, without making any difference. I do not share this opinion, as teachers and coaches are two different types of professions.
- In the literature the terms of 'teacher' was used to label the person who was in charge of teaching theory in classrooms. Whereas 'coach' was used to label the person who was in charge to work with apprentices in companies. That is why I took over the definition of in-company coaches proposed by Strahm et al (2016).
- Finally, 'teacher' was used to label a person who followed a curricula to become teacher. Whereas in-company coaches were skilled works appointed with this position.

The first teacher is a professional skilled person. This person is called an in-company coach. In-company coaches are either volunteers and intrinsically motivated to take over the function and the role in their companies or are appointed (compelled) by their bosses. In-company coaches are responsible, according to a compulsory educational/training plan, which will be explained later in this chapter, for training apprentices at the level of K3 taxonomy, according to Bloom's taxonomy (see Chapter 2). Apprentices spend three to four days per week with in-company coaches. In my thesis, I focus on in-company coaches because they spend most of their time with apprentices, are the less educated of the three teachers in the field of pedagogy and, according to the interview results, have a great impact on the noncompletion of apprenticeship.

The second teacher is a professional qualified teacher in the vocational school. This teacher is called a vocational trainer. These skilled teachers working at vocational schools follow an academic curriculum at the University of Teacher Education. They teach targets following the abovementioned educational/training plan at the level of K1 and K2 taxonomy, according to Bloom's taxonomy (see Chapter 2). Apprentices spend one to two days per week with vocational trainers.

The third teacher is a professional skilled person in charge of the branch course who works in a company. This person needs to have a professional background in the field of apprentices and is responsible for K1 and K2 targets according to Bloom's taxonomy (see Chapter 2). Also, these targets are defined in the compulsory educational/training plan. Apprentices attend branch courses for two weeks per year.

The training arrangement, with regard to its geographical organisation, takes place at three different places/locations and in three completely different settings (Wettstein et al., 2017).

The first location is called the 'host company'. The host company is where apprentices spend time when they are not at school or in branch courses, as the apprenticeship curriculum is on a part-time basis. In-company coaches are responsible for apprentices in host companies. The apprenticeship itself is carried out as a part of everyday life at the company; therefore, apprentices are fully involved in the daily business of their companies. Often, it is time pressure rather than methodological considerations that determines the work of the apprentices. This is the main reason why attendance in branch courses is today a fixed component of the VPET programme in most occupations.

The second location is called 'classroom instruction'. Vocational and professional schools provide classroom instruction. Professionals and skilled teachers take care of apprentices. This consists of instruction in vocational subjects as well as subjects falling under language, communication and society. Classroom instruction is intended to develop the technical, methodological and social skills of apprentices while imparting the theoretical and general principles needed to perform occupational tasks. Classroom instruction covers one or two days per week (Wettstein et al., 2017).

The third location is called the 'branch course'. Branch courses are meant to complement classroom instruction at vocational schools and apprenticeship training at host companies by providing apprentices with essential practical skills to carry out their jobs. Teachers in charge of branch courses are skilled professionals working in

companies. In the branch course, it is possible to introduce new vocational tasks, and that is why branch courses are held for all apprentices at the same location.

To briefly sum up, there are three types of teachers responsible for training arrangements in three different places, following an agreed educational/training plan set up and agreed upon between the Confederation, cantons and professional associations.

These three types of teachers also have to fulfil and reach different targets according to the educational/training plan in accordance with Bloom's taxonomy of educational objectives (Madaus et al., 1973). Bloom's taxonomy is still implemented in Switzerland's educational plan and uses a multitiered scale to express the level of expertise required to achieve each measurable apprentice outcome. According to Bloom, organising measurable apprentice outcomes in this way will allow teachers to select appropriate classroom assessment techniques and methodologies for the course. As already mentioned, a critique on Bloom's taxonomy is in Chapter 2.

1.3. Conditions and constraints in Switzerland's apprenticeship scheme

The working relationship between employer and apprentice is regulated by a specific work contract that states the form and duration of the apprenticeship, salary, working hours and vacations (Tynjälä et al., 2012, p. 119). The VPET ordinance is the legal basis of a VPET programme in a specific occupation. Each VPET ordinance includes an educational/training in which the vocational education and training contents of a VPET programme are set out. The VPET ordinance and training plan define the core elements of a VPET programme. The basis for this is provided by the Federal Vocational and Professional Education and Training Act, which gives the Confederation the authority and responsibility to issue a VPET ordinance for VPET programmes ("VPETA - Bundgesgesetz über die Berufsbildung (Berufsbildungsgesetz) ", 2002, pp. Art. 19, para. 11). The structures and contents of a VPET ordinance are highly standardised today. The State Secretariat for Education, Research and Innovation (SERI) gives precise instructions about which pieces of information have to be specified in which section (Wettstein et al., 2017, pp. 122-123).

The training plan (Wettstein et al., 2017, p. 123) is an extensive and compulsory list of targets that need to be reached by every single apprentice by the end of the apprenticeship. The training plan contains the pedagogical concept of the VPET programme. The structure of a training plan is less standardised than that of a VPET ordinance. Since 2013, the SERI template (Wettstein et al., 2017, p. 123) has stipulated that training plans be structured as follows:

1. Introduction
2. Vocational education and training foundations
3. Competence profile
4. Competence areas, competencies and performance targets for each learning locations (company, vocational school, branch course)

The educational/training plan flows into a training plan, which is usually between 40 and 100 pages, divided by the three locations where the training takes place (host company, branch courses and vocational and professional schools). Training plans are developed by the responsible professional organisation – with the assistance committee and with pedagogical support – and are approved by the SERI (Wettstein et al., 2017, p. 123).

1.4. The curricula of Swiss in-company coaches

As my thesis focuses on the role of in-company coaches, I explain their curricula as host companies require a permit from the cantonal VPET authority to enable them to offer apprenticeship places, and this permit is linked to in-company coaches. Generally, the in-company coaches themselves must have completed an apprenticeship or at least adequate professional education. In-company coaches normally have a strong professional background in the field where the apprenticeship takes place but have no professional education in terms of pedagogical (related to children) or andragogical (related to adults) processes (see Chapter 3). Although an unskilled person cannot become a professional in-company coach, a skilled in-company coach needs to attend a special compulsory course called the VPET trainer formation course to get professional education in terms of pedagogy and andragogy. Article 10, paragraph 1, of the Vocational and Professional Education and Training Act (BBG) clearly stipulates: Apprentices can only be trained by professional instructors

who meet the required professional skills and personal characteristics, attended the VPET trainer formation course, and must guarantee a professional, appreciative training without jeopardising health or moral principles. These courses are compulsory and are 40 hours in length. They are offered by the cantons. The following topics are addressed within the abovementioned 40 hours (Strahm et al., 2016, pp. 107-108):

- How to deal with young apprentices.
- To teach and learn in the company.
- Health and addiction precaution.
- Training plan.
- Basics of VPET/legal basic apprentice relationship/Federal Certificate of VPET/VPET trainer and final apprenticeship exam.
- VPET trainer and VPET school.
- Qualification of apprentices.
- Leading and educating/safety at work.

The certificate issued at the end of the five days lasts the whole working life of in-company coaches without any obligation of taking part in refresher courses (Strahm et al., 2016, pp. 107-108). To sum up, in Switzerland, skilled workers become in-company coaches for their whole working life, without any refresher courses, by attending a five-day course, which ends without a formal or informal assessment.

1.5. Instructional approaches in host companies – how apprentices are taught

According to Maclean and Wilson (2009) , 'the most common approach to skill acquisitions in host companies revolves around observation, imitation, and later repetition' (p. 269). This is a cognitivist way to impart knowledge (see Chapter 3). Furthermore, the apprentices themselves are, to some extent, responsible for carrying out the work on time and without any errors. If instructions are given by in-company coaches, this is generally done by people whose main task is not to instruct but rather to carry out the work themselves (Wettstein et al., 2017, p. 148). This training was appropriate to instruct skilled workers to make a product in the Industrial Age. However, as we have moved to the Information Age and with the fast-moving and changing world of work (see Chapter 2), there is a need to train a new kind of workers, knowledge workers, to prepare them to meet new challenges (Maclean; & Wilson, 2009, p. xcvii).

Therefore, I also assert the terms 'training' and 'education' require elaboration (Winch, 2000). Essentially, the goal of education is 'to create independent problem solvers with sufficient depth of understanding' (Maclean; & Wilson, 2009, p. xcvii). In contrast, the goal of training 'is to teach people to follow prescribed procedures and to perform in a standardized manner' (Gray & Herr, 1998, p. 159). In Chapter 2, this transition from training to educating is going to be addressed to foster the desired teaching and learning methodologies for knowledge workers.

1.6. Reason for the thesis

Despite the high reputation in Switzerland and abroad, one problem has attracted attention in recent years: the high level of noncompletion. Depending on the occupation and geographical area, 20%–40% of apprentices who enter the dual VET system do not complete their apprenticeship within the stated terms of their contracts (Stalder & Nägele, 2010). Of these, 9% change occupations, 11% have to repeat a year, 7% change employers and 7% drop out from the apprenticeship system without any immediate alternative pathway. In autumn 2012, I received a phone call from the Department of Education of the Canton of Zürich, Switzerland. The person calling was worried, as in 2011, a total of 3,412 out of 6,948 young people in the canton of Zurich, Switzerland, gave up on their apprenticeship curricula within 12 months (SFSO, 2020). This figure represented nearly 50% of the apprentices of the three-year curricula lasting from 2011 to 2014. Zürich, with a gross domestic product (GDP) of CHF 140,706 million, is Switzerland's most economically powerful canton (SFSO, 2020) and therefore relevant in terms of the quantity of apprentices trained in Switzerland's VPET landscape. Given these circumstances, it has become crucial to gain a better understanding of what causes young people to drop out or make changes in apprenticeship programs. Apprentices who did not complete apprenticeships in the Canton of Zurich in 2011 were asked about relevant aspects of their apprenticeships as well as the reasons for their noncompletion shortly after their withdrawal. Two relevant aspects came mutually/reciprocally out of interviews held by an independent agency (see Appendix 01); that is, personal motivation and competencies were seen from two different lenses of the partners involved in the apprenticeship: apprentices and in-company coaches.

Fifty percent of the apprentices mentioned these two reasons:

- lack of social and self-competencies of the in-company coaches
- loss of personal motivation because of the way they have been involved in the learning process during the apprenticeship in the host company

Meanwhile, in-company coaches stated two reasons for the phenomenon of noncompletion of apprenticeships:

- lack of motivation of their apprentices
- lack of personal engagement and commitment of their apprentices

Unfortunately, at the beginning of the research, the SFSO did not have figures on apprenticeship termination (see Appendix 14).

In Chapter 2, these aspects are going to be put in perspective with the generation currently attending apprenticeship curricula (born after 2000) and so-called Generation Z (Madden, 2017), as well as the fact that we are living in the age of postmodernism. The abovementioned results showed similarity with those from research conducted by Lamamra and Masdonati (2009) investigating the reasons given by apprentices who had interrupted their apprenticeship. The research concluded that poor working conditions, low support by trainers and workplace relations emerge as main causes leading to dropout. Half of the apprentices interviewed reported conflicts in their relations with their colleagues or supervisors and also complained about insufficient training opportunities in the workplace.

According to Filliettaz (2010), various reasons for noncompletion and dissatisfaction have been proposed over time. For instance, the national-level survey conducted by Cully and Curtain (2001) established that personal and work-related factors seem to play an important role in retention rates. Other research (Snell & Hart, 2008) also identified the high level of dissatisfaction with training conditions amongst noncompleters. Finally, relational problems in the workplace are often mentioned as contributing factors leading to apprentice attrition (Cully & Curtain, 2001).

The noncompletion of apprenticeship in Switzerland is seen as a challenge because of the following points (Tynjälä et al., 2012, p. 120).

- One-third of the apprentices did not commit themselves to another apprenticeship or curricula and thus worked without any qualifications in the Swiss labour market

(SFSO, 2014). Working in the Swiss labour market without any qualifications implies a high risk in terms of failure to get a qualified job. The statistic related to labour market status in Switzerland for the period 1996–2017 (SFSO, 2018) showed a direct correlation between the high(er) unemployment rate of people either with low education or without any completion of scholarship with a degree.

- Noncompletion later causes a lack of qualified employees in the related branches because a part of the apprentices completing their curricula continues to work in the same company as a fully qualified employee. Therefore, companies must hire new employees either abroad or steal employees from other branches. In both cases after hiring new employees, an intensive phase of training will be compulsory to ensure quality and efficiency (Strahm et al., 2016, p. 23).

- According to the Observatory for Vocational and Educational Training, if the apprentices after the early withdrawal do not start another apprenticeship or do not get qualified, they will later in their lives suffer from irregular – and lower – incomes incurring costs to welfare and to society.

During the literature review process, I found a report by the Australian Government's Department of Industry on the phenomenon of noncompletion of apprenticeships (Bednarz, 2014). It showed that Australia shares three common issues with Switzerland regarding noncompletion. These are the following (Bednarz, 2014, p. 13):

1. Approximately half of all Australian apprenticeship contracts in the trades were not completed. Switzerland, in 2011, had the same situation.

2. Employment-related issues were the most cited reasons for not completing an apprenticeship. Among the reasons given by Australian apprentices, there were interpersonal difficulties with employers or colleagues. In Switzerland, in 2011, Swiss apprentices gave as top-ranked reasons for noncompletion of apprenticeship the lack of social and self-competencies of their in-company coaches as well as loss of motivation because of the way they were involved in the learning process.

3. Apprentices in Australia generally leave their host companies early. About 60% of Australian apprentices who left did so within the first year. We experienced in Switzerland the same phenomenon, with about 50% leaving within 18 months.

My thesis and findings are not specifically limited and addressed to the issues around completion and noncompletion of apprenticeship even if it was the starting point of my PhD journey. Starting from the reasons for noncompletion given by apprentices and in-company coaches (see the beginning of this subchapter), I wanted to explore the potential of active learning in Switzerland's apprenticeship scheme.

1.7. Intention and purpose of the thesis

As the reasons for dropping out are attributed to both parties (in-company coaches and apprentices) in terms of motivation and relationship, I wanted to focus my thesis on in-company coaches. It is apparent that they are stuck in a cognitivist (see Chapter 3) instructional approach whenever they were interacting with apprentices in their companies. The purpose of this thesis was to support the four in-company coaches in implementing active learning, derived from the theoretical basis of constructivism (see Chapter 3) in four different outlets belonging to the same company but geographically located in different places and to explore the potential of active learning, an approach of instruction based on active learning (Bonwell & Eison, 1991) through the methodological approach of IAZPERKA (see Chapter 5) after its introduction and implementation in the four outlets. IAZPERKA is a pedagogical tool to support the implementation of constructivism in Switzerland's outlets and companies.

As a short introduction to constructivism and active learning, constructivist learning theory emphasises that individuals learn by building their own knowledge, connecting new ideas and experiences to existing knowledge and experiences to form new or enhanced understanding (Bransford et al., 1999). The theory, developed by Piaget and others, posits that learners can either assimilate new information into an existing framework or modify that framework to accommodate new information that contradicts prior understanding. Approaches that promote active learning often explicitly ask students to make connections between new information and their

current mental models, extending their understanding. In other cases, teachers may design learning activities that allow students to confront misconceptions, helping them reconstruct their mental model based on more accurate understanding. In either case, approaches that promote active learning advocate the kind of cognitive work identified as necessary for learning by constructivist learning theory. Constructivism will be critically reviewed in Chapter 3.

The definitions of active learning found in the literature are broad: from 'instructional activities involving students in doing things and thinking about what they are doing' (Bonwell & Eison, 1991) to 'active learning engages students in the process of learning through activities and/or discussion in class, as opposed to passively listening to an expert. It emphasizes higher order thinking and often involves group work' (Freeman; et al., 2014). Bonwell and Eison (1991) explicitly recognised that a range of activities can fall within it. They suggested a spectrum of activities to promote active learning, ranging from simple (e.g., pausing lectures to allow students to clarify and organise their ideas by discussing with neighbours) to complex (e.g., using case studies as a focal point for decision-making). Thus, active learning is commonly defined as activities that students perform to construct knowledge and understanding. The activities vary but require students to do higher-order thinking. Although not always explicitly noted, metacognition – students' thinking about their own learning – is an important element, providing the link between activity and learning. The evidence that active learning approaches help students learn more effectively than transmissionism approaches, in which instructors rely on teaching by telling, is robust and has existed for more than 40 years (Bonwell & Eison, 1991).

1.8. Information on how the research program was carried out

In chapter 4 I explained methodology and methods selected for this thesis. Therefore, here a brief information on how the research program was carried out. The thesis is based on fieldwork research influenced by the position of an interpretivist (Thomas, 2017). The methodology selected was participatory action research (Winter, 1989b). I took an etic position as described by Pike (1967). With a qualitative methodology, I was interested in understanding in the field which kind of support, if any, was needed by the four in-company coaches after implementing

active learning. I worked self-sponsored with a company (see Appendix 15) and four different in-company coaches by adopting the lens of a reflection practitioner (Schön, 1983). The research design was planned according to the spiral of action research cycles proposed by Kemmis et al. (2014) in a raw of workshops. A multiple methods approach was applied by interviewing in-company coaches twice, transcribed and analysed interviews according to the notion of 'reflexive methodology' proposed by Alvesson and Skoldberg's (2000) . Data were analysed and reflected. A research diary has been kept as a track of my thoughts and I encouraged in-company coaches to keep one as well.

1.9. Personal background and values

In 2002, I started to work as a behavioural trainer focusing from the very beginning on the target group acting as an in-company coach in the upper-secondary level VPET. Since 2002, I have worked in nearly every canton of Switzerland, getting to know more than 4,000 in-company coaches spread in one of the nearly 70,000 host companies in Switzerland. For the past 18 years, I have taught in-company coaches in three different languages and three different cultural settings (German, French and Italian). My work entails empowering in-company coaches to work and teach different skills to apprentices in their companies as well as to work with their apprentices. As described later in this chapter, one of the targets of compulsory courses for in-company coaches is to make them aware of their new role as apprentice educators (not just handcraft professionals) whenever they were interacting with apprentices.

The following are my five philosophical statements when acting as trainer of in-company coaches in the context of Switzerland's apprenticeship scheme:

- An apprenticeship is not just an act of teaching or passing practical skills and knowledge to a young person. The process of teaching needs to be more holistic, as learning is about educating a person. These young people are in transition from childhood to adulthood. In-company coaches are in charge of educating young people becoming adults.

- Learning is a joint process. The apprentice and the in-company coach work jointly in this process despite the fact that both have different roles.

- Apprenticeship is a partnership in which everybody learns from each other based on mutual respect, trust, full transparency and acknowledging each other.

- The pedagogical method of active learning derived from social constructivism brings the apprentice and the in-company coach together, instead of separating them, by promoting professional partnership, trust and transparency. Therefore, support is the foundation of this professional relationship.

- The fast development of the labour market, with, for instance, automatisation and digitalisation, calls for employees capable of permanently adapting themselves in an ever-changing working environment. Transferable skills help to adapt oneself to a dynamic environment.

These five philosophical statements correspond to my personal attitude towards people gained in my childhood by parents' education (habitus), reflect my deep personal values and come from my professional education and experience. Furthermore, they reflect the role I am mostly taking whenever I am teaching as well as my understanding of any relationship between adults both in private and professional life. The concept of habitus (Bourdieu, 1990) will be discussed in Chapter 3.

1.10. Research questions

There are five key research questions leading my thesis:

Questions 1 and 2

1) What difficulties (if any) do the coaches encounter in dealing with the new method of 'active learning'?

2) In what ways, if any, do coaches need support to implement active learning in their retail outlet?

This research concerns itself with a practical approach, aiming to deliver a set of principles to be used in daily business by in-company coaches when interacting with apprentices in Switzerland's apprenticeship scheme.

Question 3

What impacts of active learning (if any) do coaches report on apprentices' personal development and performance?

Apprentices are just starting their working life and are in transition from childhood to adulthood. Apprenticeship is – in most cases – their first regular working experience in a specific setting regulated by a specific Swiss law. I wish to get valuable information from in-company coaches about their observations, as most of them do have extensive experience in training apprentices (up to 25 years).

Question 4

What impacts of training in 'active learning' (if any) do coaches report on their own behaviour as educators?

This research question has its origins in my own experience as in-company coach since 2002. I became aware, during and after my workshops, that in-company coaches demonstrated a degree of inconsistency in their approaches regarding their roles. They stated, for example, that they were aware of the fact that through their role and their behaviour, they would have a great impact on the apprentice, but then when they were acting, I observed an outdated way of acting as a coach and, at times during the learning process, an astonishing negative routine towards the task and the apprentices, spreading negative attitudes or showing a lack of motivation. This outdated way of teaching is close to a cognitivistic way of acting (see Chapter 3). On the other hand, I am aware, by a long professional experience, that in-company coaches seldom have the time to develop themselves by attending courses, as they are firstly skilled workers, and the in-company coach is just a role among others. In fact, when in-company coaches are working, they experience a pressure to perform, including deadline pressure (Wettstein et al., 2017, p. 150).

My research aims to determine if there are any positive impacts on in-company coaches' attitude by implementing active learning with a pragmatic pedagogical tool and by supporting their development from teacher to facilitator.

Question 5

How has the training in active learning influenced my behaviour in my role as educator?

My last question is linked to my desire to document my personal growth in terms of self-reflection during my whole process and all changes in thinking, approaching and reflecting linked to this PhD journey, both as a professional behavioural trainer and as a person. My position as reflective practitioner (see Chapter 4) in this project is also a result of my will to gain valuable insights about myself (see Chapter 9).

1.11. Significance of the thesis

In undertaking this journey, I hoped it would make the following contributions: First, a contribution to theory: Despite the importance of in-company coaches, there is a deficiency regarding the role of in-company coaches not only in Switzerland but also across Europe: *'It should be noted that there is a paucity of work on people who are at the heart of the dual system. This invisibility is also found at the European level, where studies dealing with in-company coaches are rare'* (Lamamra et al., 2019, p. 4). This was my personal challenge in the process of the literature review (see Chapter 3), as the literature reviewed the proposed contents either for teachers working in adult education (and therefore not in the same setting like in-company coaches working in the labour market) or interactions with young students in their transition from compulsory schools to higher education (and therefore not in the same situation as apprentices in transition from compulsory schools to working life). Nevertheless, this invisibility in terms of literature related to in-company coaches in Switzerland is inexplicable, '*as in-company coaches' importance as reference persons has been highlighted by various works on the dual system'* (Lamamra et al., 2019, p. 4).

Furthermore, no one that I am aware of has attempted to analyse the trending issue of high noncompletion rate with a focus on the professional relationship between apprentices and in-company coaches in Switzerland's apprenticeship

scheme, related to the upcoming challenges of Generation Z (see Chapter 2) and the age of postmodernism (see Chapter 2), and proposed a pragmatic solution.

Second, a contribution to practice: Constructivism has become a key concept used in literature, conference presentations and other professional arenas with respect to adult learning. My thesis contributes to changes in practice by proposing a set of principles. If people believe that constructivism is an important theoretical base for educating apprentices belonging to Generation Z in a postmodern age, then my thesis will contribute to a better, deeper understanding of how to apply the theory, through active learning by means of IAZPERKA (see Chapter 5).

1.12. Outline of the thesis

Chapter 2 explores the challenges in Switzerland's apprenticeship scheme and sets up the literature review.

Chapter 3 contains a review of the literature on the evolution of constructivism, social constructivism and andragogy, Generation Z and in-company coaches as well as the concept of transmission and process model of andragogy and pedagogy.

Chapter 4 deals with methodology and methods. It starts by presenting the interpretivist approach in participatory action research (PAR) adopting the stance of reflective practitioners.

Chapter 5 explains step by step the pedagogical tool IAZPERKA, which has been implemented during the thesis to promote active learning in Switzerland's apprenticeship scheme.

Chapter 6 presents and analyses the four workshops held with the in-company coaches and my diaries.

Chapter 7 presents and analyses the interviews.

Chapter 8 presents the findings and the answers to research questions 1 to 4.

Chapter 9 answers research question 5 by presenting a personal view of myself in terms of professional and personal growth gained during my PhD journey.

Chapter 10 ends with a summary of findings, a critical review of the thesis and recommendations for future research in this area.

1.13. Summary

The VPET in Switzerland is a success and allows the young generation at the age of 16 to enter the world of work. Nevertheless, every year, 20% to 40% drop out of the system, most of them – according to apprentices' interviews held by independent agencies – reporting a lack of social competencies among in-company coaches and the poor quality of training opportunities offered in companies. Meanwhile, in-company coaches complain that apprentices are not willing to engage themselves with the necessary motivation and commitment to learn.

In the Industrial Age, apprenticeship in Switzerland was intended as a setting to train and pass professional skills from in-company coaches to apprentices to be skilled to make a product. The goal of training in the Industrial Age was to teach and train apprentices how to correctly follow instructions and make a product. In the Information Age, there is a need for skilled and independent thinkers at the workplace. Therefore, the aim of apprenticeship in Switzerland should be to educate apprentices and create independent problem-solvers with a sufficient depth of understanding to solve issues that they may encounter in their working life.

In-company coaches play a central role in training apprentices in companies (Lamamra et al., 2019). Not only are they less educated in terms of pedagogy, but they also feel the pressure of time whenever they interact with apprentices, as they are productive and skilled workers, and they need to perform. As the apprentices reported in the interviews held by independent agencies the poor quality of social competencies of in-company coaches, the intention of this thesis is to implement active learning, derived from constructivism, to enhance a real professional partnership, in mutual respect, where everyone learns from everyone in transparency. The final scope of this thesis is to offer a set of principles that can help reduce the dropout rate from Switzerland's apprenticeship scheme as well as to adequately educate apprentices for a labour market in the Information Age.

2. Further challenges for Switzerland's apprenticeship scheme

In this chapter, I explore further challenges for Switzerland's apprenticeship scheme alongside the issue of noncompletion as seen in Chapter 1. My intention is to explore further challenges in relation to Switzerland's apprenticeship scheme before proposing a change and provide additional elements and reasons for the implementation of active learning in Switzerland's apprentice scheme. These challenges arise independently from the phenomenon of noncompletion of apprenticeship and are caused by the transition from the Industrial Age to the Information Age (see Chapter 3) but are also a consequence of the complexity of Switzerland's apprenticeship scheme involving three different partners. This transition towards an Information Age, as seen in Chapter 1, has consequences on apprenticeship training goals: from training apprentices able to correctly follow instructions and make products in the Industrial Age to training skilled and independent thinkers in the Information Age who can solve issues that they may encounter in their working life. Besides the issue of noncompletion seen in Chapter 1, I want to explain in this chapter which constraints need to be carefully reviewed in Switzerland's apprenticeship scheme to cope with the upcoming labour market needs in the Information Age. As the aim of apprenticeships in Switzerland is still to impart the knowledge and skills necessary for the exercise of a profession, or simply learning for jobs, Switzerland's view of apprenticeship coming from the Industrial Age urgently needs to be reviewed. The Information Age requires workers with a different set of competencies that need to be acquired already in apprenticeship. This is not what is happening at the moment.

2.1. Implications related to the setting learning at work

Referring to the VPET in Switzerland, the first thing that comes to mind when one thinks of apprenticeship is young people working in a company to learn their occupation. This is correct, as 'learning at work implies that apprentices learn while they are carrying out productive work' (Wettstein et al., 2017, p. 148). The work is based on an order from a customer looking to use the product or service. Such learning is therefore geared primarily towards orders from clients. It is not 'based on systems such as disciplines or subjects but is oriented towards the work process' (Wettstein et al., 2017, p. 148). The apprentices themselves are to some extent

responsible for carrying out the work on time and without any errors. The apprentices have in-company coaches as interlocutors in companies; nevertheless, it must not be underestimated that the role of companies is mainly to create marketable products or provide services and not to train apprentices, and this generally implies the challenge 'connected with pressure to perform and deadline pressure' (Wettstein et al., 2017, p. 150). This pressure of time is a shared issue for both apprentices and in-company coaches. Nevertheless, generally companies are still and only willing to train 'as long as they expect sufficient benefits to cover their training costs, either in the short run or long run' (Backes-Gellner, 2014, p. 5). Even if Dionsius et al. (2009) showed that this is the case for most Swiss training companies, the willingness of companies to offer training opportunities to apprentices is directly and probably primarily linked to a monetary benefit for companies (return on investment).

As seen at the beginning of this paragraph, Switzerland's apprenticeship takes place in companies with the pressure of time by carrying out productive work; learning geared primarily towards orders from clients and oriented towards the work process is the reality of each working day. I claim that the quality of training in Switzerland's companies to develop competencies required by workers in the Information Age is poor, as the focus is on production and not training and educating apprentices. I underpin my claim with this sentence: 'If instructions are given, this is generally done by people whose main task is not to instruct but rather to carry out work themselves' (Wettstein et al., 2017, p. 148). Filliettaz (2010) commented, 'Unlike extended explanations and demonstrations as apprentices can be expanded upon in the school context, instructions in the workplace are often concise, implicit, and tightly related to productive tasks' (p. 149).

Additionally, I claim that media used in companies to train apprentices do not focus on the reflection of a learning process but are rather task- or process-oriented. I support my claim with this sentence: 'The media which are used to instruct have not been developed with learning in mind but rather for solving problems, fulfilling orders and optimising the cost-benefit ratio' (Wettstein et al., 2017, p. 148).

Lastly, I assert that the time allowance allocated to in-company coaches to train apprentices in Switzerland's companies is limited. This is supported by this sentence:

'Another issue often raised by instructions in the workplace is their problematic temporal alignment with the ongoing process of work' (Filliettaz, 2010, p. 150). Wettstein et al. (2017) went one step further by stating that if in-company coaches in companies have to deal with apprentices and also carry out their main activities, 'they will be told to focus on their main activity first of all' (p. 148). Nevertheless, this means that the time available for in-company coaches to train apprentices is relatively short, and this 'may conflict with other tasks and priorities as they shape work environments' (Filliettaz, 2010, p. 150).

2.2. Implications related to the Swiss vocational training as a system

As Greinert (1993) put it, the system of vocational training in Switzerland is not just characterised by one or several learning environments but is also a somewhat more complex construct. This means that Switzerland's apprenticeship can be seen as state-controlled or 'a state-controlled market model' (Gonon, 2005, p. 2). As described in Chapter 1, it is a training system shouldered by three partners which 'is not the outcome of conscious planning and development but has come into being as an integral whole by a complex historical process. For a long time on the job training and instruction provided by the vocational schools evolved more or less independently of one another, only becoming intentionally linked to for a systematic route to a qualification (. . .) at a very late date' (Greinert, 1993, p. 19). Greinert discerned beside this system a more bureaucratic and school-based system and market-oriented market models. Gonon (2005) emphasised this sentence by stating, 'Swiss vocational training is not the result of a forward-looking initiative and planning process' (Gonon, 2005, p. 2). Nevertheless, the VPET 'system is strongly employer-driven' (Hoeckel et al., 2009, p. 16), and therefore, one of its key features is a strong labour market orientation. This implies that knowledge and standards for occupations are closely connected with the demands of the labour market, which ensure, finally, the employability of young professionals. Here we have, once more, the idea of training for jobs. The tri-party Swiss partnership arrangements including the Confederation, the cantons and professional organisations rely on 'consensus and cooperation' (Gonon, 2005).

I claim that not only are modifications made in Switzerland's apprenticeship scheme not forward-looking, but they also take too much time to be discussed and

decided. I found support for my claims in the literature. The timely proactive adjustment needed in the training plan in a 'world of market is in continuous change' (Tynjälä et al., 2012, p. 205) to cope with changes in the market is critical. As seen in the beginning of this paragraph, unfortunately, 'Swiss vocational training is not the result of a forward looking initiative and planning process' (Gonon, 2005, p. 2). Furthermore, Hoeckel et al. (2009) stated that this tri-party partnership (see Chapter 1) leads to a process of policymaking and reform 'that is relatively lengthy, entailing extensive consultation and need for agreement' (p. 16). It does not come as a surprise that this process takes time, as mentioned above, as consensus and cooperation in Switzerland's apprenticeship scheme among the three parties are central. Unfortunately, I did not find any help in the literature as to what consensus and cooperation in this process might mean, but assuming that consensus and cooperation lie on evidence, I assert that this process of gathering evidence always takes time and is never future-oriented. As apprentices belong to Generation Z (see Chapter 3) living in a postmodern society (see Chapter 3) because they are constantly connected to the world, Generation Z is much more sensitive to changes in the world of market than a tri-party partnership stuck in a slow process based on consensus and cooperation.

Additionally, the quality of training provided by a host company 'is primarily demonstrated by the success of the learners in the qualification procedure, which is organized by the cantonal authorities or on their behalf' (Wettstein et al., 2017, p. 217). This one-sided approach to the definition of quality in relation to the success of the learners in the qualification procedure is problematic. On the one hand, as discussed in the first point of this section, there is a considerable time delay in adapting training plans because of the lengthy discussions among the three partners and the evidence needed to make a change in the training provided for apprentices. On the other hand, there are companies which decisively shape the content of Switzerland's apprenticeship training plans. I claim that there is a risk that the definition of success in the quality of training provided during apprenticeship focuses on the short-term productivity of apprentices for their companies instead of training skills needed in the Information Age to ensure long-term employability (see Chapter 3) in a fast-changing world of market (Tynjälä et al., 2012, p. 205).

Lastly, I claim that there is a risk that the three places where training takes place in Switzerland's apprenticeship scheme (see Chapter 1) are isolated institutions when it comes to working and planning together. I found support for my claim in this statement: 'the work-based and school-based components become disconnected from one another' (Gonon, 2005, p. 2; Hoeckel et al., 2009, p. 17). As the system is strongly employer-driven, 'vocational schools are seen from employer as a means of supplementing the training provided in the companies by employers' (Gonon, 2005, p. 1). I assert that vocational schools and training in companies must be seen as complementing each other in a partnership, where the education of apprentices is seen as a more holistic activity as posited by Maclean (2007, p. 44) and as just a matter of 'passing on existing tools and knowledge' (Madden, 2017, p. 145). The terms 'education' and 'training' in Switzerland's apprenticeship scheme also require elaboration. As Maclean and Wilsow (2009) stated, 'Essentially, the goal of education is "to create independent problem solvers with sufficient depth of understanding"' (p. xcvii). According to Gray and Herr (1998), 'In contrast to education the goal of training "is to teach people to follow prescribed procedures and to perform in a standardized manner"' (p. 159). I assert that in a fast-changing world, an apprenticeship with the sole aim of training apprentices to perform in a standardised manner is irresponsible. In a labour market which is 'in transition from Industrial Age to the Information Age' (Maclean & Wilson, 2009, p. xcvii), apprenticeship needs to be seen as a process of education.

2.3. Implications due to teachers and in-company coaches' different lengths and quality of pedagogical education

According to literature, 'teachers at professional, vocational schools are highly qualified' (Strahm et al., 2016, p. 106). Meanwhile, 'in-company coaches follow a compulsory basic training of five days in order to be granted permission to train apprentices' (Lamamra et al., 2019). This five-day training is valid for the whole working life. As described in Chapter 1, these compulsory courses consist of 40 hours and are offered by the cantons (Strahm et al., 2016, p. 107). Apprentices spend most of their apprenticeship time in their companies with their in-company coaches. Wettstein (2017) stated that 'the training of learners cannot be any better than the training which the trainers themselves were given' (p. 149). There are two

elements in this statement that need closer attention. The first is the concept of habitus (see Chapter 3), as most of the in-company coaches were apprentices themselves and therefore all wear – according to Bourdieu (2009) – their habitus. The second element is related to the training in-company coaches have been given to be allowed to train apprentices in their companies. In a compulsory five-day training, from my experience, it is not possible for highly qualified in-company coaches to meet the challenges of educating apprentices. Therefore, I agree with Gonon et al. (2017) when they stated that 'the focus of in-company coaches will be either on teaching specific skills or on combining the planning, implementation and assessment of the learners' own activities' (p. 149).

The role of education is also essential in Switzerland's apprenticeship scheme, where the first starting point of any teachers involved must be the 'immutable and essential role of education to cultivate the development of the multidimensional potential of the individual' (Maclean, 2007, p. 222).

I assert that this compulsory on-time course valid for the entire working life to train apprentices is not enough for a valid development of professional skilled workers towards their new role of in-company coaches. In-company coaches need regular yearly training to improve their pedagogical skills and to reflect on their role, as the teaching and coaching style adopted by any teacher (and also by in-company coaches) is 'not simply a product of their choice' but is 'a result of their educational philosophy, probably derived from training' (Easthope et al., 2017, p. 117). The labour market is rapidly evolving, asking for new competencies, but 'sadly, teacher education has not adequately taken these new realities into account' (Maclean, 2007, p. 222). In-company coaches should be better aware of the complexities and specificities associated with workplace learning. As Filliettaz (2010) stated, 'vocational learning, is not only a cognitive process, but also a social one, involving transitions and identity transformation' (p. 145). This view of transitions and identity transformations needed by teachers (and in-company coaches) is also supported by Lave and Wenger (1991), Eraut (2007) and Billet (2009). The credibility of in-company coachers in their role is based on the actuality of when in-company coaches interact with apprentices. I assert that apprenticeship belonging to Generation Z is quickly realised if in-company coaches are updated, and credibility must be earned.

Additionally, in-company coaches need to learn how important they are in the role of educating apprentices. According to Fullan (2016b), 'teachers are uncertain about how to influence students, and about whether they are having an influence' (p. 21); that is, in-company coaches are uncertain about influencing apprentices and about whether they are exerting influence. As Fullan (2016b) wrote, the 'solution is to revamp the learning relationships between and among students and teachers' (p. 152). I fully agree with Fullan, and therefore, I assert that in-company coaches need to be developed in their role from teacher to facilitator, as 'teaching decision often are still made on pragmatic trial-and-error grounds with little chance for reflection or thinking through the rationale' (Fullan, 2016b, p. 21). In my opinion, this shift from coach/teacher to facilitator needs to be supported by workshops and training sequences.

Lastly, the basic formal requirements to become an in-company coach are quite clear: 'a federal certificate of competence in the field, training, a certain number of years of experience' (from two to five years depending on the field) (Wettstein et al., 2017). However, while the formal conditions of access to the compulsory course are fairly precise, the expectations surrounding the in-company coach role are much less clear. It is a question of 'instructing apprentices' and 'providing training for professional practice', with no information on how this is to be achieved. According to Lamamra et al. (2019), there are some recommendations on how this can be achieved, but they are not binding (p. 35). As Filliettaz (2010) stated, 'learning to work and becoming a member of professional communities very much relies on discourse and interactions' (p. 145). This is a crucial point in my opinion. Discussions and interactions play an important role in educating apprentices, and this calls for a set of social- and self-competencies among in-company coaches. From my experience as a behavioural trainer, in-company coaches need regular training throughout their working life to cope with changes and requirements related to their role. And this is not happening so far.

2.4. Implications related to the teaching methods used at the workplace

Learning by carrying out real work tasks therefore means the apprentices acquire expertise and also improve their methodological, social and personal competencies

as expressed clearly by the term 'work-based training' used in the Federal Vocational and Professional Education and Training Act in 2012 (Wettstein et al., 2017, p. 149). According to the literature, 'work-based training' can also be seen as 'learning through work', work-integrated learning (Hahne, 2000), learning in the work process, learning 'on the job', 'learning by doing' ("VPETA - Bundgesgesetz über die Berufsbildung (Berufsbildungsgesetz) ", 2002) or situational learning of life-related or order-related contents (Herz, 1992). Undoubtedly, apprentices can gain experience by working in a company and carrying out real tasks. But Wettstein et al. (2017) posited that apprentices 'can learn only by reflecting on their experiences' (p. 155), and this process or reflection requires time and knowledge as a basis for reflection (Kaiser, 2005) as well – I would like to add – as practice. If duality as a didactic principle when designing training 'means the interconnection of action and reflection, doing and thinking, working and learning, practice and theory' (Euler & Löb, 2000, p. 9 et seq.), this is not what is taking place in Switzerland companies when in-company coaches are interacting with apprentices.

But there is a further challenge often faced by apprentices when joining the workplace in Switzerland's apprenticeship scheme. It deals with apprentices in reference to the work environment they are exposed to. When apprentices engage in practices they are not familiar with, they sometimes lack linguistic resources to refer accurately to objects or processes related to the work environment. Filliettaz (2010) stated that 'this is because their conceptual procedural and dispositional knowledge, of workplace practices are at an early stage of elaboration' (p. 149). This makes it difficult for apprentices to enact and display what has sometimes been termed a 'professional vision' of the environment (Goodwin, 1994). In other words, apprentices, as they are at the beginning of their career and learning, can find it difficult to precisely define procedures and processes, by using the correct professional words and expressions, whenever they are communicating with professional and skilled workers.

As seen in Chapter 1 as well as in this chapter, the world of work is moving. With the advent of new technologies, 'Europe is moving toward a "cognitive" society in which work content will be limited to tasks requiring initiative and flexibility on the part of the worker' (Maclean & Wilson, 2009, p. 88). I claim that this ability of initiative and flexibility as a worker needs to be trained by in-company coaches with their

apprentices already during the apprenticeship. I assert that the training of these skills needs another pedagogical approach by in-company coaches. In light of this fact, I would like to recall (see Chapter 1) that in Switzerland, all VPET programs come with a VPET ordinance and 'corresponding training plan, which presents the teaching concept for the given VET program' (Swiss Centre for Vocational Education and Training, 2012, p. 5), and these teaching concepts are based on Bloom's taxonomy. Basing the teaching concepts on Bloom's taxonomy was not a nationally decided approach but independently selected by the training companies developing curricula (organised in professional associations). Bloom's taxonomy is a skeleton that was constructed to categorise the goals of any curriculum in terms of explicit and implicit cognitive skills and abilities (Bloom et al., 1971). Like any other theoretical model, Bloom's taxonomy has its strengths and weaknesses. Today's world is a different place, however, than the one in Bloom's time in 1956, when he came up with his model. Since 1956, educators have learned a great deal about how students learn and how teachers teach and now recognise that teaching and learning encompass more than just thinking and applying. Teaching and learning also involve the feelings and beliefs of students and teachers as well as the social and cultural environment of the classroom. Several cognitive psychologists have worked to make the basic concept of a taxonomy of thinking skills more relevant and accurate. In developing his own taxonomy of educational objectives, Marzano (2000) pointed out one criticism of Bloom's taxonomy. The very structure of the taxonomy, moving from the simplest level of knowledge to the most difficult level of evaluation, is not supported by research. A hierarchical taxonomy implies that each higher skill is composed of the skills beneath it; that is, comprehension requires knowledge, application requires comprehension and knowledge and so on. This, according to Marzano (2000), is simply not true of the cognitive processes in Bloom's taxonomy. The originators of the original six thinking processes assumed that complex projects could be labelled as requiring one process more than the others. A task was primarily an 'analysis' or an 'evaluation' task. This has been proven not to be true, which may account for the difficulty experienced by educators in classifying challenging learning activities using the taxonomy. In addition, Anderson and Krathwohl (2001) argued that nearly all complex learning activities require the use of different cognitive skills. Regardless of

any critique, Switzerland's training plans in its apprenticeship scheme are still based on Bloom's taxonomy.

I stated that training in companies in Switzerland's apprenticeship scheme in the 21st century is still based on training plans with targets formulated according to Bloom's taxonomy. This model is more than 70 years old and is outdated, as it reflects the values and ideas of training in the Industrial Age with an understanding of the role of teachers and coaches of that time without any consideration of the characteristics of postmodernism and Generation Z and of the skills needed by workers in the Information Age. In Chapter 3, the idea of postmodernism and Generation Z will be presented and critically discussed.

2.5. Implications related to the acquisition of skills to work in a fast-changing labour market

At this point, it is useful to recall the aim of apprenticeship in Switzerland: to prepare the young generation for the labour market. But this market is changing – as seen before – rapidly and continuously. In view of this ever-changing environment, one must ask what competencies apprentices in Switzerland need to acquire and possess and to what extent they must be prepared for the labour market in the Information Age. Furthermore, one must ask who is going to select and define the competencies that apprentices must acquire and possess. Van den Bergh et al. (2006) spread the concept that currently, success in a job often involves operating in ever-changing environments, dealing with nonroutine and abstract work processes, handling decisions and responsibilities and working in teams. As discussed in Chapter 3, employer surveys indicate that occupation-specific skills are no longer sufficient for workers to meet the needs of national labour (OECD, 2013). In addition to basic and specialised knowledge and skills, workers are nowadays expected to have an additional set of skills – referred to in this thesis as transferable skills – that go beyond their occupation (Trzmiel, 2015). These skills are not new but are arguably needed given the rapidly changing realities in the labour market. Therefore, adequate workplace preparation is necessary to educate apprentices. Trzmiel (2015) posited, 'Developing apprentices' ability of learning to learn is one crucial part of transferable skills' (p. 1). I fully agree with Trzmiel. Nowadays, the labour market asks for workers capable of learning both inside and outside the workplace and recognising their need for further education and training.

In contrast with this concept of learning inside and outside the workplace, the VPET system is 'geared towards the world of work and essentially aims to ensure people have the ability to work' (Wettstein et al., 2017, p. 106). And the VPET system ensures that apprentices can immediately be integrated into the production process and generate productive value for the host company from the start of their apprenticeships (Dionysius, 2009). In this respect, VPET is oriented towards an immediate and short-term labour market because apprentices achieve 'what is required to be employable in particular occupations and focuses on the knowledge and skills which can be applied here' (Wettstein et al., 2017, p. 106). I assert that there is a gap between the concept of training and the holistic view of educating also in terms of transferable skills, as these skills go behind an immediate occupation in companies just after the competition of apprenticeship.

I stated that in companies that base their output in terms of product and are under pressure of time with financial principles, it is hard to believe that pedagogical unskilled in-company coaches focus on educating apprentices with transferable skills despite their importance. Even if transferable skills seem to be, from the educational perspective, skills that are 'necessary for apprentices to develop into responsible citizens giving them a comparative advantage in the labour market' (Pavlova et al., 2018, p. 35), there are different understandings and conceptualisations of transferable skills across countries (Trzmiel, 2015). I believe this difference in understanding transferable skills should not diminish the importance of these skills for apprentices entering the world of work. Appendix 13 shows the conceptual framework of transferable skills developed by Education Research Institutes Networks in the Asia-Pacific (ERI-Net), which was established in 2009 by UNESCO's Asia and Pacific Regional Bureau for Education to facilitate regional collaboration among education research institutions (including universities and think tanks) in education policy issues relevant to the region. For this thesis, I have decided to use the following definition of transferable skills: 'transferable skills refer to a number of important competences that can be learned and that everyone requires to successfully adapt to changes and to lead meaningful and productive lives' (Trzmiel, 2015, p. 3). For the workshops with in-company coaches (see Chapter 4), I have decided to adopt the following pragmatic definition: 'transferable skills encompass

five learning domains – critical and innovative thinking, interpersonal skills, intrapersonal skills, global citizenship and media and information literacy' (Trzmiel, 2015, p. 4), which, together with foundation and specialised skills, all need to be considered for the holistic development of the individual.

In my role as a behavioural trainer, I see other challenges to the implementation of the concept of transferable skills in companies. Therefore, I agree with the following points about competencies brought up by Kemmis, Hodge and Bowden (2014):

- 'Failure to recognise the context-dependent nature of employability skills and impact of the context upon these skills'. In other words, to employ a skill, one needs to know the context.
- The incorrect assumption that competence is automatically transferable. In other words, having a competency does not mean that I can use it in every situation.
- Lack of explicit focus on employability skills in workplaces and in education and training. In other words, one needs to know when a competency is transferable.
- Insufficient confidence and/or capability of teachers and trainers to address these skills. Teachers and trainers need to be trained on transferable skills and on how they can create learning settings so that transferable skills can be learned.
- 'The difficulty of measuring, assessing, and reporting on employability skills' (p. 6). It is necessary to have a consensus on measuring, assessing and reporting employability skills.

Unquestionably, with a view to addressing global challenges in the 21st century and equipping apprentices with the necessary skills to cope with these challenges, there is a need for an education which 'move beyond the acquisition of knowledge and literacy and numeracy skills, which has been the dominant purpose of education in the economic discourse of formal education since the 1960s' (Pavlova et al., 2018, p. 49). But according to Trzmiel (2015), one of the challenges depends on the context and occupation in which transferable skills are employed as 'different occupations may require a distinctive blend of competencies' (Trzmiel, 2015, p. 5) and that even within occupations, different roles will require varying competencies. Another challenge is related to the fact that apprentices have to learn to adapt, combine and apply these competencies in different contexts (Trzmiel, 2015, p. 6).

2.6. New learning cultures needed in Switzerland's apprenticeship scheme

I claim that the new learning culture in companies and in VPET is characterised in particular by the extension and, in some cases, replacement of traditional instructional learning with constructivist and experience-based learning (Dehnbostel, 2000; Pätzold & Lang, 1999). Constructivism (see Chapter 3) posits that the focus is on the learner as an active and reflecting subject. In constructivism, the learner discovers reality via learning and experience processes based on independent activity and self-determination. 'The respective activity of learning situation is based on the principles of authenticity, model function, situation and social interaction that promote learning and transfer of knowledge' (Maclean; & Wilson, 2009, p. 2642). These principles need to be applied also by in-company coaches. According to Reinmann-Rothmeier and Mandl (1999), the following features are characteristic of a constructivist approach:

- Learning involves active learner participation. Apprentices must be motivated and show or develop an active interest in what they are doing and how they do it.
- Apprentices also steer and monitor their learning processes themselves. The extent of this self-monitoring can vary according to the situation.
- Learning is carried out constructively. Apprentices' experience and knowledge background are considered. Space is given to subjective interpretations.
- Learning is related to the situation: it occurs in a specific context.
- Learning is a social activity, which takes place interactively and respects apprentices' sociocultural background. (Reinmann-Rothmeier & Mandl, 1999, p. 37).

From the pedagogical point of view of the tri-party policymakers, the question that must be asked whenever they define competencies in training/educational plans is: What knowledge, attitudes and values and transferable skills need to be developed during the apprenticeship to ensure employability in a labour market in the Information Age? This question should be central and lead every evaluation and update of educational/training plan in Switzerland's apprenticeship scheme and should be part of critical reflection not only regarding the role of in-company coaches,

but also for every teachers involved in the scheme (see Chapter 1) whenever planning and carrying out and reflecting training activities.

2.7. Summary

In this chapter, my intention was to present further implications and challenges of learning in Switzerland's apprenticeship scheme in the transition from the Industrial Age to the Information Age. This chapter identified several issues for Switzerland's apprenticeship scheme that need addressing. As Switzerland's apprenticeship scheme is not the result of a forward-looking initiative and is based on the consensus of a tri-party initiative, changes are agreed upon based on evidence. To achieve this consensus inevitably needs time, and therefore, these changes are made reactively and come too late for apprentices.

The Information Age already requires a new set of skills called transferable skills (Appendix 13) for workers, and this set of skills needs to be part of apprentices' education already during apprenticeship. This implies not only that training plans need to be updated and learning targets liberated from Bloom's taxonomy (see Chapter 3) but also that these set of skills need to be actively trained with apprentices during the apprenticeship also in companies at work.

In-company coaches are pedagogically unprepared to educate apprentices with this set of skills, as this education requires another learning paradigm. The five-day training for in-company coaches held once in their lifetime is not enough to prepare them in their different roles to train apprentices belonging to Generation Z in a fast-changing labour market. To develop these skills, in-company coaches must shift from teaching to educating apprentices and move towards a constructivist approach. Educating apprentices is not the same as training them. Educating apprentices is a holistic mission and takes a considerable amount of time for companies and in-company coaches.

Currently, apprenticeships take place in companies dominated by pressure of time, where training is oriented towards the work process and geared by customers' orders. The in-company coaches can be granted more time to enhance the reflection process and educate apprentices to self-reflect. This time can be seen from all the partners participating in the process of educating apprentices as a long-term investment (and not a cost) for the apprentice as a young human being and

knowledge worker to ensure apprentices lifelong employability on the market. The labour market in the Information Age requires knowledge workers; these workers need transferable skills to cope with the imminent challenges in the market. To develop this set of skills during the apprenticeship is a joint mission: training plans must be rapidly updated based on a forward-looking strategy. If companies wish to educate apprentices instead of just training them, then they would do well to train in-company coaches in the required set of skills and competencies and on how they can educate their apprentices to learn them. If companies want to educate apprentices, then they should find enough time instead of pressure of time, as it is crucial when it comes to learning.

3. Literature review

The aim of this literature review is to establish a theoretical and pedagogical framework for my research as well as to review literature on changing pedagogy. Furthermore, I want to establish the current state of research knowledge in relation to my research focus and the five research questions. As mentioned in the first chapter, the rationale for my thesis comes from my professional background as an in-company coach trainer and not from the literature itself. As mentioned in Chapter 2, the challenges to Switzerland's apprenticeship scheme are part of this thesis. Therefore, the literature review takes the form of a critical review of selected literature to both support and challenge my thesis at the same time. It was my intention to identify a theoretical background to better understand the current pedagogical situation in Switzerland's apprenticeship scheme in light of postmodernism with Generation Z and to contextualise active learning as a new pedagogical method to be implemented in Switzerland's apprenticeship scheme derived from constructivism. I present the literature under specific themed headings according to their nature and association with my research. Each theme commands its own wealth of existing literature of which I have been necessarily selective. My criteria for selection have been key authors and international studies, an emphasis on contemporary over more recent work and, wherever possible, primary sources.

By far, most sources used in this literature review are from international books, as well as peer-reviewed journals. As presented in Chapter 1, there is a lack in Switzerland and in Europe of studies and literature about in-company coaches in Switzerland's apprenticeship scheme. Therefore, I have decided to explore literature about teaching young people in transition from childhood to adulthood and the role of teachers in preparing the young generation for the labour market, being aware that this is not the same setting (apprenticeship) as presented in this thesis or the same target (in-company coaches). They were accessed either through online academic searches or recommended by my research supervisors. I recognise, however, that such searches are not exclusive and the literature I have chosen to include in this thesis represents only a fraction of the documentation available. Nonetheless, I consider that it gives an accurate representation of my area of educational research at the present time. I have decided to exclude literature exclusively dealing with children's education, as the apprentices are in transition from childhood to adulthood.

Furthermore, I want to point out that the literature review process was completed by the end of December 2018.

The literature review chapter was built on the five issues presented in the following section. It starts by exploring the Age of Information and postmodernism. It explores teaching theory, as there is a missing pedagogical theory supporting the learning process of the young generation passing from compulsory school to VPET. Furthermore, it enquires about Generation Z, as the youth belonging to this generation are currently following the apprenticeship in Switzerland. It continues by presenting the need for lifelong learning, as information is changing and updating rapidly, and finally presents the state of research on knowledge about the role of teachers, as unfortunately – even if in-company coaches play a crucial role in Switzerland's apprenticeship scheme – there is no systematic research on them up until 2018 (Lamamra et al., 2019).

3.1. Stating the challenges – setting the scene

In addition to the challenges to Switzerland's apprenticeship scheme discussed in Chapter 2, the literature review process identified further issues:

- We are living in the Age of Information in postmodernism. According to Tynjälä and Gijbels (as cited in Tynjälä et al., 2012), 'in today's rapidly evolving society, we are confronted with an exponential increase in information, with a growing need for innovation, skills, and knowledge' (p. 205). This rapidly evolving society has, as a consequence, 'success in a job often involves operating in ill-defined and ever-changing environments, dealing with nonroutine and abstract work processes, handling decisions and responsibilities, and working in teams' (van den Bergh et al., 2006, as cited in Tynjälä et al., 2012, p. 205). Examples of such changes in the labour market are the upcoming digitalisation and automatisation. Therefore, I was looking for literature about a set of competencies to be trained also by in-company coaches during apprenticeship to enable apprentices to be successful in the world of work in the near future.

- There is a missing pedagogical theory for the young generation passing from compulsory school to VPET. 'Apprenticeship has proven to be an effective

way of linking the world of education, training and work' (Pavlova et al., 2018, p. 6), but unfortunately, 'there is no integrated theory about the transition from school to work' (Pavlova et al., 2018, p. 2). I fully agree with Pavlova et al., and that is why I wanted to explore the methodological approach of active learning within constructivism.

- Generation Z is entering the labour market (Madden, 2017). The apprentices entering Switzerland's apprenticeship scheme belong to Generation Z. Madden asserted that Generation Z learns differently from previous generations. According to Madden (2017), 'due to ease of access to online sources, students have been empowered to become largely self-directed learners' (p. 148). In addition, according to Madden (2017), Generation Z 'are not only consumers but also the collaborators of the content' (p. 153). This was the reason why I was looking for literature about transmission models for apprentices belonging to Generation Z in the learning setting of Switzerland's apprenticeship scheme and because of their age in transition from childhood towards adulthood. Even if I do not agree with Madden on this point that Generation Z learns differently, as from my experience Generation Z confounds learning and finding information, I acknowledge the different behaviour of Generation Z during teaching sessions (see later in this chapter).

- For apprentices belonging to Generation Z, the rapid frequency at which information is changing and updating (as a result of the world of work in continuous change, see above) justifies not learning by heart anymore. As Madden (2017) wrote, 'the need to 'remember' [according to Bloom's Revised Taxonomy] information seems less important for this generation, who value the speed of access and currency of information' (p. 153). This was the reason why I was looking for a learning approach and pedagogical model promoting the development of knowledge, skills and attitudes to enhance the concept and mindset of 'lifelong learning'. Lifelong learning is a form of self-initiated education that is focused on personal development. While there is no standardised definition of lifelong learning, it has generally been taken to refer

to learning that occurs outside a formal educational institute, such as a school, university or corporate training (Gonon, 2005).

- Interacting with apprentices belonging to Generation Z in postmodernism has consequences also for teachers' role. The role of teachers and for this thesis, analogously the role of in-company coaches, has shifted 'from being the source of the information, to the facilitator of the learning process' (Madden, 2017, p. 147). Therefore, I was looking for literature about the shift in teachers' role from teacher to facilitator of the learning process.

The five abovementioned issues are integrated in this chapter. As explained in Chapters 1 and 2, I am challenging the current pedagogical approach behind the whole Swiss apprenticeship scheme curricula, as it is stuck in a situation where two partners involved in apprenticeship (in-company coaches and apprentices) are formally accusing each other of being responsible for the early withdrawal of apprentices from the scheme. I am focusing my thesis on in-company coaches, as apprentices are spending most of their working time with them, and I have been working with in-company coaches all over Switzerland for the past 20 years.

Therefore, by proposing to implement the new method of active learning for in-company coaches to interact with their apprentices in the companies, I am proposing a pedagogical change in state-funded education. This is the reason why I am looking for literature not only about a whole system improvement in education system as well as a pedagogical change but also about how to manage an educational change in this context. In addition to these two aspects, I want to focus on apprentices as young human beings. Even if they are not the subject of my thesis, they are partners in the learning process, and therefore, the new method proposed has to consider their characteristics as learners belonging to Generation Z with a focus on their age (not children anymore but not adult yet) as well as the characteristics linked to postmodernism.

3.2. Impact of a postmodern society in education

The concept of a postmodernism society came up several times in the process of literature review. I found difficult to follow the discourse on postmodern society and

education, even if Maclean (2007) and Mccrindle (2011) suggested that the fact we are living in a postmodern society has a big impact in education. Madden, for example, stated that 'postmodernism is a concept or 'a project [. . .] that reject the very idea of large-scale, universalist claims of accounts of phenomena and experience, "grand narratives", the quest for understanding through tracing origins' (Maclean, 2007, p. 91). They posit that these changes are epochal changes, meaning new developments and great changes impose a shift in the way education should be seen. I do not agree with this view of being an epochal change. I pledge more for an incremental change affecting education. Burbules (2009) presented three elements related to postmodern conditions, which I am briefly summarising, because they contribute to a better understanding of the period we – and therefore our apprentices – are living in:

- One important element of postmodernity is due to the growing awareness of individuals of the diversity of cultural forms of life that shape group and individuals. In the current world, with new forms of communication, all cultures are much closer. We are aware that other cultures with other sets of beliefs and principles exist. This might be true, but this process of being aware of different cultures is an ongoing process which has nothing to do with postmodernism.

- A second element, related to the first, brings the individual to think about the concept of a consistent identity. A consistent identity seems to be much more than a matter of biological categories like sex and race. This concept is not only called into question but also its perpetuity and absolutism. Freedom of choice is seen as a liberation from this obligation of vision. This might be true, but does not have any connections with theoretical knowledges, which are found not on beliefs, but on facts.

- A third element is the disillusionment that a few people in power can improve everyone's life. A few have influence over too many people, and this influence is reinforced by different kinds of control from which the individual cannot escape. This might be true, but not new to postmodernism. Every generation has a kind of disenchantment on their beliefs.

In light of the above-mentioned points, it is important to examine the field of education (Burbules, 2009). For a modernist, one role of education is to move the development and learning of people in a desired direction of human betterment. I agree with postmodernists when they might argue about what betterment means, but education is also an act of normalising, in the sense of socialising learners into participation within a given social formation. This act of normalising should be seen as one of the roles of education to become member of a society even if the society is postmodern society. I fully agree with Usher and Edwards (1994) when they wrote, 'It is because postmodernism presents no foundational standpoint and no new theory that it teaches us to be sceptical of all systematic theorizations (. . .)'. Changes in the society have as a consequence change in education, but these are incremental changes in the sense of is a slower process of making small adjustments to how things are done that doesn't upend existing processes. I would like to add and enhance at this point the implication of a humanistic idea of apprentices to be seen as a subject who has the potential to become self-motivated and self-directing. Therefore, the primary task of education and one of the roles of in-company coaches should be understood as one of bringing out, of helping apprentices realise their potential in order to become independent in whatever society.

3.3. Generation Z

At the age of 15–16 years, when entering Switzerland's apprenticeship scheme, apprentices are undergoing transitions in their lives: they are not pupils anymore but not fully adults yet. Furthermore, they are also making the transition from compulsory schooling to the upper-secondary level.

It is worth pointing out that the apprentices following the apprenticeship at the time of my thesis writing belonged to Generation Z, born from 1995 to 2009 (Madden, 2017). With the term 'generation', I took on the understanding of 'sociological as grouping of people born in the same period' proposed by Madden (2017, p. 10).

Generation Z is growing up in a postmodernist world as seen above. Therefore, a part of apprentices belonging to Generation Z seems to not accept information as they are presented anymore without critically questioning reasons and discussing whether they are still valid. As Ziehe (2009) wrote, 'The kind of everyday culture, . . . into which the young generation of today grows up is not-norm regulated, as was the

case for earlier generations' (p. 187). Ziehe (2009) stated that 'the kind of culture it is preference-related, i.e. it is oriented towards personal preferences and sensitivity' (p. 187). This has of course an impact on the way apprentices belonging to Generation Z grow up and perceive themselves in a society.

Nevertheless, as my thesis focuses on exploring the potential of active learning in the apprenticeship scheme in Switzerland from 2016 to 2019 for the generation currently following apprenticeship in Switzerland belonging to Generation Z, I wanted to critically review the literature about a postmodern society. The concept of postformal thinking has some interesting connections to the postmodernist world we are living in. Kramer (1983) claimed that in postformal thinking, 'one has relativistic conception of knowledge "anything goes", and multiple viewpoints can be understood to be relatively right at the same time' (p. 53). Unfortunately, this is not true in the labour market, where performance and outcome are well defined. As apprentices belonging to Generation Z are growing up in postmodernism society, they have another standpoint not only towards teachers but also towards themselves: 'to be cool – from the apprenticeship standpoint – is to be with the moment and with others also experiencing the moment' (Maclean, 2007, p. 91). And this standpoint also applies to the concept of knowledge. Knowledge is not grounded on certainty or establishes it in line with a postmodernist world. Knowledge and information are created. Or as Madden (2017) says, they 'not only consume content but create it' (p. 149). This is another crucial point for my thesis: information needs to be elaborated, discovered and not just presented by in-company coaches as a result.

With regard to in-company coaches, there are further implications for Generation Z and the postmodernist world. In-company coaches are therefore cool 'when they connect with the here and now and, most important, can show how their knowledge, experience, expertise has value in illuminating the moment and in enabling students to continue their explorations and learning adventures' (Maclean, 2007, pp. 91-92). On the other hand, 'teachers are not cool when they look beyond, to other and especially past world which appear to lack relevance' (Maclean, 2007, p. 91).

Madden was also a useful source of solid information both for my metacognition process as well as for a more practical set of principles to be implemented with the in-company coaches to bridge my lack of knowledge about Generation Z. In (Madden, 2017), I found information about the need for a shift in teacher's role, 'from

fountain of all knowledges towards a facilitator' (Madden, 2017, p. 147), as well as the influence of technology and digital devices on Generation Z's lives (Madden, 2017, p. 148). Furthermore, my thesis's context of Switzerland's apprenticeship scheme concerns in-company coaches working with apprentices belonging to Generation Z. The shift in pedagogical approach also should focus on teaching and learning in the transition from childhood (pedagogy) to adulthood (andragogy). This context demands an understanding of the ideas and aspects of the learning process in this lifespan, as apprentices are, because of their age, in a transition. This transition calls for a new view of teaching philosophy away from a pedagogical view and towards an andragogical philosophy of teaching arrangement, where students are actively involved in their learning process, as explained at the beginning of this chapter.

In the next section, the concept of pedagogy and andragogy and their critical review will be presented. Before looking at the tenets of andragogical assumptions about learners and learning, it is helpful to look at what is meant by 'adult'. According to Knowles et al. (2015), there are at least four viable definitions of 'adult':

- The biological definition: biologically, we become adults when we reach the age at which we can reproduce.
- The legal definition: legally, we become adults when we reach the age at which the law says we can vote, obtain a driver's licence, marry without consent, etc.
- The social definition: socially, we become adults when we start performing adult roles such as full-time worker, spouse, parent etc.
- The psychological definition: psychologically, we become adults when we arrive at a self-concept of being responsible for our own lives, of being self-directing. Regarding learning, it is the psychological definition that is most crucial.

It seems, however, that the process of gaining a self-concept, of self-directedness, starts early in life and grows cumulatively as we biologically mature, start performing adult-like roles and take increasing responsibility for our own decisions (Knowles et al., 2015). Thus, we become adults by degree as we move through childhood and adolescence, and the rate of increase by degree is probably accelerated if we live in homes, study in schools and participate in youth

organisations that foster our adoption of increased responsibilities. Switzerland's apprenticeship scheme seems to be a suitable setting for developing a positive self-concept and self-directedness. But it is not only the setting that is relevant; motivation also plays an important role. Tough (1971) found that many adults are motivated to keep growing and developing, but this motivation is frequently impeded by such barriers as negative self-concept as a student and programmes/courses that violate principles of adult learning (see next sections). Tough's arguments relate to my thesis and support the need for in-company coaches to switch from a pedagogical perception of teaching (teacher-centred) towards an andragogical perception of teaching (student-centred).

3.4. Pedagogy and andragogy

At this point, it is worth explaining the terms 'pedagogy' and 'andragogy', as they are key terms for the understanding of the next sections of this literature review.

Pedagogy is derived from the Greek words 'paid', meaning 'child', and 'agogus', meaning 'leader of/guide'. Thus, pedagogy refers to the art and science of teaching children. The pedagogical model of education is a set of beliefs. This form of pedagogy is commonly known as the transmission or content model. As secular schools were organised in later centuries and public schools in the 19th century, the pedagogical model was the only existing educational model (Knowles et al., 2015). According to literature, pedagogy is a teacher-focused approach to teaching, which assigns to the teacher full responsibility for making all decisions about what will be learned, how it will be learned, when it will be learned and if it has been learned. Knowles et al. (2015) described pedagogy as follows: 'Pedagogy is teacher-directed education, leaving to the learner only the submissive role of following a teacher's instructions' (p. 41). Thus, it is based on these assumptions about learners:

1. The need to know. Learners only need to know that they must learn what the teacher teaches if they want to pass and get promoted; they do not need to know how their learnings will apply to their lives.
2. The learner's self-concept. The teacher's concept of the learner is that of a dependent personality; therefore, the learner's self-concept eventually becomes that of a dependent personality.

3. The role of experience. The learner's experience is of little worth as a resource for learning; the experience that counts is that of the teacher, the textbook writer and the audiovisual aid producer. Therefore, transmittal techniques (e.g. lectures, assigned readings, etc.) are the backbone of pedagogical methodology.

4. Readiness to learn. Learners become ready to learn what the teacher tells them they must learn if they want to get promoted.

5. Orientation to learning. Learners have a subject-centred orientation to learning; they see learning as acquiring subject-matter content. Therefore, learning experiences are organised according to the logic of the subject-matter content.

6. Motivation. Learners are motivated to learn by external motivators (e.g., grades, the teacher's approval or disapproval, parental pressures). (pp. 41-42)

Andragogy is derived from the Greek words 'andras', meaning 'man', and 'agogus', meaning 'leader of/ guide'. Thus, andragogy refers to the art and science of teaching adults (Knowles et al., 2015). The first known use of the term 'andragogy' was by the German educator Alexander Kapp (1833). The term he used was 'Andragogik'. It did not catch on and largely disappeared from usage until Knowles made it widely known in the 1970s. Loeng (2018) wrote,

> Andragogy can be defined as an approach i.e. the total embodiment and expression for a philosophy of education for adults. This approach is aimed at enabling people to become aware that they should be the originators of their own thinking and feeling. (p. 4)

Knowles et al. (2015) were convinced that children and adults do not learn the same way. Nevertheless, they stated that 'the pedagogical model is an ideological model that excludes the andragogical assumptions. The andragogical model is a system of assumptions that includes the pedagogical assumptions' (Knowles et al., 2015, p. 50). The foundation consists of the four andragogical assumptions underpinning their belief that andragogy should be understood as an alternative to pedagogy, a learner-focused approach for people of all ages (Knowles, 1980). In contrast to the abovementioned six assumptions about learners in a pedagogical model, the andragogical model is based on the following presuppositions:

1. The need to know. Adults need to know why there is a need to learn something.
2. The learner's self-concept. Adults have a self-concept of being responsible for their own decisions, for their own lives.
3. The role of experience. Adults come into an educational activity with both a greater volume and a different quality of experience from that of youths. This means that any group of adults is more heterogeneous in terms of background, motivation, needs, interests and goals than of youth. Hence, the emphasis in adult education is on experiential techniques – techniques that tap into the experience of the learners, such as group discussions, simulations, exercises, problem-solving activities and case methods.
4. Readiness to learn. Adults become ready to learn the things they need to know and do to cope effectively with their real-life situations.
5. Orientation to learning. In contrast to children's and youths' subject-centred orientation to learning, adults are life-centred (or task-centred) in their orientation to learning.
6. Motivation. Adults are responsive to some external motivators, but the most potent motivators are internal pressures (the desire for increased job satisfaction, self-esteem) (Knowles et al., 2015, pp. 46-47). From my experience as in-company coach trainer, there are further internal motivators like curiosity and learning for learning's sake.

Knowles (1950) considered that teachers have a completely different role from the transmission model, not as a leader in the learning process but as a facilitator. To sum up, the andragogical model is a process model in contrast to the transmission or content models employed by traditional education. The andragogical model is more an adult approach in which interaction with the learner is central.

Andragogy is relevant for my thesis for the following reasons:
- The apprentices are in transition from childhood to adulthood, and therefore, a model based on pedagogy only is not suitable.
- The development of the needed generic and transferable skills and competencies to meet the labour market's challenges (as discussed in

Chapter 2) cannot be trained with a model based on pedagogy, as this model is teacher-centred, and it is concerned with transmitting information and skills whereas the process model is concerned with providing procedures and resources for helping learners acquire information and skills.

- Andragogy is a learner-focused approach that enhances the partnership between teachers and learners in mutual respect. The andragogical approach to teaching is more holistic, enhancing the value of educating rather than just passing knowledge.

3.5. Critique on andragogy

Some of the criticism of andragogy has come from theorists operating from a critical philosophical perspective. Grace (1996) criticised andragogy for focusing on the individual only and not considering the relationship of adult education to society. Nevertheless, according to Knowles et al. (2015), 'andragogy was never intended to be a theory of the discipline of adult education as it is defined by the critical theorist. Andragogy is a transactional model of adult learning that is designed to transcend specific applications and situations' (p. 74).

3.6. Literature review on Pestalozzi, Vygotsky and Kerschensteiner

At this point is necessary to critical review literature on Pestalozzi, Vygotsky and Kerschensteiner as their ideas are often integrated into consideration of reform pedagogy (Sloane, 2022). Revisiting Johan Heinrich Pestalozzi (1746 – 1827), his significant contributions also for this thesis embedded in a constructivist approach are his educational philosophy and instructional method that encouraged harmonious intellectual, moral, and physical development of learners; his methodology of empirical sensory learning, as well as his use of activities to enhance education (Pestalozzi, 1946). Pestalozzi's method rested on two major premises: children need an emotionally secure environment as the setting for successful learning and instruction should follow the generalized process of human conceptualization that begins with sensation. Pestalozzi believed that education should develop the powers of 'Head', 'Heart' and 'Hands'. He believed that this would help create individuals who are capable of knowing what is right and what is wrong and of acting according to this knowledge. In the literature review, the concept is called 'Pestalozzi Method'

which lies on Pestalozzi's believe, that children should learn through activity and through the handling and use of material objects rather than simply through words. Despite of the critique on Pestalozzi (Ashwin, 1981), it can be stated, that the 'Pestalozzi Method' already well before the time of constructivism learning approach, contained two important elements for this thesis: the importance of a professional relationships between teachers and students and activity and handling as central elements of learning.

Even if Lew Semjonowitsch Vygotsky (1896-1934) works were based on children education, there are some interesting points for this thesis. Vygotsky's social development theory (Vygotsky, 1980a) asserts that a child's cognitive development and learning ability can be actively guided and mediated by their social interactions. Vygotsky, in his book entitled *Mind and Society* (Vygotsky, 1978) , argues from the moment a child is born, learning and development are not separate entities as many other theorists suggest. Rather these two elements are interrelated. He brought up the concept of Zone of Proximal Development. His theory (also called Vygotsky's Sociocultural theory) states that learning is a crucially social process as opposed to an independent journey of discovery. As such, Vygotsky outlined three main concepts related to cognitive development: (1) culture is significant in learning, (2) language is the root of culture, and (3) individuals learn and develop within their role in the community. Vygotsky claimed that we are born with four 'elementary mental functions': Attention, Sensation, Perception, and Memory and it is our social and cultural environment that allows us to use these elementary skills to develop and finally to gain what he called 'higher mental functions' (Vygotsky, 1980a) . Vygotsky's theory provides a profound understanding of teaching and learning that reflects the complexity of social and cultural contexts in the modern learner. Nevertheless, there are some critiques on Vygotsky social development theory, especially on his concept of 'Zone of Proximal Development'. According to Chaiklin (2003) the 'Zone of Proximal Development' is unclear and it does not account for a precise picture of a child's learning needs, a child's present capability level, or a child's motivational influences. The ZPD also does not explain the process of development or how development occurs. Furthermore, according to Lui and Matthews (2005) Vygotsky's socio-cultural theory disregards the role of the individual, but regards the collective. Vygotsky asserted that the mind is not considered separate from the

group. Despite of the critique on Vygotsky, his ideas that learning and development are not separated and development and learning ability can be actively guided and mediated by social interactions are an important contribution in a constructivism view of education.

The literature review process on Georg Kerschensteiner (1854 – 1932) brought up the concept of an holistic understanding of education, and education going behind the concept of training with focus on developing people and 'professional competence' as basis for civic education (Kerschensteiner, 2022). The emphasis on activity forged a connection, according to Kerschensteiner, between physical and mental activities. This very much correspond in a pedagogy that can be characterised as follows (Kerschensteiner, 2022) :

- 'Orientation towards the life-world of the pupils', and for the matter of this thesis for apprentices;
- Emphasis on independent learning and working;
- Changing the school from a book culture to a culture of joint activity for both learners and teachers, and for this thesis move from theory to practice based on theory.

This holistic understanding of education posited by Kerschensteiner can be seen as an act of respecting human beings in their individuality, diversity and learning speed. Furthermore, with the idea of Kerschensteiner of the work-school (Kerschensteiner, 2022) there is a focus on the discussion about cooperation over the locations for learning that can stimulate the debate about on how and where learning take place. It could be described as 'action-theoretical turn' which an influence in curricula.

Revisiting Pestalozzi, Vygotsky and Kerschensteiner through the process of literature review, brought up the importance of a sincere professional relationship based on a transparent communication. This can be seen as a kind of renaissance of the idea, that every form of education, must primarily relate to the development of the person.

3.7. The evolution of learning theory

Constructivism has its educational roots in learning theory. There are three acknowledged branches of learning theory: behaviourism, cognitivism and constructivism (Bransford et al., 1999; Crocco, 2001; Doolittle, 1999; Steffe & Kieren,

1994). Behaviourism, as introduced in North America by Skinner in the 1940s, was supplanted in the 1960s by cognitive learning theory, which devolved into and was to some extent replaced in the late 1980s by constructivist learning theory. Brief sketches of these bodies of theory follow.

Behavioural Learning Theory

Behavioural learning theory is concerned with learner performance – performance is accepted as the only valid evidence that learning has occurred. The basis of behaviourism is Skinner's premise of operant conditioning (Skinner, 1938). Learning is believed to be a conditioned response to a stimulus. The stimulus is provided, a response is elicited and the response is reinforced, either positively or negatively. The behavioural approach is often informally referred to as reinforcement theory because reinforcement plays such a key role in the process. In behavioural learning theory, learning is reduced to conditioned behaviours. What actually occurs within the brain of the learner is beyond the interest of behaviourists. Despite its simplistic view of learning, in certain circumstances it works but leaves many questions unanswered about how learners actually learn.

Cognitive Learning Theory

Cognitivism is an internal orientation to learning. Cognitive learning theorists are more interested in changes in what the learners know and the structure of their knowledge as stored within the brain. They emphasise how learners process new information, incorporate it into existing information/knowledge and how and where it is stored, remembered and recalled. Cognitive learning theories are frequently referred to as information-processing theories. They emphasise complex intellectual processes such as thinking, language development or acquisition, and problem-solving. Essential to cognitivism is the concept of meaningful learning. Learners make knowledge their own in relation to their understanding and its meaning. According to Smith and Ragan (1999), 'recent cognitive learning theorist have concentrated primarily upon the later stages of information processing. Specifically they have conjectured upon the structures and processes surrounding encoding information int long-term memory from working memory, and retrieval of information from long-term memory into working memory' (p. 22).

Constructivism Learning Theory

Constructivism seems to be the appropriate approach to answer the challenges identified by the Department of Education of the Canton Zürich, Switzerland, in relation to the early withdrawal of apprentices as in constructivist learning theory, students learn actively by making sense of new knowledge, making meaning from it and mapping it into their existing knowledge map or schema (Mortimore, 1999). I am convinced that the pedagogical theory to be implemented in Switzerland's apprentice scheme has to come from a constructivist view of teaching and learning, as constructivist learning is based on the notion that learners are involved in building or constructing their own knowledge and understanding. This view is also supported by cognitive scientists and sociologists, as reported by the National Research Council (1999), which stated that 'traditionally teaching has focused too narrowly on the memorisation of information, giving short shrift to critical thinking, conceptual understanding, and in-depth knowledge of subject matter' (p. 25). Teaching and learning for deep understanding (so that learners can critically apply what they know to comprehend and address new problems and situations) have now become the goal of this new pedagogy (Bransford et al., 1999; Garnder, 1999). Ausubel et al. (1968) supported this view by stating that 'constructivism is not offered as a single pedagogical approach or educational panacea, but as a useful professional development framework i.e. to focus discussion and to pursue understanding of teaching for learning' (p. 14).

Constructivism is a theory of learning that has roots in both philosophy and psychology. The core of constructivism is that learners actively construct their own knowledge and meaning from their experiences (Fosnot, 2005). Therefore, knowledge cannot be transmitted; rather, learners become engaged in meaning-making. As Seels (1989) noted on constructivism, 'learning occurs because personal knowledge is constructed by an active and self-regulated learner . . . who reflects on theoretical explanations' (p. 11). This core has roots that extend back through many years and many philosophers, including (Dewey, 1938), (Hegel, 1949) and (Kant, 1946 - Original work published 1781). Philosophically, this essence relies on an epistemology that stresses subjectivism and relativism, the concept that while reality

may exist separately from experience, it can only be known through experience, resulting in a personally unique reality. Von Glasersfeld (1984, 1990) proposed three essential epistemological tenets of constructivism, to which a fourth was added in light of writings in the late 20th century. I believe these tenets continue to hold true in the early 21st century.

1. Knowledge is not passively accumulated but is rather the result of active cognising by the individual.

2. Cognition is an adaptive process that functions to make an individual's behaviour more viable given a particular environment.

3. Cognition organises and makes sense of one's experience and is not a process to render an accurate representation of reality.

4. Knowing has roots in both biological/neurological construction and social, cultural and language-based interactions (Doolittle, 1999, p. 1).

Thus, constructivism acknowledges the learner's active role in the personal creation of knowledge, the importance of experience (both individual and social) in this knowledge creation process and the realisation that the knowledge created will vary in its degree of validity as an accurate representation of reality. These four fundamental tenets provide the foundation for the basic principles of the teaching, learning and knowing process as described by constructivism.

While Fosnot (1996) suggested that 'constructivism is a theory about learning, not a description of teaching' and that 'no "cookbook teaching style" or part set of instructional techniques can be abstracted from the theory and proposed as a constructivist approach to teaching' (p. 29), she offered some general characteristics or main principles to keep in mind as educational practices are realigned.

Learning is not the result of development; learning is development. It requires initiative, self-organisation and motivation on the part of the learner.

Thus, teachers need to allow learners to raise their own questions, generate their own hypotheses and models as possibilities and test them.

Errors belong to learning processes. Teachers should not aim to avoid learner's errors, as errors need to be perceived as a result of learners' conceptions derived from challenges.

Reflection is the driving force of learning. As meaning-makers, not only students but also humans in general seek to organise and generalise across experiences. Allowing reflection time through journal writing, discussion of connections across experiences or strategies may support the learning process.

Learning proceeds towards the development of structures. As learners try to make meaning of what they learn, perspective are constructed – in a sense, 'big ideas' are generated (Schifter & Fosnot, 1993). These '"big ideas" are learner-constructed, central organizing principles that can be generated across experiences and that often require the undoing or reorganizing of earlier conceptions. This process continues throughout development' (Fosnot, 1996, p. 29).

Constructivism is divided into three broad categories: cognitive constructivism, social constructivism and radical constructivism. Social constructivism lies somewhere between the transmission of knowable reality of cognitive constructivists and the construction of a personal and coherent reality of radical constructivists. Social constructivism, unlike cognitive and radical constructivism, emphasises all four of the previously mentioned epistemological tenets. These particular epistemological emphases lead to the defining principles that maintain the social nature of knowledge and the belief that knowledge is the result of social interaction and language usage and is thus a shared rather than an individual experience (Prawat & Floden, 1994). In addition, this social interaction always occurs within a sociocultural context, resulting in knowledge that is bound to a specific time and place (Gergen et al., 1995). Vygotsky (1980b) supported this view. This position is exemplified by (Bakhtin, 1984): 'truth is not to be found inside the head of an individual person, it is born

between people collectively searching for truth, in the process of their dialogic interaction' (p. 110).

Truth, in this case, is neither the objective reality of the cognitive constructivists nor the experiential reality of the radical constructivist but is rather a socially constructed and agreed-upon truth resulting from 'co-participation in cultural practices' (Cobb & Yackel, 1996, p. 37).

Like radical constructivism, social constructivism would be considered a 'strong' form of constructivism, emphasising all three epistemological tenets. This is the main reason for my selection of this paradigm for my thesis and my research.

Fullan (2016b) often used the research paradigm of social constructivism in his field research. Kim supported this approach, stating that constructivism sees reality as a social construct. She supported the concept that in social constructivism, human interests are important for research purposes, and knowledge is constructed through social interaction (Kim, 2001). Constructivism implies that reality is constructed through human interaction. Knowledge is a human product and is socially and culturally constructed. Individuals create meaning through their interactions with each other and with the environment in which they live. Social constructivism emphasises the importance of culture and context in the process of knowledge construction and accumulation. The aim of constructivist research is to understand particular situations or phenomena. Rich data is gathered from which ideas can be formed. The interaction among several people is researched mostly to solve the social problems of the target group. Nevertheless, I share the opinion of von Glasersfeld (1995) that 'constructivism does not claim t have made earth-shaking interventions in the area of education; it merely claims to provide a solid conceptual basis for some of the things that, until now, inspired teachers had to do without theoretical foundation' (p. 4).

It is this solid conceptual basis that I am looking for to convince in-company coaches to make a shift from a behaviouristic teaching approach to a constructivist teaching approach, seeing their apprentices as partners in the learning process and not as receivers of knowledge.

As social constructivism strongly affects the way in which people learn, I believe that teaching methods coming from this learning theory need to be implemented in Switzerland's apprentice scheme to actively involve Generation Z students in their learning process. I have decided to adopt the notion of 'pedagogical constructivism' suggested by Noddings (1990). She took a broader approach in her work and acknowledged constructivism as a cognitive position which leads to the adoption of pedagogical constructivism. This suggests methods of teaching and study consonant with cognitive constructivism. She indicated that constructivism, as applied to teaching, needs to consider much of the thought processes of learners and their elaboration and articulation, such as in social settings and teaching groups. 'The rationale and practices are those of constructivists, who operate within a belief that, cognitive constructivism implies pedagogical constructivism; that is acceptance of constructivist premises about knowledge and knowers implies a way of teaching that acknowledges learners as active learners' (Noddings, 1990, p. 10).

3.8. Critiques of constructivism

But there are some philosophically related challenges arising from a variety of angles, including Millar's (Millar, 1989) identification of the existence of conflicting paradigms at the time when pedagogical social constructivism was first introduced. Researchers continue to debate this issue (Osborne & Dillon, 2008), particularly questioning the empirical basis of its assumptions and in what ways pedagogical constructivism assumes a particular view of knowledge, together with the impact of this in terms of the learning and assessment process. Furthermore, (Kirschner et al., 2006) argued that minimally guided approaches as practiced through constructivist methods ignore empirical studies that have shown that unguided instructions are not effective in learning environments. Goldman and Torrisi-Steele (2002) note that when using constructivism, the learner, rather than the teacher, becomes the focus of the learning environment. Form a constructivist perspective, the focus of instructional design shift from being goal-orientated, strictly structured and ordered knowledge transmission, to a process focussed on reconceptualization of knowledge acquisition to ensure active exploration by the learner. This refocus from teacher to learner has profound effects. The teacher's role changes to a manager of knowledge production,

a facilitator who provides advice in exploration, a guide, a helper and an assistant (Brater, 2014).

 I propose that, despite difficulties in resolving philosophical and epistemological issues, constructivism is a useful mindset and vehicle for the discussion and development of approaches to teaching for learning, and there is a transferability of the generic features of constructivism to a range of contexts. I also suggest that tenets of constructivism, as associated conditions for learning, provide a focus for lively and creative debate with in-company coaches.

3.9. Employability, lifelong learning and the workplace

One of the issues discussed in research on learning, development and human growth has been the rapid change in society and the mental demands that individuals face for their growth as adults in an ever-changing future. Continuous change and the flow of information in different areas of life, external expectations and demands 'challenge the ways of thinking processes and the ability to manage complex reality' (Tynjälä et al., 2012, p. 51). This transformation also has an impact on workplaces. The transition from the Industrial to the Information Age (from a productive or service orientation to a knowledge-based or learning enterprise) necessitates educating a new type of worker. This new worker has been called a 'knowledge worker and is one who is able to use logical-abstract thinking to diagnose problems, research and apply knowledge, propose solutions, and design and implement those solutions, often as a member of team' (Maclean, 2007, p. 215).

Leggett, Kinnear, Boyce and Bennet are among the researchers who have claimed that formal education should include the teaching of skills that prepare individuals to handle complex problems and situations across their life span, to exercise skills which transfer to differing situations and to prepare for a future which is not known yet (Barnett, 2004; Leggett et al., 2009). This view is supported by Maclean (2007), who wrote, 'Education is about the development of knowledge, skills and attitudes' (p. 36). To cope with these continuous changes in society, the concept of lifelong learning can assist in maintaining continuous employment. Hughes (1995, p. 7) has been convinced for some time of the need for lifelong learning. This view is also supported by Delors. The Delors reports (1998) referred to learning throughout life as 'the heartbeat of society' (p. 22) and argued that 'learning how to learn is the

key to lifelong learning' (p. 24). I fully agree that for apprentices, learning how to learn is also the key to continuous employment or employability throughout their working life. I am convinced that apprentices in their companies, supported by in-company coaches with an appropriate pedagogical tool – as described in Chapter 5 – have plenty of opportunities to train skills supporting a positive attitude towards lifelong learning. Furthermore, it is crucial in a fast-changing workplace to make distinctions between 'training for employment and training for employability' (Maclean, 2007, p. 226). Nowadays, the skillsets of jobs are changing so rapidly, and indeed, with altogether new types of jobs being created, 'employers are aware that formal schooling can no longer keep up with the changing demands of the workforce. In the four years it takes to produce a professional, the face and skill sets of that profession may have changed profoundly' (Maclean, 2007, p. 224).

By addressing global challenges in the 21st century and equipping apprentices with the necessary skills to cope with these challenges, education can make a valid contribution as 'it is high time . . . for education to move beyond the acquisition of knowledge and literacy and numeracy skills, which has been the dominant purpose of education in the economic discourse of formal education since the 1960s' (Pavlova et al., 2018, p. 49).

3.10. Challenging the current pedagogy in Switzerland's apprentice scheme

Up to the 1990s, students in Switzerland were mostly socialised at schools according to behavioural learning theory, with some sparse experiments related to cognitivist theory (Schläfli & Sgier, 2008). The VPET is at the intersection between Switzerland's compulsory education system and the world of work (labour market). This leads to tasks and challenges when it comes down to teaching. The objective of the Swiss education system is primarily social integration by teaching elementary cultural techniques and informing people about living together as a society (Schläfli & Sgier, 2008). The VPET system, however, is geared towards the world of work and essentially aims to ensure people have the ability to work in a specific field. In this respect, VPET programs are oriented towards the labour market because by their successful completions, they fulfil what is required to be employable in particular occupations and focuses on the knowledge and skills which can be practically applied in labour market (Wettstein et al., 2017).

From my long experience of working with and observing the practice of in-company coaches, they are still teaching mostly with a behaviourist approach (Schläfli & Sgier, 2008), as in-company coaches have been socialised in the 1990s, and at that time in Switzerland's education scheme, behaviourism was still the predominant learning theory. Behaviourism does not allow a real relationship and a reasonable exchange of opinions between teachers and learners, as presented in Chapter 2. This is with a high degree of certainty a cause for apprentices refusing to accept the authority of in-company coaches as leaders and motivators in their apprenticeship. Fullan (2016b) stressed the importance of seeing students as active participants in their own education and not as passive recipients of learning in the school. Educational change needs to be a people-related phenomenon for each individual. Unless apprentices have some meaningful (to them) role in the enterprise, most educational changes, and indeed most education, will fail. Fullan (2016a) asked the following question to enhance the need for pedagogical change: 'What would happen, if we treated the student as someone whose opinion mattered in how learning occurred and for what purpose?' (p. 138), and he added further, 'If meaning matters to the success of teachers, it doesn't take much imagination to realize that meaning is central to student success' (p. 138). Therefore, I agreed with him that engagement is key to the success of education and the new common ground concerns motivation and relationships, as only when schooling operates in a way that connects students relationally in a relevant, engaging and worthwhile experience in which substantial learning will occur.

As seen in chapter two and chapter three there are new challenges for teachers and in-company coaches related to Generation Z, born between 1995 and 2009 (Geck, 2007; Madden, 2017), in their role as students/apprentices. Not only the presence of new technologies in students'/apprentices' lives but also the way students/apprentices were brought up/socialised by their parents is different from the way in-company coaches were raised. Generation Z was born in a postmodernist world. Generation Z needs a new pedagogical approach in schools as supported by the observations of Fullan, who quoted several of his studies, which clearly showed that students were increasingly disengaged as they moved up the grade levels if they were taught with a behaviouristic approach (Fullan et al., 2018).

For the reasons mentioned above, I am convinced that the current behaviouristic pedagogical approach at school does not appeal to the incoming Generation Z in Switzerland's apprenticeship scheme anymore (as it has clear, rigid roles and competencies and does not build the learning process as a relationship between in-company coaches and apprentices). That is one of the reasons why I am convinced that we need a change in the pedagogical approach in Switzerland's apprenticeship scheme, away from a behaviourist way of teaching towards a constructivist approach. Fullan (2016b) warned that the young generation will force this change: 'kids can't wait any longer, they won't wait' (p. 139). The new common ground for both cognitive scientists and sociologists concerns motivation and relationships; that is, according to Fullan (2016b), 'it only when schooling operates in a way that connects students relationally in a relevant, engaging, and worthwhile experience that substantial learning will occur' (p. 139). I agree with him, and I believe this disconnect between in-company coaches and apprentices is one of the reasons for apprentices to withdraw from apprenticeship. As evidence of this, Fullan (2016b) stated 'that only a small proportion of student are so engaged is a measure of the seriousness of the problem' (p. 139).

3.11. The in-company coaches

Globalisation, advances in technology and the rise of the knowledge economy are part of the contemporary world. As Technical Vocational Education and Training (TVET) becomes increasingly more knowledge oriented, the role of the teachers and in-company coaches must change for the didactic imparting of skills and knowledge to the facilitation of learning (Maclean & Wilson, 2009). In-company coaches are not only part of the transformation of this economy; 'they also contribute to the changes through the knowledge, skills, attitudes, and values that they agree are important and nurture in their student' (Bruniges 2005 as cited in Maclean, 2007, p. 233). Therefore, in-company coaches also play a central role in apprentices' education. As cited in UNESCO (UNESCO, 1996): 'The importance of the role of the teacher as an agent of change . . . has never been more obvious than today' (p. 102). I reformulated this statement by positing that the importance of the role of in-company coaches as an agent of change by educating in a holistic way apprentices and not only to pass knowledge has never been more obvious than today. Research by Hattie, Martin, and others has provided powerful evidence to support what I have observed in my

professional life – that excellent teaching is more influential than any other factor in improving student achievement (Maclean, 2007). Unfortunately, despite the central role of in-company coaches in Switzerland's apprenticeship scheme, I have not found at the time of my literature review process (from 2011 to 2018) any consistent literature on in-company coaches' role. Lamamra et al. (2019) published the results of a research held between 2014 and 2017. That is why I focused my thesis on in-company coaches: they spent much of their time with apprentices during apprenticeship. Furthermore, as teaching is a highly complex and demanding professional task, where teachers are constantly being asked to take on new roles and to deal with the difficulties facing young people in a world of constant change (Maclean, 2007), I believe teachers and in-company coaches need and deserve to be encouraged and supported during this transformation. This support calls for yearly courses after the compulsory course (see Chapter 1).

Maclean (2007) states that, in order for teachers to be committed to changing their practice, and not merely compliant, they must be involved in both the decision-making and discussions about why changes are needed. As there is a gap, as stated earlier, I believe this process to be involved also applies and is crucial to transform in-company coaches to agents of change. 'Furthermore, if in-company coaches are not able to recognise the need for change, then they are unlikely to make necessary and effective changes' (Australian Capital Territory, 2005, p. 13). This support for in-company coaches calls for further training, as broadening the role for in-company coaches requires changes in the way TVET instructors and in-company coaches are educated in teacher training courses (CINTERFOR, 2000). I agree with Pereira when he stated that teachers have to become facilitators to produce independent learners (Pereira, 1996).

3.12. The learning processes

Because of the increased integration of digital devices into our lives, there is apparently a need for pedagogical approaches to adapt and change to better support effective learning for Generation Z. Kyriacou (1997) described learning as changes in a person's behaviour that take place as a result of being engaged in an educational experience. This is similar to Pritchard's (2005) view although he includes the term 'practice' as well as 'experience' (2005, p. 2). I think a broader definition of learning is

helpful to recognise the complexity of learning. That is why I suggest moving from the idea of learning towards educating. An 'holistic learning, that includes the notion of the development of the whole person, i.e. both the cognitive and affective dimensions' (Miller, 1991). Education is more than just learning; education is an activity undertaken or initiated by one or more agents that is designed to affect changes in the knowledge, skills and attitudes of individuals, groups or communities (Knowles et al., 2015).

In the research context, I was looking for new pedagogies promoting new learning partnerships between and among students and teachers, leading to success in a similar setting of education involving the young generation. Fullan (2018) calls this pedagogy deep learning and delivers a set of tools and principles which have been proven to work. Fullan et al. (2018) stated the following regarding deep learning: 'deep learning is quality learning that sticks' (p. 9) and added that deep learning alters the nature of learning, as it shapes the outcomes learners take into society. This final quote supports my intention to implement a method derived from a social constructivism approach. In a fast-changing world, there is a need for self-directed students who perceive learning as education for their whole life.

3.13. Managing educational change

I consider Fullan a valid resource about reflection on the leading trends and ideas on educational change over a 50-year period (Fullan, 2018). Fullan warned that improving whole education systems has proven to be a frustrating quest (Fullan, 2016a). Maclean (2007) agrees by adding that research has clearly indicated that pedagogical practice is probably the most difficult thing to change in education (Maclean, 2007, p. 249). For this reason I have decided to study Fullan's papers, read his books *The New Meaning of Educational Change* (Fullan, 2016b) as well as *Surreal Change – The Real Life of Transforming Public Education* (Fullan, 2018) to be aware of the possible obstacles in implementing the new method of active learning in Switzerland's apprenticeships scheme.

Fullan's concern is especially about changes not being implemented because the change is not supported by the culture of the school (2007, p. 35), and therefore, the need to create training that enhances the development of collaborative cultures is an extremely useful insight for my case study when it comes to collaborating with the in-

company coaches. Fullan (2007) provided a fivefold model that he claims to be the model for what he calls an effective change (2007, pp. 19-20).

This fivefold model presented by Fullan (2007) is a moral guide to my steps through my PhD journey whenever I am acting as a reflective practitioner and interacting with in-company coaches: 'moral, purpose, understanding change, relationship building, knowledge creation and sharing and coherence making' (p. 49). His final sentence, 'Solutions need precision, but they also need motivation to act' (p. 36), recalls the responsibility in my project whenever it comes down to make changes possible and doable.

3.14. Summary

This literature review was limited by the fact that there is a gap in the literature covering in-company coaches in Switzerland's apprenticeship scheme (see Chapters 1 and 2). Nevertheless, the literature review covered several different important aspects for this thesis. First, the review on postmodern society and his epochal impact on education showed that multiple points of views and truth seem to be allowed when it comes to knowledge. As seen, I do not share this idea of being an epochal change, rather an incremental change. Furthermore, Generation Z plays an important role, as this is the generation attending apprenticeship. Even if not every young person has the characteristics found in the literature about Generation Z, common tenets seem to play important roles when teachers work with them in an educational setting.

As I posited that in Switzerland we need a new teaching approach, I reviewed characteristics describing when children and adult learn. Pedagogy and andragogy provide a useful orientation even if apprentices are – because of their age – in transition from childhood to adulthood and therefore not children anymore but not adults yet. The pedagogical tool to promote active learning will therefore be a fusion between pedagogy and andragogy. The review of learning theories and the evolution of constructivism had a great impact on the way I now see constructivism, the learning theory to effectively implement active learning, in the setting of Switzerland's apprenticeship scheme in a postmodernist world. As written in the chapter, based on many writers I chose to read and examine, constructivism needs to enter into Switzerland's apprenticeship scheme's educational theory for many reasons: the

world at work is continuously changing and asking for a set of transferable skills which can be effectively educated with a constructivist approach. The need for in-company coaches to meet Generation Z's expectations whenever they are attending courses by being creators and not only consumers of content calls for a constructivist approach. Switzerland's apprenticeship must be upgraded from training towards educating, a more holistic view of building up a young person and not merely passing knowledge and content. As a consequence, in-company coaches need to take over new roles.

But when it comes to putting constructivism into practice, teachers – and I posit so in-company coaches – are left with many and varied suggestions and ideas of practice, some still at the theory stage and many in various forms of practical advancement and documented in conference proceedings and academic journals. This largesse also became the quandary for in-company coaches. Much of the literature revealed not only the strong positives about constructivism but also some of its flaws. This then posited the fundamental question: what constitutes constructivism for in-company coaches in companies whenever they are interacting with apprentices belonging to Generation Z in a postmodernist world? Moreover, how does an in-company coach grapple with the subtle nature of educating in a constructivist environment?

4. Methodology and methods

The chapter starts by recalling the research questions, reviewing the literature and describing the methodology selected to conduct this study – action research. It presents the decision-making process of selecting action research as the guiding methodology and shows the position of the reflective practitioner in action research, the design and the process by which the plan was implemented during the case study.

4.1. Research questions

The subject chosen and the setting selected emerged from my educational and professional background and field of activity for the past 20 years as briefly explained in Chapter 1.

The first objective of the study is to apply active learning as a new method in Switzerland's vocational training (apprenticeship) to enable young apprentices to learn actively and independently in their working environment.

The second objective is to develop a set of principles for active learning, derived from constructivism, to be operationalised from in-company coaches in daily business.

The third objective is to follow the in-company coaches and apprentices for two years to study and analyse their action or reaction to the new method and determine if and which kind of support in terms of self- and social competency development in-company coaches may need.

There are five key research questions leading my journey:

Question 1 and 2

1) In what ways, if any, do coaches need support to implement active learning in their retail outlet?
2) What difficulties (if any) do the coaches encounter in dealing with the new method of active learning?

Question 3

What impacts of active learning (if any) do coaches report on apprentices' personal development and performance?

Question 4

What impacts of training in active learning (if any) do coaches report on their own behaviour as educators?

Question 5

How has the training in active learning influenced my behaviour in my role as educator?

4.2. Research framework

The thesis is based on fieldwork research influenced by the position of an interpretivist (Thomas, 2017). The variety of conceptual approaches underpinning the subject makes quantitative methods not only unsuitable but potentially dangerous, since two individuals can give the same answer to a question and mean very different things. This means that 'the opportunity to follow up any questions and tease out the meaning behind any statement, is particularly important' (Sarantakos, 1998, p. 44). It also suggests that any positivistic search for some objective truth about active learning will be fruitless not only because contrary views will always be held about its nature but also because it is itself a continually evolving idea, which changes over time.

4.3. Ontology and epistemology

My research is best described as being based on idealist assumptions regarding ontology and interventionist assumptions with regard to epistemology. Idealism suggests that 'reality consists of representations that are the creation of the human mind, and that social reality consists of shared interpretations' (Blaikie, 2010, p. 93).

The starting point for my research was that in-company coaches perceived their role as a coach and their duties in several ways, and my intention was to explore and contrast these different understandings rather than to attempt to establish one that was correct.

Using a deductive approach and a qualitative design, the methodology used in the thesis is participatory action research (PAR). This methodology had an impact on the material collection technique: the design was multimethod, using four case studies and expert interviews. In the literature, PAR is used as a synonym for action research

(Winter, 1989b). PAR has therefore been defined as having a double objective: 'One aim is to produce knowledge and action directly useful to a group of people through research, adult education or sociopolitical action. The second aim is to empower people at a second and deeper level through the process of constructing and using their own knowledge' (Reason, 1998, p. 71). McNiff added, 'Action researchers believe that all people are equal and should enjoy the same right and entitlements. They are able to exercise their capacity for creativity of mind to create their own identities and allow other people to create theirs' (McNiff, 2013, p. 26). This view also corresponds to my view or, as Bourdieu (1990) would say, to my habitus (see Chapter 1).

Action researchers also believe that people 'try to find ways of accommodating different values perspectives, which can be difficult when values differ. They try to find ways of living together in spite of possible differences and see things from the other's perspective; this involves recognising and suspending their own preconceptions' (McNiff, 2013, pp. 27-28). This is exactly what I believe; people find ways to accommodate different values perspectives if they are willing and motivated to work together.

As there is no prior research on the topic on the specific field of apprenticeship in Switzerland's apprenticeship scheme and the approach chosen is an interpretivist one, nomothetic enquiry is not suitable.

By taking an etic position, I will have the opportunity to have a particular view of particular events in a particular culture or environment (Pike, 1967). An etic viewpoint studies behaviour from outside a particular system; the emic viewpoint results from studying behaviour from inside the system. The vocabulary used to write the thesis will be very much an etic one, as I have been embedded in the field of education for more than 20 years.

4.4. A qualitative study

Given the constructivist nature of my research, it was appropriate to adopt a qualitative methodology. I was interested in understanding which kind of support, if any, was needed by in-company coaches after implementing active learning. Furthermore, I wanted to look at which kind of changes, if any, the implementation of active learning causes in in-company coaches' behaviour by playing an 'active rather

than a passive role in the research and employing a dynamic flexible approach rather than a static inflexible one' (Sarantakos, 1998, p. 35).

Collecting material in an action research project is not a snapshot of a single incident like a test score, nor should the material collection process rely on a single type of data, for example, collecting only survey data or observations. Rather, action research involves a series of quick looks taken at different times and in a variety of ways. In this sense, the material collection process in action research is much like collecting soil samples: the researcher collects little bits of soil in different places over time.

This is the main reason why I have decided to keep a research diary, as I had experienced many times during meetings with in-company coaches more valuable statements and thoughts coming up or spoken out during informal moments (e.g., coffee breaks, luncheon, etc). I also encouraged the four in-company coachers to keep a diary and reassured them that they were confidential. I explained the utility of a diary to give them a ritual, whenever they were reflecting, by inviting them to take notes of their personal reflection.

Given the considerations outlined above, this project has not been overly concerned with the kind of strict issues of reliability and validity that would be a feature of a more positivistic piece of work. However, since the aim is to make a meaningful contribution to the discussion, and ongoing development, about more progressive in-company coaches' teaching approaches, it is important that there be some kind of generalisability to the research; otherwise, it risks being simply an anecdotal account of the viewpoints of a relatively small number of individuals, myself included. When planning the research, I heeded the advice of Schofield (2002) (as cited in Cohen et al., 2007) that 'it is important in qualitative research to provide a clear, detailed, and in depth description so that others can decide the extent to which findings are generalisable' (p. 200). Equally, although drawing on a fairly small local sample of in-company coaches in Switzerland, careful consideration was given to ensure a good variety in terms of the characteristics of in-company coaches. The four in-company coaches had the following professional backgrounds and personal characteristics:

In-company coach 1: 55 years old, male, managing director of his outlet, began his professional career with an apprenticeship. Along his professional life has followed further education. Coach A has formed apprentices for the past 30 years.

In-company coach 2: 40 years old, male, managing director of his outlet, began his professional career with an apprenticeship. Along his professional life has followed further education. Coach B has formed apprentices for the past 15 years.

In-company coach 3: 45 years old, female, responsible for the apprentices in her outlet, began her professional career with an apprenticeship. Along her professional life has followed further education. Coach C has formed apprentices for the past 20 years.

In-company coach 4: 32 years old, male, responsible for a department in his outlet, began his professional career with an apprenticeship. Along his professional life has followed further education. Coach D has formed apprentices for the past 5 years.

Cohen, Manion and Morrison's (2007) discussion of validity and reliability with regard to interviews was drawn upon when preparing the research design, and I aimed to avoid some of the potential pitfalls highlighted. The first pitfall was a potential lack of understanding on the part of the interviewee regarding the language and concepts associated to active learning, and the second one was the 'risk of bias being introduced through a projection of my own views' (Cohen et al., 2007 p. 150).

As already mentioned, I have been training in-company coaches for the past 20 years, and it is inevitable that I hold certain opinions and assumptions regarding in-company coaches and their teaching methods. A clear acknowledgement of my own positionality and a careful determination to avoid leading the interviewees' responses were regarded as the best form of protection with regard to this challenge, but I know that in no sense can I guarantee to have my own bias. My intention was to set up a set of principles to implement active learning, as well as to develop in-company coaches as reflective practitioners. I believe that these will be of wider interest to those working in this area and will make a useful contribution not only to any discussions regarding the future of apprenticeship in Switzerland but also in a more practical and operational way in daily business.

4.5. An interpretivist study

Given the discussion above, it was clear that my research would be best situated within an interpretivist rather than a more positivistic framework. It would attempt to understand actions and meaning rather than causes; involve me personally rather than be conducted from 'outside'; concern itself with a perceptions feelings, ideas, thoughts and actions rather 'than things which could be quantified and counted, and it would examine emergent patterns rather than variables that had been decided on in advance' (Cohen et al., 2007 p. 33).

McNiff (2013) stated that 'as action researchers regard learning and experience as processes that enable individuals and groups to negotiate choices about who they are and how they are together, they do not aim for consensus or harmony, but try to create spaces of understanding and negotiating differences' (p. 30). By involving the in-company coaches from the very beginning of the research and inviting them to keep a diary, I wanted to help them to become action researchers as well. I wanted to allow them to discuss and negotiate together, during my workshops according to the scheduled presented in this chapter, which kind of learnings they have experienced in the meantime (here with the meaning of 'between the four workshops').

McNiff (2013) stated that 'action researchers believe that all people are equal and should enjoy the same rights and entitlements' (p. 27). This corresponds to my habitus and is important to create an environment, where we could work trusting each other, as participation is a critical component of action research. Greenwood and Lewin (2007) emphasised that 'action research is a social process in which an action researcher works with members in an organisation, as a facilitator and teacher, to improve the situation for these participants and their organisation' (Brydon-Miller et al., 2003; p. 17). I fully agree with this view of action research being a social process, where researchers work with members in organisations.

'Therefore, reflection on action, an idea popularised by Schön (1983) becomes a core assumption' (McNiff, 2013, p. 30). In my opinion, reflection is a core assumption not only for the researcher but also for the members in organisations as 'action research involves learning in and through action and reflection' (McNiff, 2013, p. 24).

To sum up McNiff (2013), action researchers see 'knowledge as something they do, a living process. People generate their own knowledge from their experiences of living and learning. Knowledge is never static or complete; it is in a constant state of

development as new understandings emerge' (p. 29). Or as Winter (1989a) describes in his book, learning is seen as rooted in experience. I believe that experience is something everyone needs to personally make/do to learn. That is the reason why I have decided to select action research as methodology: to allow the in-company coaches to learn.

Every methodology has advantages and disadvantages. I considered the advantages of action research as follows: it enables a high level of practical relevance of the research, furthers a collaboration between researcher and members of organisations to solve organisational problems and promotes the acquisition of in-depth knowledge about the issue being studied. Nevertheless, I am aware of possible disadvantages related to this methodology. To sum the idea of Brymann and Bell (2015), there are two points: difficulties in distinguishing between action and research and ensuring the application of both, and the lack of repeatability and rigour. Koch and Lau (2001) presented further threats, which are referred as uncontrollability, contingency and subjectivity, which seem to be associated with the emergent nature of most action research investigations. The essence of the uncontrollability threat is that while the environment being studied will often change in ways that have been predicted by the researcher, sometimes change will happen in ways that are completely unexpected. The contingency threat is linked to the problem that the body of data collected is usually broad and shallow rather than narrow and deep like the bodies of data collected through, for example, experimental research. The vast body of shallow data collected through action research studies seldom provides cumulative evidence that points to a particular effect or refers to a particular construct and is often difficult to analyse because the rich context in which it is collected makes it difficult to separate different components that refer to particular effects or constructs. The subjectivity threat is linked to the deep involvement of researchers with the organisation in action research studies, which may hinder good research by introducing personal biases in the conclusions. I was aware of the last threat, which is also a possible bias. Nevertheless, I have decided to select action research because I wanted an intense collaboration with the in-company coaches by testing a new approach to coaching apprentices. I share the idea of McNiff (2013) that 'action research is about putting ideas into action, not only talking about them' (p. 51), and

researchers can learn from theories in the literature as well as create their own personal and professional theories of practice from the experience of doing practice.

I end this section by quoting McNiff, as she precisely describes my philosophy and my beliefs as researcher:

'Some theorists believe that learning happens only in critical episodes, or in official settings such as classrooms. Yes, but learning also happens in our moment-to-moment living' (McNiff, 2013, pp. 29-30). For these reasons, I have selected action research as methodology, as it is about putting ideas into action and not only talking about them.

4.6. The role of a reflective practitioner in action research

Because action research is undertaken by myself, in my role as reflective practitioner, it may be referred to as practitioner research or practice-led or practice-based research. It is a form of on-the-job research, undertaken by people in any context regardless of their status, position, age or previous experience. It involves me thinking carefully about what I am doing so it becomes critical self-reflective practice.

'Critical self-reflection is central. In some social science forms of research, researchers tend to do research on other people. They observe other people and ask: "How do I describe and explain what they are doing?" . . . No distinction is made between researchers and practitioners' (McNiff, 2013, p. 23).

To gather data in an action research context, I have to monitor the practices of myself and in-company coaches, which means observing what is going on and keeping records, capturing records of the action as data, analysing this and interpreting it to generate evidence. Therefore, I have taken the position of a coach and used a qualitative approach for gathering data, before, during and after the implementation process of a new form of support for in-company coaches in companies.

> Action research therefore becomes an enquiry by the self into the self, with others acting as co-researchers and critical learning partners. Therefore, although I think for myself and I explain how I hold myself personally accountable for what I am doing, I recognise that I am always in relation with other people, always situated in a real-life social, political, economic and historical context. (McNiff, 2013, pp. 23-24)

To sum up, action research involves learning in and through action and reflection and is conducted in a variety of contexts.

I have decided to adopt the lens of a reflective practitioner. Schön (1983) defined reflection as knowing-in-action and explained,

> When a practitioner reflects-in-action in a case he (sic) perceives as unique, paying attention to phenomena and surfacing his intuitive understanding of them, his experimenting is at once exploratory, . . . and hypothesis testing. The three functions are fulfilled by the very same actions. And form this fact follows the distinctive character of experimenting in practice. (p. 72)

I believe this is the distinctive character of experimenting in practice and therefore important to my research, as the practice context is different from the research context in several important ways, all of which have to do with the relationships between changing things and understanding them. Schön (1983) stated, 'The practitioner has an interest in transforming the situation from what it is to something he likes better. He also has an interest in understanding the situation, but it is in the service of his interest in change' (p. 72).

All these actions need to be done within an ethic of care and respect for others and for the self. Care and respect are two important aspects also of action research, as McNiff (2013) claims:

- Action research is always collaborative.
- The aim of my enquiry is to try to exercise my educational influence on other people's thinking and my own.
- My thinking influences my actions, and my actions influence my thinking.
- I hope that my thinking and actions will inspire and influence other people to reflect critically on their thinking and actions.
- Their revised thinking and actions in turn influence my thinking.
- . . . and so it continues to develop. (pp. 104-105)

The whole system becomes interrelated and mutually reciprocal. I am in a web of critical thinking and action that aims to influence new ways of thinking and practice in the apprenticeship scheme in Switzerland. The abovementioned points have implications for what I monitor and how I gather data about it. I have to monitor different processes and therefore gather data about

- my own thinking and practice,
- other people's thinking and practice,
- how I am influencing others,
- how I am developing new insights and practices through the interactions.

My records can therefore take a range of forms to capture these individual and collective actions, which is the reason for a double loop in this research: I will be monitoring what I am doing and monitoring what other people are doing. To monitor my thinking, I used a research diary in written, audio- and video-recorded forms and kept copies of e-mails, texts and interactions on social networking and pictures. As cited in this chapter, to monitor in-company coaches in their role as participants in my research, I invited them to keep a diary, as only they can monitor their thinking. As for ethical reasons, I did not ask them to show me what they have written. Nevertheless, I did ask them to share some of the contents with me during regular interviews according to the schedule presented in this chapter.

4.7. Research design – schedule of workshops

In my role as researcher with reflective practitioner's lenses, in an action research methodology setting, I decided to plan my research according to the spiral of action research cycles according to S. Kemmis et al. (2014).

Image 2: Spiral of action research cycles

Source: Retrieved 22 July 2021 from

<u>https://www</u>.researchgate.net/publication/267928281_Social_Entrepreneurial_Leader ship_Creating_Opportunities_for_Autonomy/figures?lo=1&utm_source=google&utm_ medium=organic

I decided to carry out the research by holding an information session, four workshops and two rounds of interviews with the in-company coaches. The first round of interviews with the in-company coaches was held between February and April 2017, and the second was held between January and March 2018. The information session was meant to give an overview of the intention of the research and answer the questions of the in-company coaches and took place 10 January 2016.

The outcome of the four workshops is reported in Chapter 6. Each workshop was evaluated, and the outcomes influenced the targets and the subjects of the following workshop according to the stance of action research. Unlike some other studies, analysing results does not come at the end of my thesis, but it is an ongoing process, influencing directly the following steps.

I described the process of planning and doing the action research project in Chapter 5. I wanted to plan carefully to ensure my action would be as successful as possible, and I decided to structure my planning according to McNiff (2013): 'Planning involves asking questions about: What are you doing; How and why you are doing it; what you want to achieve; how you can evaluate outcomes in terms of the values you hold' (p. 90).

The four workshops had the following purposes:

Workshop 1 was a kick-off with the four in-company coaches and the head of education and further education of the company. It was held 2 June 2016. The aims of the first workshop were:

- To get to know personally the four in-company coaches;
- To find out how the in-company coaches perceived their task within the learning process of the apprentices, establish coaches' initial attitudes to teaching and their knowledge of pedagogies;
- To prepare the practical introduction in the outlets of the new pedagogical tool IAZPERKA.

Workshop 2, held 29 September 2016, picked up as a central theme the first experiences and reactions gathered after the introduction of IAZPERKA in August 2016 with the beginning of apprenticeship for the new apprentices. I was interested to find out how in-company coaches put into practice the new method. What did they find 'easy' to deal with? Did they need support? If so, which kind of support?

Workshop 3 was held on 17 August 2017 and focused on reflection about the role of an in-company coach in Switzerland's apprenticeship scheme. I wanted to thematise how in-company coaches conceive their role as in-company coaches and which kind of support, if any, they need because of the introduction of IAZPERKA.

Workshop 4, held 16 February 2018 focused on reflection about the self- and social competencies needed by the company coaches to implement IAZPERKA and the linked change in attitude towards their perception of the in-company coaches' role.

In between the first and second workshops, I interviewed the in-company coaches for the first time on an individual basis, geographically away from their outlets (see Chapter 7).

In between the second and third workshops, I interviewed the in-company coaches for the second time on an individual basis, geographically away from their outlets. On both occasions, interviews were semi-structured. Both sessions were held during working time and were paid by the company (see chapter 7).

4.8. The interviews

As mentioned, to establish coaches' initial attitudes to teaching and their knowledge of pedagogies, I interviewed the coaches focusing each time on different topics. Every interview was voice-recorded, transcribed and analysed.

I transcribed and analysed the interviews to reveal evidence of knowledge development within cases and to discover common themes between the different coaches. The data generated needed reflection and interpretation, and I used Alvesson and Skoldberg's (2000) notion of 'reflexive methodology'. This foregrounds the role of the reflective practitioner in interpreting the data. For this purpose, I kept a research diary throughout my journey. In this research, the interpretation of the interviews was based on 'differentiation in the sense of ability to see various aspects; theoretical sophistication; theoretical breath and variation; and the ability to reflect at the meta-theoretical level' (p. 250).

Having already prepared the key questions for the two rounds of interviews, I compiled a list of subquestions and follow-up enquiries to make sure that, although the interview would feel as much as possible like an organic conversation, it would cover all the areas in which I was interested. I then conducted a trial interview with a trainer, who was not part of the sample and who was prepared to give me some feedback on my approach. This led to some minor alterations, most notably softening the questions about personal competencies, which my test subject considered might be a little intimidating in their original form. This was a further reminder, should it have been needed after the initial meeting, that speaking about the skills required to implement active learning required confidence between me and in-company coaches, and the lack of it could consequently lead to a kind of prudent or guarded response. It was therefore important that I did all I could to put the interviewee at ease. At this point, I wanted to point out that 'the interview is a social, interpersonal encounter, not merely a data collection exercise' (Cohen et al., 2007 p. 361).

To put the in-company coaches at ease, the in-company coaches could withdraw at any time from the project without giving any explanation from any statements, opinions and insights. We agreed on the confidentiality of every workshop and every communication by any means (e-mails, phones, etc.), and they were allowed at any time to contact me if they had questions.

Generally, the interview process was much more pleasurable than expected. Most interviewees were pleased to discuss the impact and the challenges of active learning. I felt that they were also excited to have a researcher interested in them in their role as in-company coaches. It was notable at any time that there was a strong level of commitment to the project even with a high degree of uncertainty existing over the possible personal failure by making what they called mistakes at some stage of the project. I supported the in-company coaches telling them that I was available at any time to support them in case of uncertainty.

Upon arrival at their outlets, I asked each interviewee if there was somewhere quiet where we could talk uninterrupted and if they would permit me to record the conversation to be able, once back home, to transcribe the content. Everyone agreed.

They were very generous with their time, with many of them making available considerably longer than the 45 minutes requested by invitation. Everyone was open to discussion and ready to give their opinions and insights. The questions asked in the two rows of interviews can be found in Appendix 03.

4.9. Producing transcriptions

I recorded every conversation digitally as MP3 files. Originally, my intention had been to carry out analysis of the interviews by using NVIVO coding software to directly tag and code sections of the audio files themselves. I experimented with this process, but I felt it was not the most appropriate way to look at data in the way that I wished. Ultimately, I decided to transcribe the interviews in full and in verbatim. I personally considered this process of transcribing every interview word for word a crucial investment in my research rather than a time-wasting activity. Listening to my interview partners at home, in a quiet environment, and typing their words opened new ways to interpret what they said. The transcription of the interviews can be found in Appendix 04.

4.10. Research diary

Although primarily a personal resource to ensure that I kept track of my thoughts and observations as the research started and progressed, in many ways the research diaries (here in plural) became the key source and resource as they tracked

a journey from practice to theory, from theory to self-reflection and back. As a behavioural trainer working with in-company coaches, I began this project by deepening and extending my own knowledge and understanding of the theoretical basis and underlying philosophy of active learning in the context of the Switzerland apprentice scheme. The research diary allowed me to reflect on the development of my ideas as the research progressed and was also invaluable in helping to connect the early conceptual part of the research, which examined the underlying philosophy of teaching theories and the potential of active learning and its purpose.

I realised that I was applying several teaching methods in my business life fully convinced that I had understood them, but this was not the truth. This fact made me reflect for several days, thinking about other people who assume or pretend to know things/concepts or models but not having a clue about it. After deepening my own knowledge, I was able to apply what I had learned, both in my own teaching and my fieldwork research, which focused more generally on the actual practice of in-company coaching teaching methods. I have extensively written about it in Chapter 9 answering research question 4.

4.11. Data analysis

To a degree, the nature of data analysis was always going to be partly determined by the experience of the interviews and by the material obtained. However, within the broadly established research framework, I did give considerable thought to this area before I embarked on the research itself, primarily to ensure that my approach to data collection did not rule out any forms of analysis that I might later wish to pursue. As mentioned in this chapter, the work on the literature had shown a broad typology of learning theories and linked attitudes towards them. This was sometimes helpful when used within the interviews as a broad frame of reference, but I was aware of the need to exercise caution and ensure that connections were not made too readily and wished to avoid guiding interviewees down particular pathways.

Since this research was situated squarely within a constructivist, qualitative paradigm, I aimed to avoid analytical methods which gave a more positivistic weight to any conclusions. Even a grounded theory approach, I felt, might be too restrictive having in mind Thomas and James (2006), who argued that 'if researchers . . . pick

up and run with grounded theory, they risk losing the best of qualitative inquiry' (p. 791).

My research did not aim to establish any objective facts; it rather aimed to explore in greater depth the potential of active learning and the support needed, if required, by the in-company coaches. The intention was not to form definitive judgments but stimulate debate and encourage implementation in other branches and companies. Nevertheless, as cited in Chapter 1, my research aimed to make contributions to theory and practice.

I was also aware that it was important that a thesis which aims to implement a new method does not become too generic. As a trainer myself, I was keen that the views of practitioners should be clearly given voice within this research. I have chosen to do this by making judicious use of direct quotations to give a strong sense of the voice of the in-company coaches involved in this project. I was aware of the limits of voice in qualitative research. The book *Voice in Qualitative Inquiry: Challenging Conventional Interpretative Conceptions in Qualitative Research* (Jackson & Mazzei, 2009) helped me as a researcher to be more aware of possible bias and misinterpretation when listening to in-company coaches during workshops and interviews. Thomas (2017) was a precious help to organise data analyses. The analysis of data was according to the following three methods:

For the workshops, I voice-recorded the four workshops, and at home I worked with the summary network of themes and subthemes (Thomas, 2017, p. 246), a technique that helped to organise what has been said.

For the diaries, I worked with theme mapping. I worked with the constant comparative method (Thomas, 2017, p. 246). Once I established the themes, I went through working data files and looked for good quotations that illustrated these themes.

For the interviews, I worked with the construct mapping technique (Thomas, 2017, p. 247). Construct mapping technique puts themes in sequential order from the interview and uses lines and arrows to make connections between the ideas and the themes.

4.12. Triangulation and positionality

Triangulation serves the dual purpose of offering potential corroborative evidence for the research findings or alternative explanations that may challenge my assumptions as a professional and 'those made by the structure of the research project itself' (Cohen et al., 2007 p. 144). The opportunity for triangulation within Switzerland's apprentice scheme was extremely limited because, as previously mentioned, there were no reports about the phenomenon of early withdrawal from apprenticeship in Switzerland (Appendix 14). Luckily, the occasional paper of the Australian National Centre for Vocational Education Research (Bednarz, 2014) helped with a certain amount of cross-referencing, showing parallels in the behaviour of Swiss and Australian apprentices when withdrawing from their apprenticeships. That is why I planned to work with what the research methodologist Denzin (1978) called methodological triangulation, where more than one method was used to collect data. I compared interview responses with the comments of in-company coaches in their diaries as well as data from voice-recorded workshops.

Whilst the temptation existed, particularly given my current status as a behavioural trainer teaching in-company coaches, to view particular responses in a way that made them suit comfortably within my worldview, I was always aware that it would be much more useful not to mention it, to acknowledge that they may be interpreted in contrary ways. It was appropriate to consider the issue of positionality. As a working professional within the field, it was inevitable that I entered the research with some pre-conceptions regarding not only the behaviour of in-company coaches but also the teaching and coaching method used by them. Moreover, I entered the research with preconceptions regarding active learning and its successful delivery. Whilst this was openly acknowledged and was not consistent with the constructivist approach of the study, I was not interested in simply confirming my own prejudices and hoped that drawing upon existing research would help me maintain an approach which was open-minded and rigorous.

4.13. Ethical considerations

I fully respected ethical issues throughout the study. I had a fully proactive and transparent communication by giving reasons for the research project, its purpose to the organisation and to the four in-company coaches at any time. My collaboration

with the company was based on a written agreement (Appendix 15). The company did not pay me, as I am self-sponsored. I was not and am not involved in any assessment or judgment of the in-company coaches involved in the research. I respected and followed the University of Gloucestershire's ethical guidance and the British Educational Research Association (BERA) guidelines on research ethics, and I confirm that all the interviews were held with nonvulnerable adults older than 18 years. In particular, I did not deal with minors, as my research focused on in-company coaches (adults) and not apprentices (minors).

The main ethical issue was, therefore, ensuring that proper informed consent was received from the participants and that their anonymity and that of their outlet were maintained (Sarantakos, 1998, pp. 20-25). The background and purpose of the research were carefully explained to the in-company coaches and sent with a preliminary task (Appendix 05), and they were reassured that this was a piece of work which dealt with the implementation of a new coaching method rather than tested their quality and competencies in their role as in-company coaches. This approach had the dual function of ensuring properly informed consent and putting them at ease to maximise the effectiveness of the collaboration and our relationship during the workshops and interviews. The participants were informed throughout the entire process about their right to withdraw at any point without consequences for them. I left my contact details to allow them to ask any questions that might occur to them at a later date.

The anonymity of the participants has been assured throughout the thesis and the project using pseudonyms. All the data have been stored in a secure way, encrypted, locked on a memory card and password-protected.

My intention has always been to make a positive contribution to any debate about the subject, maintaining that extra caution required when acting with a small sample, within a relatively small geographical area and where I have a professional role in the community.

4.14. Data analysis – Analysing the transcriptions of workshops

Action research is always collaborative. Kemmi's model of action research processes (Kemmis & McTaggart, 1988) shows a 'self-reflective spiral of planning, acting, observing, reflecting and re-planning as the basis for understanding how to

take action to improve an educational situation' (McNiff, 2013, p. 63). That is why data will have a direct impact in replanning the next steps to improve the educational situation.

4.15. Reflections on the data collection

Because of the nature of my personality, I was always, and always will be, extremely critical about an objective self-reflection avoiding the bias of self-satisfaction or even complacency. This is due to my education as a trainer and the fact that I have always had high expectations towards my actions, my thoughts and critical thinking.

Critical thinking has been defined as 'analysing and evaluating thinking with a view to improving it' (Paul & Elder, 2006). It is used to describe a higher level of intellectual thinking, reasoning and analysis imbued with reflection. Smith (2009) wrote, 'Critical thinking is also considered important within doctoral level study and within professional practice itself, where decisions and actions are complex and may be underpinned by a variety of factors' (p. 35).

Nevertheless, I was quite happy with the data collection process. The literature review on changing pedagogies and about Switzerland's apprentice scheme was extremely helpful in providing a reliable framework for the interviews as well as for my reflective practitioner's diary. Having already explored and read about a variety of interpretations and studies regarding active learning, I was able to maintain a degree of neutrality in my questioning, which has been for sure more difficult given my own feelings at the outset of the research.

Thinking about potential criticism towards my project at the time of planning, I came to a point related to the in-company coaches' apprentices and the fact that I did not have any contact with them: be it informal talks or interviews. I deliberately decided not to include apprentices' voice in my thesis for the following reasons:

- Hierarchy – The apprentices have been hired by their employers, and it is they who assume total responsibility in conjunction with in-company coaches to lead them. I did not want to interfere and cause confusion in daily business.
- In-company coaches – They are responsible for their apprentices. I did not want to weaken their position by interfering in their communication.

- The apprentices – I started the project to implement active learning through IAZPERKA (see Chapter 5) with the in-company coaches at the beginning of the apprenticeship. So the apprentices were, at the very beginning of their apprenticeship, without any possibility to compare behaviour of in-company coaches or learning setting, as they did not have any working experience.

Perhaps the most significant weakness in the research, beyond my own enthusiasm for the topic, is the fact that my sample was, as I mentioned earlier, to a degree self-selecting. Therefore, my results arguably reflected a certain bias rooted in the fact that the selected in-company coaches who wanted to help implement the new method were voluntary and therefore, it might reasonably be assumed, felt not only some enthusiasm for the subject but also high motivation to implement it. However, ultimately this was probably a positive fact although a genuine cross-sectional sample might have made for a more neutral picture about possible support needed by in-company coaches by implementing active learning. Without any personal motivation and positive attitude towards changes, those who do not value active learning as a possible teaching method to reduce the early withdrawal would be unlikely to give valuable insights into the support needed beyond the assertion that they do not probably see the need for support or have constructive opinions.

Before summarising this chapter, I wanted to point out that the theoretical existing bias because of my position as reflective practitioner, who has been teaching in-company coaches for the past 20 years, has always been the focus of my behaviour whenever I was planning, carrying out workshops and writing. I was never seeking a 'happy ending' as stated by McNiff (McNiff, 2013, p. 126). My position as a reflective practitioner was led more by my philosophical approach: 'aiming not for happy endings as much as new beginnings' (McNiff, 2013, p. 126).

4.16. Summary

Without any doubt, PAR or action research as a methodology presents some threats. I prevented these threats by putting in place the following measures. I am self-sponsored, and I do not have any financial interest with the company I am working with in this thesis. Therefore, there are no expectations from the board. My

intention was to explore the potential of active learning, for that reason already with the choice of the title, and I had no expectations towards the results of the potential active learning might have or not and no pressure of seeking happy endings. Triangulation and the multimethodological approach ensure that the collected data are valuable and meaningful. I worked with four different coaches in four different outlets with different lengths of professional experiences and different backgrounds, despite the fact that everyone was an apprentice themselves at the beginning of their working careers.

In this chapter, I explained why I took the position of an interpretivist by explaining the intention of my thesis to contribute to theory and practice (see Chapter 1) through the method of action research. Even though I was aware of possible bias because of my experience, that position as a reflective practitioner is in my opinion the most valuable position I could select to make a valuable contribution to practice.

5. Explaining and implementing IAZPERKA

This chapter explains the selection and the implementation of the pedagogical tool of IAZPERKA as the approach to instruction based on active learning (Bonwell & Eison, 1991) in Switzerland's apprenticeship scheme. For this thesis, I used the following definition of active learning: 'active learning can be defined as anything that involves students in doing things and thinking about the things they are doing' (Bonwell & Eison, 1991, p. 19).

This chapter informs and explains the origins of IPERKA and discusses why and how this pedagogical tool has been transformed by me from IPERKA to IAZPERKA. Furthermore, it explains how IAZPERKA has been applied in practice to promote the approach of active learning in the four outlets. Active learning builds up on the learning theory of social constructivism (Vygotsky, 1978), which serves as a foundation for a new instructional design and framework in the four outlets when in-company coaches are educating their apprentices. Finally, I described – step by step according to IAZPERKA – which kind of contribution I intended to make to enhance active learning and support the learning process.

5.1. Influencing factors from literature review

As presented in the literature review, my intention was to make a pedagogical change in Switzerland's apprenticeship scheme, away from pedagogical methods building on a learning theory dominated by behaviourism (Skinner, 1938) by proposing a pedagogical method oriented more toward the learning theory of social constructivism (Vygotsky, 1978). I would like to recall the main reasons why exactly this change in pedagogical method is needed in Switzerland's apprenticeship scheme nowadays.

- Apprentices currently following the apprenticeship belong to Generation Z, born from 1995 to 2009 (Madden, 2017). With the term 'generation', I took on the understanding of 'sociological as grouping of people born in the same period' proposed by Madden (2017, p. 10). According to Madden (2017),

- This generation has been raised with a conception, that different parties have different perspectives on reality, even if truth is objective.

- 'The world of market is in continuous change' (Tynjälä et al., 2012, p. 205). The aim of apprenticeship in Switzerland is to prepare the young generation for the labour market, but this market is also changing rapidly and continuously. Dall'Alba (2009) described the situation of the labour market in these terms:

  > Professional in many countries around the globe are working in a context of continual change, including advances in . . . computers and internet, globalization of the economy, expanding knowledge- and service-based industry, heightened threats to national and international security, and increase professionalization of the workforce. The ensuing context of flux and uncertainty presents news and pressing challenges for professionals, while reliance upon their skillful participation in society is heightened. Professionals are being required to take new issues into account before those issues can be fully grasped, while continuing to make judgments acting on the basis of those judgments and facing the consequences of their actions. (p. 4)

In view of this ever-changing environment, one must ask what competencies apprentices need to acquire and possess and to what extent. Currently, success in a job often involves operating in ever-changing environments, dealing with nonroutine and abstract work processes, handling decisions and responsibilities and working in teams (van den Bergh et al., 2006). As discussed in the literature review, employer surveys indicate that occupation-specific skills are no longer sufficient for workers to meet the needs of national labour (OECD, 2013). In addition to basic and specialised knowledge and skills, workers are nowadays expected to have an additional set of skills – referred in this thesis as 'transferable skills' – that go beyond their occupation (Trzmiel, 2015). These skills are not new but are arguably needed given the rapidly changing realities in the labour market. Therefore, adequate workplace preparation is necessary to educate apprentices. 'Developing apprentices' ability of learning to learn is one crucial part of transferable skills' (Trzmiel, 2015, p. 1). Nowadays, the labour market asks for workers capable of learning both inside and outside the

workplace and recognises their need for further education and training. As seen in Chapter 3, social constructivism supports methods where the ability of learning how to learn is enhanced.

- The role of in-company coaches needs to be revised and improved because of the entrance of Generation Z into the labour market as well as the new skills required in an ever-changing environment as described above. Maclean (2007) stated,

> Sadly, teacher education has not adequately taken this new reality into account. The teacher of the future must realize that its students think and learn differently than he/she does and will enter a future world he/she is not familiar with, and with the information explosion, the teacher's role is going to be less the sage on the stage and more the guide on the side. (p. 223)

This pedagogical tool called IAZPERKA should develop in-company coaches from 'being the fountain of knowledge' to the role of a learning companion, which is exactly 'the guide on the side' mentioned above (Maclean, 2007). This new understanding of the role being a learning companion rather than a teacher plays an important role for in-company coaches. It allows them to create a framework where relationships foster learning. It brings in-company coaches and apprentices together in a professional partnership based on support, mutual respect and transparent communication. 'The students themselves frequently mentioned specific teachers – their champions – with whom had formed a special bond. These teachers supported them in all aspects of school life, both their work within their school subjects and also the process of school' (Pavlova et al., 2018, p. 89). Support is key to a successful partnership with apprentices. Fullan (2016) supported this view and the importance of relationship needed between students and teachers by stating 'the solution is to revamp the learning relationship between and among students and teachers' (p. 152). Maclean (2007) enhanced this relationship with the following words: 'the powerful relationship between teacher and learner is central to the teaching-learning process' (p. 102). Dedication, professionalism and skills are the crucial elements for this powerful

relationship. Social constructivism enhances the importance of this role between students and teachers and, for the purpose of this thesis, between apprentices and in-company coaches. As seen in Chapter 3, social constructivist interpretation is based on the belief that knowledge is produced by the interaction of people within a community or society (Airasian & Walsh, 1997).

This chapter is the result of my personal reflection process after the literature review combined with my personal experience in my role as behavioural trainer teaching in-company coaches for the past 20 years in Switzerland. Therefore, you find my personal reflection on my role as a reflective practitioner.

It begins by explaining and justifying the choice of IPERKA as pedagogical tool, the new steps created (A and Z) and the changes made to the tool and finally explains IAZPERKA step by step, showing the kind of changes I have made, which kind of contribution I wanted to provide with these changes and why I think that this change is possible.

5.2. History of IPERKA as a foundation for IAZPERKA

I was seeking a pragmatic tool, a teaching model to be used by apprentices in an everyday working situation, whenever they were planning and carrying out practical tasks of certain complexity on their own, after getting information about the task itself delivered by the in-company coaches. As seen in Chapter 1, the definition of active learning is broad, and Bonwell and Eison (1991) recognised that a range of activities can fall within it. My intention was to implement a pragmatic pedagogical tool to support the implementation of active learning in daily business. Action regulatory theory was a helpful framework to find a pragmatic tool, as this theory is a psychological theory in which action is understood as a process covering not only the planning but also the concrete execution of actions (Zacher & Frese, 2018). As action regulatory theory was not explained in Chapter 3, the following is a brief explanation and criticism about it. According to Jones (2007), 'Action Regulation Theory comprises two concepts – actions are goal-oriented, and actions are regulated through a hierarchical structure – therefore a worker who performs an action is firstly led through a cyclic process of: Goal – Plan – Decision – Execution and Feedback' (p. 2).

The above cyclic process of goal–plan–decision–execution–feedback when translated into German has a close meaning to the structure of IPERKA. IPERKA is the translation of informing, planning, decision-making, implementing, checking and evaluating. According to German literature, IPERKA is grounded on the work of two industrial psychologists, Hacker and Volpert, in the 1970s (Gudjons, 2008). The model of the complete action (called IPERKA) is a teaching concept from vocational pedagogy. It should correspond to the practice in professional life and enable the apprentices to learn in an action-oriented way. Vocational educators assume that when apprentices are taught according to this model, they will be able to transfer the skills they have acquired to other work processes independently in their later working life. The model consists of six stages described above. The model attaches great importance to reflection on the process but is also product-oriented/result-oriented. Criticism of IPERKA claims that motivation is not included in this process. I decided to adopt IPERKA as a pragmatic pedagogical tool for implementing active learning in Switzerland's apprenticeship scheme, but I also wanted to make three substantial changes by adding two steps to the process, involving apprentices and in-company coaches in a joint process and partnership during the learning process, enhancing the reflection's process as a joint process between apprentices and in-company coaches.

5.3. From IPERKA to IAZPERKA

To better understand the modifications, I decided to make to IPERKA as a tool, I wanted to recall my five philosophical statements explained in Chapter 1 (p. 14) when I am acting as a trainer of in-company coaches in the context of Switzerland's apprenticeship scheme.

- An apprenticeship is not just an act of teaching or passing practical skills and knowledge to a young person. The process of teaching needs to be more holistic, as learning is about educating a person. These young people are in transition from childhood to adulthood. In-company coaches are in charge of educating young people becoming adults.

- Learning is a joint process. The apprentice and the in-company coach work jointly in this process despite having different roles.

- Apprenticeship is a partnership in which everybody learns from each other on mutual respect, trust, full transparency and acknowledging each other.

- The pedagogical method of active learning derived from social constructivism brings the apprentice and the in-company coach together instead of separating them by promoting professional partnership, trust and transparency. Therefore, support is the foundation of this professional relationship.

- The fast development of the labour market with, for instance, automatisation and digitalisation calls for employees capable of permanently adapting themselves in a dynamic working environment. Transferable skills help to adapt oneself to an ever-changing environment.

The intention of the following chart is to compare and contrast IPERKA (Gudjons, 2008) and IAZPERKA processes in the two fields didactic and dialogical approach. This chart can be seen as a concise overview of the two pedagogic tools as well as a rational for the adjustment I made to IPERKA, by adding two steps and finally to develop IAZPERKA for this thesis.

	IPERKA	IAZPERKA
Didactic approach	'action-oriented' / 'goal-oriented'. The focus is on training apprentices to fulfil tasks on the labour market and passing the skills necessary. - Apprentices are responsible for their learning process.	'action-oriented' / 'apprentice oriented'. The focus is on apprentices' education and development, not on the result only. Education is holistic. - Learning is a joint process between apprentices and in-company-coaches.

	Action regulatory theory is based on goal-directed behaviour and is based on behaviourist learning theory. The result is at the heart of the process. Either the outcome is satisfactory, or it is not.	The action-oriented approach is rooted in a constructivist paradigm. Learning happens when apprentices are carrying out tasks. Even if the outcome is not satisfactory, apprentices learn, as mistakes are an important element in learning processes.
Dialogical approach	• The dialog between in-company coach and apprentices is limited to the first and last step, and the outcome is discussed at the end in form of a feedback. • The relationships between in-company coaches is based on professional expertise.	• The dialog already begins in the beginning of the process and is based on a professional partnership. The self-reflection of apprentices enhances the whole process and not the outcome only. • The relationships between in - company coaches lie in the belief, that in-company coaches do have many sub-roles.

Table 1: Overview of IPERKA and IAZPERKA from a didactic and dialogical approach – Cristian Moro

I posit, that IPERKA is a valid pedagogic tool to train apprenticeship and IAZPERKA a valid pedagogic tool to educating apprentices. Or as seen in the literature review – see chapter 3 – '…'the idea that training is inculcation into a set of usually rigid routines, while education develops the whole person' (Clarke & Winch, 2007, p. 9).

One of the goals of the apprenticeship in Switzerland is to prepare the apprentices to meet the requirements of the labour market. Apprentices need to train transferable skills during apprenticeship. Active learning is a pedagogical model that

allows not only the training of these skills but also the reflection about it as seen in Chapter 1. For the abovementioned five statements, I decided to bring the two partners involved in the learning process (the in-company coach and the apprentice) together from the very beginning of the apprenticeship and to expand IPERKA to IAZPERKA. With the extension from six to eight steps, I wanted to bring transparency into the planning process of apprentices by giving a structure to their thoughts and their learning process. Furthermore, I wanted to promote an open communication between in-company coaches and apprentices in every step: from 'informing' to 'evaluating'. The learning process should happen in mutual respect and partnership.

The eight steps of IAZPERKA are extensively described in this chapter and provide an explanation of what I want to reach with every step and why I think that step is relevant for the learning process of in-company coaches and apprentices. This table briefly shows the extension from six to eight steps and gives an overview of the joint process between apprentice and in-company coach through the execution of the practical task.

Letter in German	Step in German / Stage in English / Responsibility/duty of . . .
I	Informieren – Informing – Duty of in-company coaches
A	**Analysieren – Analysing – Duty of apprentices – New step**
Z	**Ziel setzen – Goal-setting – Duty of apprentices – New step**
P	Planen – Planning – Duty of apprentices
E	Entscheiden – Decision-making – Joint (in-company coaches and apprentices)
R	Realisieren – Implementing – Duty of apprentices
K	Kontrollieren – Checking – Duty of apprentices
A	Auswerten – Evaluating – Joint (in-company coaches and apprentices)

Table 2: Overview of the eight steps of IAZPERKA – Cristian Moro

5.4 Explaining IAZPERKA – step by step

The aim of IAZPEKRA as a pedagogical tool is to involve the apprentice in the process of thinking and carrying out a task from the very beginning, already at the time of selecting the task to be carried out. In-company coaches, as described in the introduction chapter of this thesis, are responsible for a full range of practical learning targets.

These practical targets correspond to Bloom's Revised Taxonomy stage 3 (K3) (Madden, 2017): 'at this stage, apprentices demonstrates that they are able to carry out or use a procedure in a given situation. The developed competencies include executing and implementing knowledge' (p. 152).

As seen in Chapter 1, the task of in-company coaches is to enable apprentices to reach the learning targets during the third to fourth year of education. These learning targets have been approved by Swiss Federal Institute for Vocational Education and Training (SFIVET) in collaboration with the Confederation, cantons and professional organisations (Strahm et al., 2016, p. 127).

Apprentices record all the eight steps by writing on the same form called IAZPERKA (see Appendix 02). This form is a template that must be used by apprentices for all practical learning targets (K3) whenever they carry out new tasks in the company. Responsibility in this partnership is envisaged as follows:

Legend: IC = In-company coach / AP = apprentice

Step	IC	AP	Description of the stage
I = Informing (in German: informieren)	X		The assignment/task is issued verbally in brief by in-company coaches. Apprentices should take brief notes. There is intentionally no time limit given by in-company coaches.
A = Analysis (in German: analysieren)		X	Apprentices should be able to make their own deliberations at this stage and deduce what information is required to carry out the task. Questions are noted by apprentices and can be asked before the stage of planning to in-company coaches. Questions are asked if there are any gaps in knowledge.

Z = Goal-setting (in German: Ziele setzen)		X	At this stage, apprentices deal with each of the following questions: What do I want to achieve? What can I achieve? What must I have achieved by when? They thereby set themselves a time limit.
P = Planning (in German: planen)		X	Planning by apprentices is done individually and is recorded briefly in writing. There may be various options for this. At least one option needs to be recorded briefly in writing.
E = Decision-making (in German: entscheiden)	X	X	The planning is discussed with in-company coaches. Apprentices disclose how much have planned to carry out the work. In-company coaches can set checkpoints to ensure physical integrity. They will thus monitor the individual steps agreed upon.
R = Implementing (in German: realisieren)	(X)	X	Apprentices carry out the planning according to the decision taken. In-company coaches are present to monitor single steps if agreed upon in the previous step.
K = Checking (in German: kontrollieren)		X	Apprentices are responsible for checking the results. They are supported by checklists, templates etc. Apprentices also decide whether the assignment was 'fulfilled/not fulfilled'.
A = Evaluating (in German: auswerten)	X	X	The meeting will take place under the guidance of in-company coaches. In-company coaches ask open questions. Apprentices answer them upon reflection and note the most important points in writing. Apprentices talk most of the time. The role of in-company coaches is to challenge apprentices with open questions to promote self-reflection.

Table 3: Graphical representation of division of responsibility – Cristian Moro

5.4.1. Undertaking practical assignments/tasks using the eight-step method of IAZPERKA - 1st step - informing

The first step – as shown in the graphical representation on pages 92-93 – was translated into English to 'informing' and was originally and exclusively the duty of the in-company coach. I wanted to make a first change to the original model, promoting a view of learning as a joint process already by the time of selecting tasks and learning objectives. As Madden stated, 'In this digital era, there is a desire for face to face communication as part of the teaching process' (Madden, 2017, p. 147). Over the past 19 years, in my role of teaching in-company coaches, I have been experiencing that the selection of learning targets to be carried out with a task by apprentices was exclusively done by the in-company coaches without any interaction with apprentices. Fullan (2016b) stated,

> Although research in the 1980s began to look at students as active participants
>
> in their own education, and it has become clearer what should be done, too little
>
> actually has happened to enhance the role of students a members of the school
>
> as organization. (p. 138)

Most of the time, this selection made by in-company coaches was a result of coincidence and not any particularity about the apprentice as an individual, as a person, with individual strengths and weaknesses. Fullan stated that 'when it comes to the meaning of educational change, nothing could be more crucial that bringing the student forward as a partner in learning' (Fullan, 2016b, p. 149). I fully agree with Fullan, and I believe this shift in the first step by selecting learning targets together reinforces the partnership between in-company coaches and apprentices as well as the idea of apprentices being active participants in their own education. The in-company coach discusses in advance with the apprentice which kind of learning targets would the apprentice intend to reach and why. According to Madden (2017), 'Generation Z will be more likely to engage with the learning where they can first perceive why the content is relevant to them' (p. 155). Fullan (2016) supported this opinion and stated, 'Meaning is central to student success. Engagement is the key word' (p. 138). This statement is helpful for the IAZPERKA pedagogical tool, as in-company coaches during the information process (the first step of the IAZPERKA

process) get the opportunity to discuss with apprentices the meaning and usefulness of the task to be delegated.

Therefore, apprentices and in-company coaches agree in advance together on a practical task, which would allow to reach the compulsory learning targets set by SVIFET for training plans. Madden (2017) outlined the importance of involving students from the very beginning of the learning process. 'Educationalist Dr Bickmore-Brand highlights the importance of students taking responsibility for their learning' (p. 154).

This process of selecting one of the learning targets to be reached with a practical task, as set by SVIFET, is also based on a thorough self-reflection done by in-company coaches prior to discussion with their apprentices. In this reflection process, in-company coaches need to ask questions like: How can I support and adequately challenge them at the same time? What strengths and weaknesses do they have? With which kind of task can I contribute to bring them further in their education as skilled professionals? In-company coaches can answer the above questions only if they have a regular and open exchange with their apprentices based on support, trust, partnership and mutual respect. I want to reinforce the capacity of in-company coaches to reflect and to fully understand their important role in educating apprentices in a much more holistic dimension and not just see themselves as passing skills. Maclean (2007) supported this view: 'holistic learning also includes the notion of the development of the whole person' (p. 44).

As in-company coaches have profound practical experience, they can propose different learning objectives for apprentices to choose from. The intention of this preselection is not to overwhelm or underwhelm apprentices and consequently cause a loss of motivation. This preselection happens in an in-company coach's personal and individual reflection on the apprentice as an individual, who needs to be treated like a person with individual needs. Fullan (2016) spoke about 'The Centered Student' (p. 148) to prevent the disengagement of students in learning. I believe effective teaching only happens if in-company coaches know their apprentices as human beings with strengths and weaknesses.

This preselection made by the in-company coach should be a continuum based on an open and regular exchange between in-company coach and apprentice. This exchange promotes the idea of learning as a joint process between in-company coaches and apprentices where everyone learns from each other on mutual respect.

Once the in-company coach and the apprentice have agreed on the learning targets and the task, the in-company coach briefly and succinctly communicates the task to the apprentice. The way the in-company coach communicates the task to be carried out to the apprentice should be the closest to everyday working situations as the apprentice will encounter after completing their curricula. The foundational principle to be created by in-company coaches in the first step is 'context'. According to Madden (2017), context involves 'creating a meaningful and relevant context for the transmission of knowledges, skills and values' (p. 154). In other words, it means to make sure that apprentices understand the reason why the task is important for them, for the company and for the customers.

This also means that the in-company coach needs to use technical terms and verbs employed in the professional field. The in-company coach needs to pay attention to the choice of a specific verb so that the result will be visible/tangible/audible. Verbs like 'make' and 'do' are not recommended, as they are too generic. Apprentices need precise information about the tasks they must carry out.

This first step of communicating a task needs to be the closest as possible to a professional situation, which the apprentice will encounter after apprenticeship completion. Therefore, the in-company coach does not communicate a time limit.

The apprentice must briefly write the task on the IAZPERKA sheet (one to two sentences). By imposing a written element, I want the apprentice to be focused and attentive already on this first step. As Madden (2017) stated, 'The challenge of overcoming constant distractions through employing self-control is a significant battle for today's learners' (p. 161). I want to support in-company coaches in developing apprentices' competence in focusing.

Furthermore, by writing down the first and all other steps, I want the apprentice to be able, at the end of IAZPERKA, to have a written record. Only with a written record of the eight steps can the apprentice and the in-company coach openly and transparently discuss and reflect on the performance/result. A reflection on the learning process is the core philosophy of active learning. Madden (2017) focused on the fact that 'Generation Z have been exposed to a world where the value seems to be on speed of access rather than depth of understanding' (p. 156). Unfortunately, from my experience, the fact that apprentices are fast in accessing knowledge does not mean that they have understood what they have found or are able to use this knowledge to

perform. I do believe that time and reflection are essential and crucial for a real long-lasting learning experience. As apprentices do have little working experience, and to promote a learning setting based on partnership, I suggested that in-company coaches ask apprentices the following question: What do you have understood? This type of open question fulfils several purposes:

- In-company coaches can demonstrate that they are attentive and aware, that apprentices are learning, and therefore, it is possible that they have comprehension issues (e.g., due to technical language). In-company coaches can demonstrate empathy towards apprentices.

- In-company coaches can be assured that apprentices have written and understood what they must carry out and they both have the same understanding of what needs to be done.

- Apprentices experience in-company coaches as persons who really are interested in their learning process.

- Apprentices feel the learning setting and environment as a place where, in mutual respect, learning can take place without time pressure.

- Apprentices are encouraged to be self-directed learners during the apprenticeship as well. Madden stated that 'due to ease of access to online sources, students have been empowered to become largely self-directed learners' (Madden, 2017, p. 148). I support Madden, as from my experience, self-directed learners are active learners, highly motivated to be author of their learnings and learning process.

5.4.2. Undertaking practical assignments/tasks using the eight-step method of IAZPERKA - 2nd step - analysis

The second step – as shown in the graphical representation on pages 92-93 – was translated into English to 'analyses. It was the second change I made to IAZPERKA.

I decided to create a new step called 'analysing' before 'setting a goal', as apprentices have no practical (at the beginning of their apprenticeship) or little working experience. This new step enhances two important aspects for apprentices in their professional life:

- The importance of being a self-directed learner and developing personal skills to achieve the competence of lifelong learning.

- The importance of learning by heart of a specific vocabulary and verbs used in their specific professional field, as without this knowledge they will be not able to perform and work in teams.

With 'analysing', I wanted to support in-company coaches on how they can show apprentices the importance and value of learning by heart of theory and professional jargon that apprentices have been taught at vocational schools and in branch courses. As discussed in Chapter 1, in Switzerland, apprentices are educated in three different places: host companies, branch courses and vocational schools. SVIFET has defined learning targets for all three places, but the transfer of theoretical knowledge learned at school takes place in the host company. Often apprentices do not understand why they must learn theory by heart if they do not see any practical application in their working life. As IAZPERKA is used as a pedagogic tool whenever apprentices a working on a practical task, according to Bloom et al. (1971), applying (K3), apprentices recognise the importance of theory as a foundation of a professional work. IAZPERKA shows why is important to learn theory by heart.

Therefore, the second step focuses on remembering and shows why the stage of 'remembering' with the meaning used in Bloom's Revised Taxonomy is important in their life. According to Bloom et al. (1971), remembering (K2) is the stage where apprentices can retrieve relevant knowledge from their long-term memory. The competencies involve recognising and recalling information, often achieved through memorisation, repetition and the use of lists. However, following my personal beliefs based on the learning theory of social constructivism, in-company coaches cannot simply transfer this notion of 'remembering' being important to apprentices. In-company coaches need to create learning settings through the delegation of a practical task, where they allow apprentices to discover why it is still important to learn by heart. It is worth considering how Bloom's Revised Taxonomy is applied in today's context of Generation Z learners. Madden (2017) stated,

> The need to 'remember' information seems less important for this generation who value the speed of access and currency of information, rather then memorising the content 'just in case' they may need it in the future, it is about being able to access it 'just in time'. (p. 153)

I believe this process of understanding why apprentices should learn theory, in a world where the value of information is changing rapidly, is extremely important to them, as they have to understand the difference between being brokers of content versus knowers of content. Being knowers of content implies the willingness to 'engage in higher level of thinking and understanding' (Madden, 2017, p. 154).

The second step gives apprentices the time to reflect on what needs to be done before moving on to the third step, 'setting a goal'. The second step gives a structure to their thoughts, and this is important, as Generation Z is less linear in their approach to learning, trusting the process of exploration and self-directed learning far more than previous generations (McCrindle & Wolfinger, 2011).

I wanted to support in-company coaches whenever they are working with apprentices belonging to Generation Z. Generation Z asks to be self-directed apprentices. This means, while analysing the task, they want the opportunity of being creative in their way/individual path of solving the problem. This is an important aspect; as seen in Chapter 3, Generation Z is not only the consumer but also the collaborator of content. With the second step, they can start to actively construct their learning process by using the richness and accessibility of all resources (e.g., books, manuals, computers and other devices).

In this step, the apprentice, furthermore, notes questions arising from the process of analysing. The apprentice has the opportunity, when the step is completed, to ask questions. The in-company coach should encourage the apprentice to think about where and how they could an answer to enhance their competencies of being a self-directed learner as well as to promote lifelong learning.

5.4.3. Undertaking practical assignments/tasks using the eight-step method of IAZPERKA - 3rd step - goal-setting

The third step – as shown in the graphical representation on pages 92-93 – was translated into English to 'goal-setting'. It was the third change I made to IAZPERKA.

I decided to create a new step called 'goal-setting' before 'planning', as I wanted to give apprentices the opportunity to set their own objectives/goals by applying Bloom's Revised Taxonomy stage 2, 'understanding'. Understanding implies, according to Bloom et al. (1971), a deeper comprehension than just recognition and recall. With understanding, apprentices can determine the meaning of instructional messages.

Even if goals can be defined in a variety of different ways, 'there is agreement that goal represent the purpose of behaviour' (Elliot et al., 2017, p. 43). 'Purpose' can be conceptualised in two distinct ways. One conceptualisation of purpose is the 'aim or end state that guides an individual's behaviour' (Dweck, 1996, pp. 69-90); the other conceptualisation is 'the underlying reason that an individual engages in behaviour' (Elliot & Trash, 2001, pp. 139-156).

Following an andragogical stance, 'the critical element in the assessment of the gaps is the apprentices' own perception of the discrepancy between where they are now and where they want and need to be' (Knowles et al., 2015, p. 60).

With this step, I wanted in-company coaches to encourage apprentices to set their goals, as I believe that they must be involved in this process in their role of self-directed learners and take responsibility for their own learning process. According to Mergel (1998), 'behaviorism and cognitivism both support the practice of analyzing a task and breaking it down into manageable chunks, establishing objectives, and measuring performance based on those objectives' (pp. 20-21).

I believe setting a goal is an important task for apprentices before starting planning, as objectives 'encouraged to be bold enough to see reality in his or her own style' (Maslow, 1970, p. 223). Therefore, I was less interested about learning objectives as behaviourist like Gagné (1965) described them as 'a verbal statement that communicates reliably to any individual (who knows the words of the statement as concepts) the set of circumstances that identifies a class of human performances' (Gagné, 1965, p. 243).

With the third step, 'goal-setting', I was more interested in building on the thinking of Tyler (1950) as did Houle (1972). He identified these attributes of objectives:

- 'An objective is practical'.
- 'Objectives lie at the end of actions designed to lead to them'.
- 'An objective is essentially rational, being an attempt to impose a logical pattern on some of the activities in life' (pp. 139-312).

This was exactly what I intend to reach by creating this third step of 'goal-setting': giving apprentices the opportunity to think about their practical goals and develop a logical pattern to follow. It is also about focusing oneself, and all actions, on a specific goal. This logical pattern should be reached by planning actions, which will be the

next step in IAZPERKA to be done by apprentices. In this step, apprentices need to set their goals, including how much time can be allocated realistically.

5.4.4. Undertaking practical assignments/tasks using the eight-step method of IAZPERKA - 4th step - planning

The fourth step – as shown in the graphical representation on pages 92-93 – was translated into English to 'planning'. This step is exclusively the duty of apprentices.

With this step, I intended to encourage and support in-company coaches regarding the importance for apprentices to plan. This step gives apprentices the chance to experience two important developments in their apprenticeship, as I believe that apprenticeship should be seen as a holistic education of a young person in transition from childhood to adulthood. According to my experience, these elements contribute to a holistic education during apprenticeship.

- Whenever apprentices are planning, they have to decide. By making decisions, apprentices are taking responsibility for their learning process as described by Bickmore-Brand (2010). This concept of handing over responsibility is also supported by Madden (2017): 'responsibility: developing in learners the capacity to accept increasingly more responsibility for their learning' (p. 155).

- By the act of scaffolding as described by Bickmore-Brand (2010). In my opinion, this concept of scaffolding is important, as apprentices should build on their existing theoretical knowledge acquired in branch courses and at vocational schools and learn to go beyond their own thinking. Madden (2017) defined 'scaffolding' as follows: 'challenging learners to go beyond their current thinking, continually increasing their capacities' (empowering learning through building) (p. 155).

- The andragogical model of adult learning makes some fundamentally different assumptions about what motivates adults to learn. 'Adults tend to be more motivated toward learning that helps them solve problems in their lives or results in internal payoffs' (Knowles et al., 2015, p. 183). By planning, an apprentice has an active opportunity to show how they intend to solve a task given by the in-company coach. The activity of planning has an important impact on his motivation. According to Wlodowski (1985), the adult motivation to learn is the sum of four factors:

Success: Adults want to be successful learners. With the IAZPERKA step 'planning', an apprentice is seeking their own way to be successful.

Volition: Adults want to feel a sense of choice in their learning. With the IAZPERKA step 'planning', an apprentice chooses their own way to reach goals, which they previously set in the IAZPERKA step 'goal-setting'.

Value: Adults want to learn something they value. With the IAZPERKA step 'planning', an apprentice learns to plan to solve a real task. These tasks are important, as they are part of his curriculum.

Enjoyment: Adults want to experience learning as pleasurable. With the IAZPERKA step 'planning', an apprentice learns that the planning process is the foundation of the next step, 'decision-making', and – the most rewarding step – 'implementing'.

There is not only one possible way to solve a task. According to my experience, depending on the assignment, there are various solutions possible to approach. The systematic procurement of information as a result of the 'analyse' step is particularly important. That is why 'planning' should build on the steps 'analyse' and 'goal-setting'. The apprentice creates a workflow whereby they plan the individual steps by using the richness and accessibility of all resources (e.g., books, manuals, computers and other devices).

 In the workflow, resources and tools needed for the 'implementation' are identified, and the time required for the steps to solve the task is estimated.

In addition, the criteria for checking the result – according to the IAZPERKA step 'checking' – are compiled.

5.4.5. Undertaking practical assignments/tasks using the eight-step method of IAZPERKA - 5th step - decision-making

The fifth step – as shown in the graphical representation on pages 92-93 – was translated into English to 'decision-making'.

With this step, I wanted to reinforce the concept of the apprentice and the in-company coach being partners in the learning process. This was the fourth change I made to IAZPERKA. The step 'decision-making' is now a joint process and the result of a discussion between the apprentice and their in-company coach.

After the IAZPERKA step 'planning', a solution option must be selected if the apprentice has planned more than one option. This process will be discussed

collaboratively between the in-company coach and the apprentice before beginning with the IAZPERKA step 'implementing'. This conversation between the in-company coach and apprentice is important for several reasons:

- Sometimes constraints arise in the company (because of timing provisions, materials etc.), which limit decision options.

- In-company coaches are still responsible for the physical integrity of their apprentices. They have to carefully listen and follow the presentation of the solution, as they have the right to set checkpoints where they think their presence is needed to survey apprentices.

- In-company coaches contribute to create a supportive learning environment. According to Brickmore-Brand (2010), this element is called 'community'. Madden (2017) described 'community' as follows: 'creating a supportive learning environment where learners feel free to take risks and be part of a shared context' (p. 155). With this joint step, apprentices feel the support of their in-company coaches as well as their empathy. Furthermore, I wanted apprentices to reduce their anxiety towards the task. According to Hilgard and Bower (1996), 'anxiety level of the individual learner may determinate the beneficial or detrimental effects of certain kinds of encouragements to learn' (pp. 562-564). The in-company coach is the key to create a relationship with their apprentice, where anxiety is not needed, and safety is the foundation of the relationship. As Maslow (1972) wrote, 'We grow forward when the delights of growth and anxieties of safety are greater than the anxieties of growth and the delights of safety' (pp. 44-45).

Nevertheless, errors are normal in a learning process. Therefore, the attitude towards errors in an andragogical view is 'attitude towards errors: to be learned from' (Knowles et al., 2015, p. 252). For this reason, the in-company coach does not correct any errors in an apprentice's planning. If the in-company coach feels worried about the apprentice's physical integrity, they set a checkpoint as described above.

5.4.6. Undertaking practical assignments/tasks using the eight-step method of IAZPERKA - 6th step - implementing

The sixth step – as shown in the graphical representation on pages 92-93 – was translated into English to 'implementing'.

I believe this step of IAZPERKA is the core of the learning process for apprentices and shares the view of Kolb (1984) when he defined learning as 'the process whereby knowledge is created through transformation of experience' (p. 38).

With this step, I wanted to enhance one of Gibbson's (1990) three aspects of learning: action. Regarding the aspects of learning, action has an important impact on learning itself: 'using learning to take meaningful action. Key elements include making decisions, taking initiative, practicing, solving problems, and influencing others' (Knowles et al., 2015, p. 200).

In the sixth step, 'implementing', the apprentices carry out the individual steps as planned. Apprentices have permission to change their plans because of compelling reasons. These reasons can arise during this step because during the implementation learning is also happening. As Kolb (1984) wrote, 'Learning is not so much the acquisition or transmission of content as the interaction between content and experience, whereby each transforms the other' (Kolb, 1984, p. 84).

By permitting apprentices to change the plan, I wanted to support Argyris's (1982) idea of single-loop and double-loop learning. To sum up, single-loop learning is learning that fits prior experiences and existing values, which enables the learner to respond in an automatic way. Double-loop learning is learning that does not fit the learner's prior experiences or schema. Generally, it requires learners to change their mental schema in a fundamental way. This concept is extremely similar to Schon (1987), who spoke about 'knowing-in-action' and 'reflection-in-action'. To sum up, 'knowing in-action' is somewhat an automatic response based on a person's existing mental schema that enables them to perform efficiently in daily actions. 'Reflection-in-action' is the process of reflecting while performing to discover when an existing schema is no longer appropriate and changing those schemas when appropriate.

I believe the most effective learners are those who are good at reflection-in-action and double-loop learning, as this learning has a deeper impact on apprentices' life.

Furthermore, with the IAZPERKA step 'implementing', I wanted the apprentice to experience the third stage of Bloom's Revised Taxonomy: applying. Madden (2017) described applying as follows: 'in this stage, the student demonstrates they are able to carry out or use a procedure in a given situation. The develop competencies include executing and implementing knowledge' (Madden, 2017, p. 155). I believe that

knowing and performing are not the same, and therefore, it is essential for apprentices to get the opportunity to carry out tasks.

In this stage, it is important that the apprentice does not experience any time pressure. Unfortunately, as seen in chapter 2, it must not be underestimated that the role of companies is mainly to create marketable products or provide services and not to train apprentices, and this generally implies the challenge 'connected with pressure to perform and deadline pressure' (Wettstein et al., 2017, p. 150). This pressure of time is a shared issue for both apprentices and in-company coaches. Nevertheless, generally companies are still and only willing to train 'as long as they expect sufficient benefits to cover their training costs, either in the short run or long run' (Backes-Gellner, 2014, p. 5). That is why the learning setting for apprentices as well as the time allowance are so important when apprentices are working. According to Ziehe (2005 as cited in Illeris, 2009), 'the setting designates the totality of rules and agreements that define and regulate the standard work conditions of a field of action' (p. 197). I believe that the value of the learning setting needs to be stressed as 'a setting not only has technically regulating functions, but also a supporting, meaning-generating and expressive impact' (Illeris, 2009, pp. 197-198).

5.4.7. Undertaking practical assignments/tasks using the eight-step method of IAZPERKA - 7th step - checking

The seventh step – as shown in the graphical representation on pages 92-93 – was translated into English to 'checking'.

With this step, I wanted to hand over the responsibility of checking the result to the apprentice. I would like to stress the fact that 'checking' here is just product related. In other terms, this step has nothing to do with any kind or type of reflection.

Every job carried out must be checked before it is handed over for further processes. Checking in this step means, for example, reading through the implementation description again, reading the construction manual, comparing against specifications, etc. and checking whether the result of your work meets the specifications set out in the 'planning' step and keeping a written note of the result.

5.4.8. Undertaking practical assignments/tasks using the eight-step method of IAZPERKA - 8th step - evaluating

The eight and last step – as shown in the graphical representation on pages 92-93 – was translated into English to 'evaluating'.

The fifth and last change I made to IAZPERKA was to bring together in-company coaches and apprentices for this step. I would like to point out that this step, 'evaluating', consists of two elements: evaluating the result in terms of product and reflecting on the process.

For IAZPERKA, I applied Swanson's (1996) definition of evaluation: 'a systematic collection of evidence to determinate if desired changes are taking place' (p. 26).

In this step, the apprentice thinks about the whole assignment, from informing to checking, and assesses their individual steps. This step is carried out under the guidance of the in-company coach, who supports and encourages the apprentice to speak. This step is not about awarding the apprentice a grade but helps the apprentice in the process of assessing themselves. Furthermore, is about reviewing jointly with the in-company coaches which activities the apprentice has already performed properly and what the apprentice still needs to improve on.

I believe this stage is the second important stage in the IAZPERKA pedagogical tool because only through apprentices' own deliberations (called reflection) can people develop in a sustainable and continuous way. It is also important that apprentices always record their deliberations in writing and build on them in further tasks. According to (Knowles et al., 2015), 'Evaluate: Engage learners in this phase to gain higher self-reflection and integration of the knowledge and expertise being sought' (p. 163).

Although 'evaluating' is carried out jointly, the one speaking 'most of the time' is the apprentice and not the in-company coach because it is the apprentice who must think about their own learning process. For in-company coaches, it is also important not to appear 'school masterly' or 'judgemental' in the sense of 'You didn't do that very well'/'I would have expected more', etc., but more like a discussion partner who helps to provoke thought about the method and the result, as well as the apprentice's own actions.

5.5. Implementing IAZPERKA

In these sections, I described how I planned to implement IAZPERKA as a pedagogical tool in the four outlets of the four in-company coaches. These sections are built along the four workshops I held with the four in-company coaches between

2016 and 2017 and support a better understanding of the order in which data have been collected. I am aware that these sections could provide a rather technical description of action research. Nevertheless, I consider it important, as it follows a structure based on the following stages suggested by McNiff (2013, p. 89), which have been included from the very beginning of planning the workshops:

- What I am doing,
- How and why I am doing it,
- What I want to achieve,
- How I can evaluate outcomes in terms of the values I hold.

All workshops lasted one day, from 8:00 a.m. to 4:30 p.m., and were divided into two parts. The first part of each workshop was a personal exchange of experiences and reflections made by in-company coaches. According to McNiff (2013), when other people become participants in research, only the participants 'can monitor their thinking, probably through keeping a written or multimedia diary' (p. 105). At every workshop, I was keen to listen to them about their thinking and learning about IAZPERKA as well as their questions and their needs related to the experiences made on the field with the apprentices. I decided to start all the workshops with this personal exchange using the questions shown below.

The second part of each workshop was built on in-company coaches' questions and needs, recorded and discussed in the previous workshop, as during the end of each workshop I recorded what in-company coaches required me to prepare/do for the next workshops. These questions and needs of in-company coaches supported my intention, as reflective practitioners, to help and support in-company coaches during the process of implementation of IAZPERKA.

With the exception of the first workshop, which was a kick-off workshop, all other workshops began with the same structure. As described above, the first part of the workshop was dedicated to an open discussion and reflection based on the following questions:

1. IAZPERKA: My biggest success since the last workshop.

2. IAZPERKA: One of my failures since the last workshop and therefore my biggest learning moment.

3. IAZPERKA: What does work well? What do I find easy?

4. IAZPERKA: Where do I encounter personal challenges? What are my actions/reactions to these challenges?

5. IAZPERKA: Which kind of support do I need by whom?

6. IAZPERKA and the developed tools, templates and forms: How do they favourably support the implementation and use in practice? Do I have suggestions and wishes to improve them? If yes, which kind?

I set up the structure above to follow the idea of self-reflective cycles described by Kemmis, McTaggart and Nikon (2014). They named this spiral of following self-reflective cycles the 'spiral of action research' (p. 18). The spiral of action research consists of the following steps:

1. Planning a change

2. Acting and observing the process and the consequences of the change

3. Reflecting on this process and consequences

4. Re-planning

5. Acting and observing again

6. Reflecting again . . . and so on (p. 18)

Therefore, this spiral helped me and in-company coaches during the first part of every workshop to reflect on the process of implementing IAZPERKA and its consequences. During the first part, from discussions and exchanges, we replanned the next steps.

The second part of the workshop was a training in line with the requests in-company coaches brought up in the previous workshop. At this point, I would like to recall why the in-company coaches needed to be trained. According to Maclean and Wilson (2009), 'teachers must be transformed from those who impart knowledge to those who facilitate learning' (pp. vol 1 of 6, page xcvi). I fully agree with the statement. This transformation must be supported by training. This need for training was supported by CINTERFOR (2000): 'broadening the role for instructors will

require changes in the way VPET instructors are educated in teacher training courses' (pp. as cited in vol 1 of 6, ciii).

It is important to recall at this point what was written in Chapter 2. In-company coaches in Switzerland have to attend once in their lifetime a course lasting 40 hours offered by the cantons (Strahm et al., 2016, p. 107) to get their qualification to train an apprentice. This course is compulsory, and in these 40 hours, the following topics are addressed: how to deal with young apprentices, teaching and learning in a company, health and addiction precautions, training plan, basics of VET, VET trainer and school, qualification of the apprentices, leading and educating and safety at work (pp. 107-108). As the course needs to be followed once in a lifetime and there are no refresher courses in Switzerland, it is evident that in-company coaches need training.

5.6. Workshop structures

As agreed with the in-company coaches, the four workshops were held over a period of 18 months starting in June 2016 with the kick-off workshop, two months before the beginning of the apprenticeship for the new apprentices entering the labour market in August 2016. The four workshops had the following structure:

- First workshop (kick-off). I planned to work on the following topics: preparing the in-company coaches for IAZPERKA as well as working on the new role of learning facilitator with Generation Z. Presentations of the setting for the thesis as well as the role of reflective practitioner.

- Second workshop. I planned to work on the following topics for the first part: exchange of experiences and reflections of the in-company coaches after four months on IAZPERKA, according to the structure mentioned above. The topics for the second part of the workshop were discussed and agreed upon among the in-company coaches at the kick-off workshop.

- Third workshop. I planned to work on the following topics for the first part: exchange of experiences and reflections of the in-company coaches after 10 months with IAZPERKA according to the structure mentioned above. The topics for the second part of the workshop were discussed and agreed upon among the in-company coaches at the second workshop.

- Fourth and last workshop. I planned to work on the following topics for the first part: exchange of experiences and reflections of the in-company coaches after 16 months with IAZPERKA according to the structure mentioned above. The topics for the second part of the workshop were discussed and agreed upon among the in-company coaches at the third workshop.

I would like to recall that the topics selected by in-company coaches for the next workshop came out during the first part in the morning. These topics were the result of in-company coaches' experiences on the field whilst working with their apprentices and using IAZPERKA as well as their self-reflections on their role as reflective practitioner.

5.7. Workshop topics and schedules

First workshop – kick-off – held in June 2016

The first workshop was held in June 2016, two months before the new apprentices started working with IAZPERKA on 2 August 2016.

What I am doing

The workshop lasted one day and had the following agenda:

- Personal presentation of the in-company coaches and myself.
- Presentation and aim of the project.
- Theory about the role and subroles as in-company coaches in Switzerland's apprentice scheme. In-company coaches' duty and responsibilities.
- Challenges to Switzerland's apprenticeship scheme and Generation Z.
- Presentation of the pedagogical tool: IAZPERKA (inclusive of templates).
- Lego exercise with IAZPERKA
- Reflection on the exercise with Lego and IAZPERKA.
- Theory of the new approach of in-company coaches in the outlets: from a teacher who imparts knowledge towards a learning companion who facilitates learning and thinking.
- Theory about how people learn.

- Information about the newsletter and the support given by me throughout the project.
- Closing of workshops.

How and why I am doing it; what I want to achieve

I was keen on creating a collaborative, self-supportive, caring and trustful setting when working with the in-company coaches on the project. For this reason, I wanted to involve them from the very beginning of the project by establishing a climate conducive to learning. To support this climate, I let them work in groups, gave them the opportunity to ask questions and paid attention to keep my theories block short in terms of time and in terms of content. I did not want to bore or annoy them. Furthermore, I wanted in-company coaches to be cocreators of the day we invest together and not just spectators of a show.

The selection of the different topics was made with the following intention: 'Personal presentation of the in-company coaches and myself'.

I started presenting myself, as I wanted to show them my respect and give them the opportunity to ask questions about me. After my presentation, I wanted to know the in-company coaches to establish a personal relationship based on mutual respect. For this reason, they had – after a short preparation time – to talk not only about themselves but also about their personal beliefs and values. I wanted to hear how they perceived themselves and how they spoke (voice, loudness, etc.), believing that when people talk, they give a lot of insights into their personality.

'Presentation and aim of the project'.

After the presentation, I wanted to inform in-company coaches about the project. I wanted to give a structure to the project, talking about why I think the project is important, the purpose of it as well as the role of the in-company coaches. In addition, I spoke about ethical issues, inclusive of confidentiality. I informed them about their right to withdraw and change their opinions at any time. We also spoke about the opportunity to quit the project. The plan behind this point was to create a setting for the project, discussing rules, rights and duties.

'Theory about the role and subroles as in-company coaches in Switzerland's apprentice scheme. In-company coaches' duty and responsibilities'.

We carried on with an exercise about roles. I made a short introduction about the definition of roles and how they influence our behaviour and communication. In the short introduction I pointed out that every role has subroles, and these imply rights and duties.

After the short introduction, I let them work in pairs to discuss and write down the subroles they had while they were working as in-company coaches in their outlets. The result was beyond my expectations. The in-company coaches wrote more than 15 subroles, and we discussed them together with several examples such as how they were acting and communicating during the day with their apprentices.

I closed this exercise by recalling three further subroles, which I think are crucial to keep in mind while working with Generation Z.

First, in-company coaches have a role as ambassadors of the company. They represent their companies at all times.

Second, in-company coaches have a role as motivators. By having a positive attitude, talking positively and acting with pleasure in what they do, they might have a positive impact on apprentices' motivation.

Third, in-company coaches have a role of a confidant for the apprentice. In-company coaches play a central role in their apprentices' transition from childhood to adulthood.

'Challenges to Switzerland's apprenticeship scheme and Generation Z'.

At this stage, I wanted to work with the in-company coaches about three challenges to Switzerland's apprenticeship scheme. First: Generation Z entering the labour market (through apprenticeship). Second: the development of automatisation and digitalisation in Switzerland's labour market, the fast changes of knowledge and the consequences for the development of professional skills for apprentices. Third: the consequences of the first two points for the role of in-company coaches. I wanted to discuss with them the challenges and show them that the change I wanted to make clear, the change I wanted to make, had been strongly influenced by the labour market and Generation Z.

'Presentation of the pedagogical tool: IAZPERKA (inclusive of templates)'.

After discussing the imperative need for a change in the way we are educating apprentices, I explained IAZPERKA step by step as a pedagogical tool to be implemented in their outlets when in-company coaches were working with apprentices. I wanted to explain and openly discuss the several steps as well as communicate my thinking behind every step. I was concerned about speaking not only about the what but also about the why, as I wanted to gain not only their commitment to the new pedagogical tool but also show in-company coaches that it was built on logical steps.

'Lego exercise with the pedagogical tool IAZPERKA'.

After the theory, I wanted to allow the in-company coaches to practically work with IAZPERKA using the form created to record the steps.

I decided to work with a Lego set in pairs. My intention was to give confidence to in-company coaches that IAZPERKA is easy to implement and could easily be implemented whenever the apprentice has to carry out a practical work according to the target list approved by SVIFET. Furthermore, I wanted to reassure in-company coaches that there was no administration overload. This fact is important because in-company coaches during their working days are performing under time pressure.

'Reflection on the exercise with Lego and IAZPERKA'.

This stage wanted to allow an open discussion as well as give in-company coaches the opportunity to ask (critical) questions.

'Theory of new approach of in-company coaches in the outlets: from a teacher who imparts knowledge towards a learning companion who facilitates learning and thinking'.

At this point, we had a discussion about the new role I wanted to develop with in-company coaches: away from teaching and towards facilitating learning and thinking. We discussed the chances and threats in this shift as well as the required competencies for the in-company coaches. At this stage, I introduced the concept of being a reflective practitioner as well as the need for in-company coaches to keep a personal diary. I believed that the new role of facilitator of learning and thinking would call for the development of new competencies.

The in-company coaches reacted with an open spirit and motivation and responded with the will to take over the challenge to develop themselves and finally adhere to the project.

'Theory about how people learn'.

At this point, we discussed the way people learn. I was keen to show them the three learning theories, cognitivism, behaviourism and constructivism, and discuss the influence of these theories on the way the role of in-company coaches was understood.

'Information about the newsletter and the support given by me throughout the project'.

With this point, I wanted to discuss the monthly newsletter as an instrument to remind in-company coaches of the importance of working with IAZPERKA as well as recording in the diary their learnings and reflections.

'Closing of workshop'.

In the last step, I was seeking feedback about the day as well as getting to know their desired topic for the next workshop. I wanted to show them my appreciation for their feedback and their important role as pioneers in this project, implementing a new pedagogical tool with apprentices for the first time in Switzerland's apprenticeship scheme.

How I can evaluate outcomes in terms of the values I hold

After the first workshop, I was almost certain that the in-company coaches were motivated and ready to take over the challenge of implementing IAZPERKA as well as to develop themselves towards the new role of facilitator. I was impressed with their positivity and their trust in my person. At the same time, because of this trust, I felt even more responsible in carefully thinking about all steps and situations I could encounter through my PhD journey with them.

My personal concern was about developing in-company coaches to become reflective practitioners. With the implementation of IAZPERKA in outlets, it is highly probable that in-company coaches will experience some personal difficulties. Despite the pedagogical tool chosen, which is easy to use in everyday situations, a shift in in-

company coaches' behaviour is necessary, away from a behaviouristic approach to teaching towards a more constructivist learning approach. This shift requires personal self-development as well as self- and social competencies. It puts in-company coaches in a new role of being a facilitator of the learning process. This new role requires critically reflective and self-reflective competencies.

Therefore, by planning the four workshops, I decided to follow Brookfield's Four Lenses (Brookfield, 1995) as a guide. The goal of the critically reflective teacher, for Brookfield, is to garner an increased awareness of their teaching from as many different vantage points as possible. To this end, Brookfield proposed four lenses that can be engaged by teachers in a process of critical reflection. They can be summed up as follows:

1. The autobiographical.
2. The student's eyes.
3. The colleagues' experiences.
4. The theoretical literature.

These lenses correlate to the process of self-reflection, student feedback, peer assessment and engagement with scholarly literature, respectively. Brookfield (1995) suggested that 'the path to discovering the worth of the teaching is through a process of critical reflection' (p. 45).

The in-company coaches asked to learn more about behaviour in general as well as self- and social competencies, as they wanted to better understand how and why they act and react in a certain way during the day. These wishes were linked – according to what they said – to the development of their skills as facilitators as well as reflective practitioners.

Between the first kick-off workshop and the second workshop, I received several phone calls and e-mails from in-company coaches. I recorded these phone calls and e-mails in my personal diary, which helped me reflect on the whole process. The questions were almost always about the correct use of IAZPERKA and/or about the way they behaved in the new role. These contacts with the in-company coaches

made me feel assured that they trusted me and that whenever they had questions, they knew that they could contact me.

Second workshop – held in December 2016

What I am doing

The second workshop was held in December 2016. This workshop was set four months after the start of the new apprentices, 2 August 2016, as I wanted to hear and discuss the first experiences made by in-company coaches with their apprentices.

How and why I am doing it; what I want to achieve

The workshop lasted one day. The first part of the workshop was held according to the structure and questions presented in this chapter to enhance and value their experience as in-company coaches through the lens of a reflective practitioner. Furthermore, I wanted to put into practice the 'spiral of action research' (S. Kemmis et al., 2014, p. 18).

The second part of the workshop – as requested by the in-company coaches at the end of the first workshop – was centred around the topics of behaviour, self- and social competences. My intentions as a researcher/reflective practitioner were the following:

First, I was keen to listen about the implementation of IAZPERKA and hear about the positive experiences of in-company coaches in the field with the apprentices. In addition, I wanted to reassure the in-company coaches and give them confidence that they were performing well with the new pedagogical tool.

Second, I wanted to listen about the challenges and problems in-company coaches encountered in implementing IAZPERKA and hear and discuss if they would need support and how this support could look like.

Third, as requested by in-company coaches, we worked together on behaviour, self- and social competencies. I started with an introduction to the second part by discussing a short theory about behaviour. After the theory, I carried out a typology test. I did not have the expectation or the claim that the typology test would be 100% scientifically validated. With the selection of a typology test, I wanted to present a

pragmatic tool to support in-company coaches to better understand their behaviour, as well as the behaviour of other people and – as consequence – of their apprentices. The typology selected is well-known and shows four different types of behaviour.

We had several exercises aiming to discover and know how the four different types of behaviour act and react when exposed to different situations throughout the day. For the four in-company coaches, it was helpful to see that they had common characteristics. With the typology test and the theory related to behaviour, I wanted the group to have a common dictionary whenever we were talking about self- and social competencies. At the end of the workshop, we had a kind of map, with a common dictionary about strengths and weaknesses, grouped according to the four behaviour types.

In addition to the intention of having a common dictionary, I also wanted to help them whenever they were interacting as in-company coaches with their apprentices in their outlets as well as when they were reflecting as reflective practitioners and recording their thoughts in their personal diary.

How I can evaluate outcomes in terms of the values I hold

After the second workshop, I felt confident that the in-company coaches knew how to implement IAZPERKA. They came to the workshops with questions, suggested solutions as well as practical examples they experienced with their apprentices.

I was pleased to listen to their motivations, their positive attitudes towards the new pedagogical tool as well as the positive reactions of their apprentices.

The in-company coaches asked to learn more about why and how people learn. To better prepare myself, I asked about the purpose of their need for the learning process and learning motivation. All four answered that they wanted to better support their apprentices in their learning processes as well as create better conditions in the outlet to make learning possible. I asked what they meant by 'better conditions', and we agreed that they referred to the concept of setting.

Third Workshop – held in June 2017

What I am doing

The third workshop was held in June 2017. Between the second and third workshops, I visited the in-company coaches in their outlets. I wanted to see the outlets as well as to interview them according to my plan. The result of the first (and second) series of interviews will be presented in Chapter 7.

During the visit and after the first series of interviews, all four participants showed the diaries they kept in their role as reflective practitioners. I found it interesting to read how in-company coaches perceived themselves in their new role as facilitators with IAZPERKA. Furthermore I – once more – could realise how self-critical they were, striving to become better in-company coaches.

How and why I am doing it; what I want to achieve

The workshop lasted one day. As already written above, the first part of the workshop was held according to the structure and questions presented in this chapter to enhance and value their experience as in-company coaches through the lens of a reflective practitioner. Furthermore, I wanted to put into practice the 'spiral of action research' (S. Kemmis et al., 2014, p. 18).

The second part of the workshops – as requested by the in-company coaches at the end of the second workshop – was centred around learning, why and how people learn and the importance of creating a setting to allow people to learn.

My intentions as a researcher/reflective practitioner throughout the day were the following:

First, I wanted to track the implementation of IAZPERKA by listening to the positive and negative experiences of in-company coaches with their apprentices. I wanted to carefully listen to check if they were still working on the pedagogical tool as well as to listen if the use was still rigorous, as I know from experience as a behavioural trainer that after some time, people begin to forget how to use the knowledge learned in workshops.

Second, I wanted – like in every workshop after the kick-off – to discuss and listen about challenges in-company coaches encountered by using IAZPERKA to understand which kind of support they might need.

Third, as requested by in-company coaches, we worked together on learning styles, learning setting and the conditions required to make learning possible in the outlets. Knowing that the learning style test by Kolb (1984) is largely discredited, I

selected the 'learning style profile' of Professors Geier and Downey even though I am aware that the criticism about pigeonholing people as certain 'kinds of learners' applies to any theory about learning styles. Nevertheless, I was looking for a pragmatic instrument for in-company coaches to be aware of differences. The idea behind this test was to make in-company coaches aware that apprentices learn in different ways, by discovering themselves in the group, how they were different in terms of learning approaches. I started with an introduction to the second part by discussing a short theory about learning styles. After the theory, I carried out a learning style test. Like the first typology test in the second workshop, for the learning style test I also did not have the expectation or the claim that the test would be 100% scientifically validated. The learning style test selected was founded on the assumption that there are four different learning styles.

I wanted to discuss and discover with the in-company coaches how people learn and how they approach the learning process. The in-company coaches had the opportunity to answer the learning style test, and we evaluated it together. It was helpful for the group dynamic to find out that the four in-company coaches had four different learning styles. As all four learning styles were equally distributed among the in-company coaches, this enabled intensive discussions about the strategy adopted by the four different styles when it comes to learning.

After the discussion, the group worked on setting, discussing and writing about factors which positively influence the learning process in outlets. My plan behind this exercise was to let in-company coaches discuss and discover which elements/conditions should be available also for their apprentices to learn. With this exercise, I also wanted to enhance and enforce their position as reflective practitioners. After the phase of working in groups, they presented their results. I was pleased to see that conditions like time, positive attitude towards the apprentice, partnership, mutual respect and trust were written on the flipchart.

How I can evaluate outcomes in terms of the values I hold

After the third workshop, I felt confident that the in-company coaches knew how to create a positive setting to enable apprentices to learn. I was also pleased to see, during the presentation, that in-company coaches saw themselves with their behaviour, their values, and their communication in a role of key player in this

partnership called apprenticeship. Nevertheless, they also showed the importance of being a partner and that the apprentices enjoy mutual rights in this partnership.

At the end of the third workshop, I felt that the in-company coaches were fully aware of their role as facilitator. In my personal diary I wrote statements made by in-company coaches at the end of the third workshop like: 'I have never thought that my role as in-company coach incorporates so many under roles' (coach 2) or 'My role as in-company coach is a summary in one word of so many sub roles, everyone so important and everyone so demanding' (coach 3). Even if the position as reflective practitioner was relatively new for in-company coaches, I was astonished by the quantity and – most of the time – the quality of their contributions in the workshop.

The in-company coaches asked to learn more about self- and social competencies needed when interacting with Generation Z in their role as in-company coaches. To better prepare myself, I asked about the purpose of their interest about self- and social competencies needed when working and interacting with Generation Z. Two in-company coaches answered that they wanted to be better sparring partners for their apprentices, and, from time to time, they felt a bit outdated when they were interacting with their apprentices. I asked what they meant by 'outdated', and they answered 'old'. We agreed to work on self- and social competencies as well as attitudes required to work with Generation Z.

Fourth Workshop – held in December 2017

What I am doing

The fourth and last workshop was held in December 2017, six months after the third workshop. Between the third and the fourth workshops, I visited the in-company coaches in their outlets for the last time. I wanted to interview them according to my plan and to thank them for their support throughout my PhD journey. Also, the result of the second series of interviews will be presented in Chapter 7.

Even during the second visit and after the second series of interviews, all four participants showed the diaries they kept in their role as reflective practitioners.

How and why I am doing it; what I want to achieve

The workshop lasted one day. As already written above, the first part of the workshop was held according to the structure and questions presented in this chapter to enhance and value their experience made as in-company coaches through the lens of a reflective practitioner. Furthermore, I wanted to put into practice the 'spiral of action research' (S. Kemmis et al., 2014, p. 18).

The second part of the workshops – as requested by the in-company coaches at the end of the third workshops – was centred around self- and social competencies needed when interacting with Generation Z in their role as in-company coaches.

My intentions as researcher/reflective practitioner throughout the day were the following:

First, I wanted to listen to the latest experiences with IAZPERKA to make the final adjustment. By listening and recording all the inputs brought by the in-company coaches, I wanted to show my appreciation. I wanted to treat in-company coaches as experts, as they had been working the past 18 months with IAZPERKA.

Second, I wanted to discuss all kinds of challenges they have encountered by taking over the new role of facilitator. At the end of my project, it was important to listen to their challenges, as I wanted to include their learnings in my set of principles.

Third, I wanted to work with the in-company coaches on Generation Z to give them the opportunity to better understand how and why the behave differently compared with the previous generation.

How I can evaluate outcomes in terms of the values I hold

I found it interesting to see how IAZPERKA became part of their tool whenever they were working with apprentices. The fourth workshop was the last one with the in-company coaches. It was impressive to listen to their learnings throughout the journey. These learnings will be included in the next chapter.

5.8. Supporting tools for in-company coaches

During my PhD journey, I created a series of documents to enable the implementation of IAZPERKA (both for in-company coaches and apprentices) as well as to develop self- and social competencies. These documents are included in the thesis. I have included these tools in the first workshop held with the in-company coaches in June 2016.

In this section, I wanted to present the annexes as valuable tools to be used by in-company coaches as a backup whenever they felt the need to support their apprentices. Furthermore, I wanted to explain which kind of contribution I intended to make with the tool created.

Appendix 12 is a guideline explaining IAZPERKA step by step. My intention was to provide an overview of the different steps, as well as show the duties and responsibilities of in-company coaches and apprentices in and for the different steps. This guideline was intended for all persons interested in the new pedagogical tool.

Appendix 02 is a form/template with which the apprentices carry out the delegated work. The purpose of the form/template is to give a structure to apprentices' thoughts as well as a visual support when they are carrying out the task.

Appendix 11 is a short self-assessment of how a person perceives themselves and how they are perceived by others. The purpose of this tool is to develop apprentices in that regard. The aim of this tool is to allow the self-development of apprentices through external feedback from in-company coaches (and vice versa) on how the person sees oneself.

Appendix 10 is a set of values to allow discussions between in-company coaches and apprentices on individual beliefs. The purpose here is to get more information about what kind of motivation a person has. The final aim with this set of values is to discover, through discussion, how the in-company coaches can support the individual's willingness to perform.

5.9. Summary

This chapter covered several different aspects of IPERKA, which I had reworked and transformed into IAZPERKA. From its selection in the literature on action regulatory theory to its transformation as a structure supporting the implementation of active learning in Switzerland's apprenticeship scheme, I have made a complete

redesign to promote the partnership between in-company coaches and apprentices, creating a learning setting where in-company coaches and apprentices learn from each other in mutual respect. Furthermore, IAZPERKA reflection about what has been learned can happen in a final conversation (see step 8). As can be seen from many of the writers I chose to quote in this chapter, from its original roots, social constructivism had a great impact on modifying IAZPERKA. The modified pedagogical tool and the learning setting of the apprenticeship in Switzerland are an ideal arena to test many of the assumptions of constructivism theorists, as cited in the literature review. As Einstein (1921) said, 'Education is not the learning of facts, but training the mind to think' (Einstein, 1921).

In addition, this chapter covered the workshops held from June 2016 to December 2017 to implement IAZPERKA. In line with the approach of a reflective practitioner, several reflections have shown how it is important to involve the in-company coaches as partners in this project and to develop them into reflective practitioners as well. From the discussions to the decisions we jointly took and agreed upon, of whatever in-company coaches needed as support, the personal exchanges during the four workshops were a fundamental and precious learning step.

6. Data analysis – workshops, in-company coaches' diary and personal diary

This chapter presents a summary and analysis of the material which was collected and generated over the four workshops, field notes and observations as well as their implications for teaching apprentices. The two interviews will be presented in Chapter 7. The material I have collected was for the most part qualitative, but voting data were presented in quantitative form. The discussions held during workshops resulted in a large amount of data; hence, selected evidence was presented and discussed here. In-company coaches and my diary were in written form. Workshops and interviews were voice-recorded. In addition, I had my diary with me during workshops. Interviews were transcribed and can be found in Appendix 04. A big challenge in this chapter is documenting when the analyses started, as probably data analysis already started in the planning of the first workshop. Nevertheless, I think this chapter gives an accurate overview, after having presented the preparation in Chapter 5, which I intended to do according to the action research spiral, of data analysis after every workshop and my reflections on them.

6.1. First workshop - kick-off workshop - materials

The first workshop was held in June 2016. I assigned a preliminary task to the in-company coaches to gather information about how they perceived constructivism, the data from which I later clustered into eight different themes (Appendix 06), as well as a list of references where they could read more about constructivism and Generation Z. I wanted to give the opportunity for in-company coaches to read more about constructivism since I did not know if they had and what information they had about it and Generation Z. The preliminary task as well as the questions are found in Appendix 05. In Bourdieu's words, as written in Chapter 3, habitus stands for 'a person's patterns of perception, thought and action, in which all incorporated, previous social experiences are expressed' (Bourdieu, 1990). With this preliminary task, I wanted to have insights into how their habitus affected their approach to constructivism.

As written in Chapter 5, one of the goals of the kick-off workshop was the identification by the in-company coaches of the ideas or characteristics that they believed applied to the following statements:

- Primary features, characteristics or elements of constructivism as a theory of learning.

- Constructivism as potentially applied to Switzerland's apprenticeship scheme.

- Roles for the in-company coaches in implementing a constructivist learning environment in Switzerland's apprenticeship scheme.

In all, over 50 initial idea statements were generated by the in-company coaches before the kick-off workshop (Appendix 06) and sent by in-company coaches before the first workshop. These idea statements were embedded in prose postings. One of the in-company-coaches, for example, sent 12 statements. From *'apprentice rather than in-company coach centred'* to *'Meaning is constructed by engagement and interaction with the issue',* he embraced a variety of themes (written statements of in-company coach 1 sent before the first workshop). I anonymously categorised the idea statements provided by in-company coaches using the approach described by Morrison (1998) as emerging themes (Appendix 6).

After this analytical step taken by me prior to the kick-off workshop, the kick-off workshop items were grouped into eight themes or categories to allow a structured discussion with in-company coaches:

- Constructivism and instructional design
- Constructivism learning/activities
- Constructivism and learning environment
- Constructivism and the apprentice
- Constructivism and social community
- Constructivism and the in-company coach
- Constructivism and assessment
- Constructivism and theory

These eight themes were used to organise and analyse the kick-off workshop, to structure and focus discussions as well to analyse the discussions, as I considered in-company coaches' idea statements as data. To ensure that I had interpreted idea statements and placed them in appropriate themes, I consulted a colleague well-

versed in constructivism. She confirmed my themes and the placement of the idea statements within them.

6.1.1. Constructivism and instructional design

We started with the theme *instructional design,* and in-company coaches discussed the idea statements sent prior to the kick-off workshop*.* According to Reinmann-Rothmeier and Mandl (1999, p. 37), 'learning involves active learner participation'. I have defined the setting and the preliminary tasks needed to create a constructivist learning environment in outlets because of its relevance to the learning process. As seen in Chapter 3, 'it is only when schooling operates in a way that connects students relationally in a relevant, engaging, and worthwhile experience that substantial learning will occur' (Fullan 2016, p. 139).

The ability of the in-company coaches to prepare authentic tasks and problems for apprentices was also raised and confirmed as an essential issue by several in-company coaches and was regarded as crucial to get apprentices' commitment. Authentic tasks mean functional tasks not tailored to apprentices but rather a part of daily business. One of the in-company coaches stated in the workshop that *'authentic tasks and problems'* were '*part of the daily business in the outlet'* and therefore *'easy to be identified as authentic task'* (in-company coach 3)*.* Another in-company coach supported this idea by stating, *'As apprentices are working in an operating outlet open to customers, there were plenty of authentic tasks to promote the learning process'* (in-company coach 2)*.* Another in-company coach was worried about the two words *'authentic'* and *'meaningful'* and questioned if apprentices were able to *'truly recognise and label the task as authentic and meaningful to them'* (in-company coach 4)*.*

In relation to constructivism and instructional design, the in-company coaches agreed on the importance of preparing authentic, challenging, individual tasks and problems for apprentices to solve to enhance their individual learning process and allow them to individually choose their path. The discussion continued to the semantic significance of 'authentic' and 'meaningful', which seemed to cause difficulties among in-company coaches, as not every in-company coach had the same understanding. The objection to the meaning brought up by in-company coach

4 allowed during the kick-off workshop for a discussion on a relevant point: the importance for in-company coaches to transparently communicate to every single apprentice the importance and relevance of a task. This view is supported by Fullan: 'if meaning matters to the success of teachers, it doesn't take much imagination to realise that meaning is central to student success' (Fullan, 2106, p. 138). The fact that a task is meaningful and relevant to in-company coaches does not mean that it would automatically be interpreted and labelled the same way by an apprentice without any in-company coaches' transparent communication. Knowing that every person constructs their own reality, as seen in Chapter 3 (Fosnot, 1996), is also one of the statements of the constructivist learning theory. The issue related to the lack of time to prepare authentic tasks at work was brought up by in-company coach 4. As seen in Chapter 2, time pressure is also a reality at work for in-company coaches, and preparing individual tasks for every apprentice demands an increased time investment for in-company coaches. I wrote in my personal diary – after the workshop – the following sentence: 'unfortunately, if they do not take time to prepare individual and meaningful task for every single apprentice, meaningful learning will not happen'.

6.1.2. Constructivism and learning activities

We went on following the statement list in Appendix 07 with *'Constructivism and Learning Activities'*. With the concept of *'learning activities',* we jointly defined the characteristics needed by tasks to be delegated to apprentices in outlets according to their personal level of knowledge.

According to Reinmann-Rothmeier and Mandl (1999), 'Learning is related to the situation' (p. 37). The in-company coaches discussed the phrase *'motivating tasks to be solved'* as presented in the idea statements (Appendix 06). In-company coach 4 pointed out that *'everyone gets motivated and stimulated in a different way'* and therefore was *'necessary to adapt tasks to every single apprentice also because of individuals' motivation'* (in-company coach 4)*.* In-company coach 2 supported this idea by adding that *'in order to adapt tasks to every single apprentices' motivation implies for us that we need to know them'.* In-company coach 3 asked what the others thought about the importance of an authentic relationship with apprentices. In-company-coach 3 insisted on explaining and pointing out that *'authentic means*

genuine' and went on by discussing the importance of thinking in roles and subroles. Suddenly, in-company coach 3 said, *'We are not just a person passing information, but a human being interacting with a human being'*. In-company coach 1 added that *'also while interacting with apprentices we take over different subroles'.*

In relation to constructivism and learning activities, the in-company coaches agreed on the relevance of personal motivation. Motivation 'means to be moved to act, but what moves people to act varies greatly from person to person and from situation to situation' (Elliot et al., 2017, p. 215). The importance of being self-motivated as an in-company coach to be a good example for apprentices was discussed, and the in-company coaches agreed on it as an important pillar to create a good relationship with apprentices and to serve as a good role model. In-company coaches discussed the challenge of delegating motivating tasks as well even if not all tasks were motivating (and, despite this fact, need to be learned by apprentices). Therefore, this relationship between being self-motivated and serving as a good example was seen by in-company coaches as mandatory, as 'they apprentices want to experience a climate within the company promoting good relationships and appreciation' (McCrindle & Wolfinger, 2011, p. 172). Furthermore, in-company coach 2 stated that *'in-company coaches need a set of self- and social competences to be able to respond and adequately fulfil apprentices' expectations linked to the different in-company coaches' roles'.* This last sentence did not find the agreement of in-company in-company coach 1, as they were afraid and overwhelmed about the idea of all the subroles: '*How can I protect myself from all the expectations deriving from so many subroles?'* With regard to the statement list, the in-company coaches recognise that they were acting in different roles. Role clarity is a crucial competency whenever in-company coaches are working with apprentices. I wrote in my personal diary – after the workshop – the following sentence: 'nowadays generation communicate immediately if a person is authentic or not. If you do not walk the talk and you do not have time for them, you are implausible'.

6.1.3. Constructivism and learning environment

We went on following the statement list in Appendix 07 with *'Constructivism and Learning Environment'*. With the concept of *'learning environment',* we jointly defined

the way to work with apprentices whenever in-company coaches delegated tasks. According to Reinmann-Rothmeier and Mandl (1999), 'Learning is carried out constructively' (p. 37). The in-company coaches discussed the concepts of *'flexibility'* and *'negotiation'*. In-company coach 4 affirmed that the *'in-company coach needs to be flexible and talk the walk'.* He stated that *'flexibility is the key to fulfil all the objectives required'.* In-company oach 2 made the contribution in the discussion by saying, *'I am already flexible, and I decide in which sequence my apprentice learns which objective'.* In-company coach 3 remarked and pointed out that *'probably this is one of the main points. It is not a unilaterally decision, but rather a discussion'.* In-company coach 1 was shocked about the wording of *'my apprentice'* spoken out by in-company coach 2. In-company coach 2 explained to the group that it was not meant in a possessive way but rather *'with a sense of responsibility'.* We went on by discussing the concept of 'negotiation', and all the in-company coaches agreed by stating *'a negotiation is an open discussion between two partners'.*

In relation to constructivism and learning environment, the discussion about the latter focused on pedagogy, but I did not want to use a technical word whenever working with in-company coaches. This step brought up the importance to see (also) apprentices belonging to Generation Z as an individual person, a professional partner, and therefore, an open and transparent communication, mutual trust, investment of time and commitment apply to this generation, as Generation Z 'is not only consumers but also the collaborators of the content' (Madden, 2016, p. 153). This importance of treating apprentices like partners was discussed among the in-company coaches from their learning biography (when they were apprentices themselves).

In-company coach 3 said, *'When I was an apprentice myself, I just followed what my in-company coach said'* (diary and personal notes). In-company coach 1 brought up that *'we are living in another time and we have to go with the time'* (diary and personal notes). *In-company coach 4* asked the others rhetorically, *'How far can you go on life just by following instructions?'* (diary and personal notes). *In-company coach 3* replied, *'You are right. Our way to work with nowadays apprentices is probably outdated and ineffective'* (diary and personal notes).

I fully share this idea of being outdated. This view is supported by McCrindle and Volfinger (2011) when they said, *'In the eyes of our children it is the teachers who speak an outdated language or teach using 20th-century techniques'* (McCrindle & Wolfinger, 2011, p. 128). On top of this, Madden stated, 'Due to ease of access to online sources, students have been empowered to become largely self-directed learners (Madden, 2017, p. 148). I wrote in my personal diary – after the workshop: 'In-company coaches needs to adapt their role and see themselves as partner'.

6.1.4. Constructivism and apprentices

We went on following the statement list in Appendix 07 with *'Constructivism and Apprentices'* according to the structure presented in section 6.1*.* With the concept of *'constructivism and apprentices',* we jointly defined the way apprentices act and learn in a constructivist context. According to Reinmann-Rothmeier and Mandl (1999), 'Apprentices also steer and monitor their learning processes themselves' (p. 37). In-company coaches discussed the concept of *'apprentice rather than in-company coach centred'* brought up in the idea statements. In-company coach 1 stated that *'from long working experience is interesting to see, how apprentices learn in different way'.* In-company coach 3 agreed by adding that *'the most important thing is, that learning happened'*. And in-company coach 2 asked about the concept of assessment: *'Who or what decides if learning happened?'* In-company coach 4 answered, *'The assessment about the fulfilment of a task need to be discussed with apprentices'.* In-company coach 1 brought up into the discussion that there are *'clear criteria about quality and standards',* and therefore, it is *'easy to assess the result'.* In-company coach 3 agreed by adding that *'learning is not just about a result, is about a whole personal process'.* In-company coach 2 added that for this reason, *'we should be interested in what happened for the apprentice while carrying out the task'.*

In relation to constructivism and apprentices, Kramer (1983) claimed that in postformal thinking, 'one has a relativistic conception of knowledge "anything goes", and multiple viewpoints can be understood to be relatively right at the same time' (p 5-53). As written in Chapters 2 and 3, apprentices following apprenticeship belong to Generation Z and are living in a postmodern society. For this reason, in-company coaches agreed on this statement: 'apprentices are encouraged to seek knowledge

and experience from different types of sources and perspectives' (Appendix 06). They discussed how important it is for them to allow apprentices to self-reflect on their learning process and their outcomes and assess themselves. But in-company coaches 2 and 3 rejected the idea of 'anything goes', as when workers are performing, this must be in line with quality standards. I wrote in my personal diary how important it is for in-company coaches to maintain an equilibrium between the need, according to Reinmann-Rothmeier and Mandl (1999), to steer and monitor their learning process and the need to prepare apprentices for a labour market, where performance and productivity are important.

6.1.5. Constructivism and social community

We went on following the statement list in Appendix 07 with *'Constructivism and Social Community'.* With the concept of *'constructivism and social community',* we jointly defined the importance of the whole team whenever interacting with apprentices. As employees are not only part of the transformation of the economy but also contribute to the changes through the knowledge, skills, attitudes and values they agree are important and nurtured in their colleagues (Maclean, 2007), they also play an important role whenever they interact with apprentices. They are also role models for apprentices, and apprentices – consciously or unconsciously – observe them when they are working.

In-company coaches discussed the different statements (Appendix 06) and agreed about the importance of interacting as a one team but also about the difficulty encountered, especially when some other working colleagues were not a good example to follow for apprentices. In-company coaches 3 and 4 spoke about the difficulty to train all the team members to create a supportive team, where everyone supported everyone and created a safe place where learning could happen. Another challenge was reported by in-company coach 1, when he stated that to create a culture where mistakes could happen was extremely challenging, as not all team members seemed to be tolerant of mistakes.

In relation to constructivism and social communities, I suddenly reflected on the fact that team members in different outlets are not trained to become in-company coaches, but they have of course intensive exchanges with apprentices. Starting from that statement, the 'training of the learners cannot be any better than the training which trainers themselves were given' (Wettstein, 2017, p. 149) can be a challenge for in-company coaches to create in their outlets an environment with a supportive context for learning. It is hoped that team members are as self-motivated and self-reflective as their in-company coaches in this project, as personal behaviour is not only a matter of training but much more a matter of personal mindset, as you cannot train how to be positive in life; you can only act as a positive person and be a positive role model for others. I wrote in my personal diary about the need to create a common, shared, positive and supportive culture in order for learning to take place.

6.1.6. Constructivism and the in-company coach

We went on following the statement list in Appendix 06 with *'Constructivism and the In-Company Coach'.* With the concept of *'constructivism and the in-company coach',* we jointly defined the change in the learning approach in-company coaches should implement to allow learning to take place (in a constructivist view). The discussions focused on the self- and social competencies of in-company coaches but also on the fear to leave a behaviouristic way to teach. In-company coach 3 said, *'I am responsible for my apprentices, towards the management, apprentice' parents, the school and my colleagues and therefore I have to guide my apprentice'.* On this statement, I reflected after the workshop on how much in-company coaches '*see their role and their activity as passing on existing tools and knowledge'* (Maclean, 2007, p. 44). The discussion moved on to the need to prepare apprentices for a different labour market, in the Age of Information, where skill workers can become independent problem-solvers (instead of copying what they have learnt in their apprenticeship).

In relation to constructivism and in-company coaches, there was agreement among the in-company coaches that they should avoid direct instruction (see Appendix 06) to help apprentices think and prepare them for the labour market. I fully agree with Maclean when he posited that 'education of apprentices should be seen

as a more holistic activity' (Maclean, 2007, p. 44). The greatest disagreement was the idea statement 'learning strategies that allow learning and new experiences' not because of the content but because of how in-company coaches should learn strategies to improve a constructivist environment in their outlet; that is, if constructivism is about not following strict guidelines, how can constructivism be taught in a strategic way? Perhaps this is a 'double blind' and the core of the disagreement described above among the in-company coaches. If 'the importance of the role of teacher as an agent of change . . . has never been more obvious than today' (UNESCO, 1996, p. 102), it is compulsory that in-company coaches become aware of strategies to implement strategies to support constructivism, especially if we consider that 'constructivism is a theory about learning, not a description of teaching and that no "cookbook teaching style" or part set of instructional techniques can be abstracted from the theory and proposed as a constructivist approach to teaching' (Fosnot, 1996, p. 29). I wrote in my personal diary about the need for Switzerland's apprenticeship scheme to leave the path of Bloom's taxonomy (see Chapters 2 and 3) and start to educate in-company coaches on how they can support and educate apprentices.

6.1.7. Constructivism and assessment

We went on following the statement list in Appendix 07 with *'Constructivism and Assessment'.* With the concept of *'constructivism and assessment',* we jointly defined how to assess performance. The discussion among the in-company coaches focused on grades at the VPET school and federal qualification at the end of the apprenticeship. They all agreed about errors being a valuable part of the learning process and that human beings learn from mistakes, but they disagreed about letting apprentices assess themselves. In-company coaches have been socialised with grades, and this is still the case in Switzerland's apprenticeship scheme at the moment. With targets formulated according to Bloom's Taxonomy (see Chapters 2 and 3), in Switzerland apprentices are assessed most of the time through tests. In-company coach 4 brought up the point that 'assessment should cover much more than just a performance' (in-company coach 4). In-company coach 1 replied that 'behaviour, stamina and self-motivation' should also be assessed and therefore feedbacked, especially when apprentices did not perform well (despite self-

motivation, positive behaviour and stamina). We discussed together what it meant to learn, how we learn, when we learn and how long-lasting is such learning.

In relation to 'constructivism and assessment', the in-company coaches agreed that 'learning is not the result of development, learning is development' (Fosnot, 1996, p. 29). Hence, in theory, all kinds of activities in the outlets can lead apprentices to a learning process and finally to learn. We agreed on how important it is to develop skills to self-reflect, as 'reflective abstraction is the driving force of learning' (Fosnot, 1996, p. 29). The challenge for in-company coaches remains to promote self-assessment and self-reflection among apprentices in their outlets, knowing that at VPET school apprentices will be assessed by tests and grades, and this seems to be the only quality attribute that counts when apprentices are passing their qualification process at the end of the apprenticeship. I felt they were frustrated about it because they could not change this situation, but they were also aware that they could contribute to a broader and wider assessment of apprentices not only because they spent most of their apprenticeship in the outlets but also because apprentices had the opportunity to put into practice what they have learnt at the VPET school and get broader feedback covering more than just their performance.

6.1.8. Constructivism and theory

We finished by following the statement list in Appendix 06 with *'Constructivism and Theory'.* With the concept of *'constructivism and theory',* we jointly defined the characteristics and challenges in their outlets. The discussion started with apprentice self-motivation and how different apprentices are. In-company coach 2 said, 'This year I have a self-motivated apprentice, but not every year is the same', and in-company coach 4 agreed: 'Sometimes you have apprentices difficult to handle' (in-company coach 4). We agreed on this point, by stating, according to Reinmann-Rothmeier and Mandl (1999), 'Learning involves active learner participation' (p. 37). And for this participation, both are responsible: in-company coaches prepare tasks promoting apprentices' participation, and apprentices are self-motivated and interested to join the activity.

In relation to constructivism and theory, in-company coaches agreed on the idea statement that the process and the result are equally important for the learning process. Disagreement prevailed in how to assess performance knowing the constraints given by VPET schools (in terms of grades). Although everyone agreed on the importance of discussions and reflection (Appendix 06), in-company coaches 3 and 4 brought up the difficulty to have a discussion and self-reflection with apprentices which are not self-motivated (see above). Furthermore, in-company coaches 2 and 3 discussed how they could pass some tasks with a constructive approach, believing that not every task to be learned by apprentices was suitable to be passed with a constructivist approach.

I felt this difficulty among in-company coaches to pass tasks on to apprentices with a constructivist approach, believing that in theory it is possible to do so but sometimes does not make sense (for example, because the task does not represent a real challenge and a learning moment for apprentices) because the task itself represents, for example, a danger and could risky whenever carried out by an unskilled apprentice. Nevertheless, I took in-company coaches' concerns seriously and decided to make a practical example on the second workshop. I wrote in my personal diary that according to Seels (Seels, 1989, p. 11), 'learning occurs because personal knowledge is constructed by active and self-regulated learner (. . .) who reflects on theoretical explanations'.

6.1.9. Outcome, analyses and personal reflection: implications from the first workshop – kick-off workshop

I found the outcome of the first workshop interesting for my personal process of reflection. Comparing notes taken from my personal diary with the finding of the literature review, I could spot similarities on issues related to in-company coaches whenever they were working with their apprentices. For example, as written above, in-company coach 2 also brought up the dilemma of time pressure whenever they were working with apprentices. This dilemma between dedicating enough time to apprentices whenever interacting and working to them and being efficient and productive at the same time was not a surprise to me. As seen in Chapter 3, time pressure is a reality in modern-day companies. I am fully convinced that is not

possible for in-company coaches to build a real relationship with apprentices, the relationship needed in a constructivist setting of learning, if in-company coaches are permanently under time pressure. The challenge for in-company coaches here is to find a reasonable amount of time to invest whenever interacting and educating their apprentices. This challenge of being granted more time to educate apprentices can be only discussed and solved in cooperation with their superiors.

In addition, in-company coaches were concerned about whether they could fulfil all the expectations within the time given coming from all different partners in the apprenticeship. These expectations derived from different roles and subroles of in-company coaches seem to be extremely present in their consciousness (habitus). The findings about roles and subroles whenever acting as in-company coaches can be found in Chapter 9. Comparing notes in my personal diary, I was pleased about this sense of responsibility of in-company coaches towards all the partners, and I understood the challenges related to it, as in their different roles they must cope with so many expectations derived from different partners in Switzerland's apprenticeship scheme. In-company coaches feel responsible about expectations related to apprentices coming from their companies, parents and teachers at different schools, as seen in Chapter 2, as discussed in the first workshop, and from themselves. In-company coaches put themselves under pressure by having expectations towards their role as well. I am fully convinced that roles and subroles need to be discussed with all partners. The in-company coaches need to be protected from a part of these unjustified expectations, as they cannot be held responsible for issues that are not under their control. It is wrong, for example, if apprentices' parents held companies and their in-company coaches responsible for learning and the learning progress. The one who is responsible for learning is the apprentice itself. The role of in-company coaches here is to support their apprentices by creating learning opportunities, and these learning opportunities are linked to real tasks. It is by carrying out tasks and working that apprentices are creating their own meaning of what they are doing. And this is an individual process, as everyone creates their own reality. Therefore, there is only one person who can be held responsible for the personal learning process of every single person: individuals themselves.

Another interesting point brought up by in-company coaches was the need to switch the approach of coaching apprentices as well as the importance of

apprentices' intrinsic motivation to carry out tasks. In-company coaches stated that the pedagogical approach whenever working with apprentices should be more learner-centred, by respecting, for example, apprentices' individuality. As everyone learns in different ways, it seems coherent that the process of supporting apprentices' learning process needs to be tailored to every individual. For in-company coaches, the challenge appears to be much more demanding when it comes to apprentices' intrinsic motivation, as in-company coaches believe that they are responsible for it. However, holding in-company coaches responsible for apprentices' intrinsic motivation is wrong. There is only one person who is responsible for our intrinsic motivation: every one of us. The in-company coaches can promote and enhance an already existing intrinsic motivation in their apprentices. And as meaning is individually constructed by every single person, in my opinion it is in-company coaches' responsibility to spot what helps apprentices' intrinsic motivation to grow and accordingly to individually delegate tasks.

After the kick-off workshop, I wrote in my personal diary the following personal implications about teaching and coaching apprentices:

- In-company coaches struggled with time pressures and were concerned about not fulfilling all expectations, especially towards their manager, apprentices' parents and VPET schools. They need to be granted more time to work with apprentices as well as to be protected from unjustified expectations derived from the above partners.

- In-company coaches recognised the importance of being a partner of apprentices and therefore moving from a teacher-centred towards a learner-centred pedagogical approach whenever working with them. They need to be supported by external coaches in this shift in pedagogical approach, as for in-company coaches it is not clear how this shift should look like in practice.

- In-company coaches (re)discovered that every person is an individual and meaning is individually constructed. They need to be taught how different the approach to the learning process for individuals is, gaining awareness about what such a process is, how it works and how apprentices can assess themselves.

- In-company coaches spotted the need to be authentic whenever working with apprentices. In-company coaches need to be supported by discovering

methods on how they can self-reflect and how can they enhance their authenticity towards apprentices.

- In-company coaches recognised that they could influence apprentices' intrinsic motivation by delegating real and meaningful tasks. Through self-reflection before delegating, in-company coaches need to be supported on which kind of task can be delegated to which apprentice, as not every task can be delegated, and not every task can be assigned to each apprentice. The process of delegation needs to be carefully analysed by considering every apprentice as an individual person, with an individual way to learn, at a different level of knowledge.

After the kick-off workshop, I felt responsible for showing in-company coaches that the implementation of the IAZPERKA form was not to burden them by asking for more time whenever they were interacting with apprentices but exactly the contrary: a useful form to promote apprentices' independence and in-company coaches' and apprentices' partnership.

6.2. Second workshop – materials

The second workshop was held in December 2016. As explained in Chapter 5, I split the second workshop into two parts. The first part was held according to the structure and questions presented in Chapter 5, to enhance and value their experience made as in-company coaches through the lens of a reflective practitioner. The second part, as requested by the in-company coaches at the end of the first workshop in June 2016, was centred around the topics of behaviour and self- and social competencies.

We started by discussing the list and voting on the idea statements sent by in-company coaches before the kick-off workshop (Appendix 06). The in-company coaches' votes made it possible to narrow down the idea statements to 10 (Appendix 07). From the 50 idea statements created by previous rounds and my filtering, total agreement (100% consensus) was reached on the following 10 idea statements:

1. Encourages/values the development of personal understanding/knowledge construction by apprentices.

2. Fosters active/higher-level thinking and reflection.
3. Apprentices are encouraged to seek knowledge and experience from different types of sources and perspectives.
4. Provides opportunities but not always answers.
5. Builds skills and abilities while working on authentic tasks and problems.
6. Becomes a coach for learners capable of critical awareness of one's thinking and learning and oneself as a thinker and learner.
7. Builds on the prior learning (knowledge) of individuals.
8. Learning activities are authentic and require reflection.
9. Knowledge does not exist independent of the learner.
10. Provides a safe environment, encouraging risk-taking and authentic dialogue.

These 10 idea statements support much of the literature on constructivism and reflect current thinking in this learning theory. Many authors and researchers have noted that the tenets of constructivism encourage and value personal knowledge construction on the part of the learner, and at its core, constructivism should be learner-centred (Doolittle, 1999; Fosnot, 1996; Yilmaz, 2011). What is noteworthy is the fact that these 10 idea statements achieved 100% consensus as representative of defining elements of constructivism across all in-company coaches in this thesis, indicating their common understanding of constructivist learning and educating.

We discussed the 10 idea statements for more than two hours. Coach 4 stressed the importance for apprentices to work on authentic learning activities to encourage apprentices' motivation. Coach 2 replied that from observations, apprentices were highly motivated to work on a task whenever they perceived that the environment was safe. Coach 1 pointed out that dialogue and authenticity are key to encourage apprentices to take risks. Coach 3 pointed out that the dialogue should be '*more supportive, by promoting opportunities, but not always answers'.* As said, this step allowed an open discussion and a common view of constructivism and defining elements.

The second part of the morning was structured as explained in Chapter 5 and therefore was dedicated to the first experiences made with IAZPERKA and its form, as the in-company coaches started with their new apprentices in August 2016. The in-company coaches brought along their personal diaries, as in the kick-off workshop we decided to keep a written record of the observations, thoughts and insights to support their role as reflective practitioners.

We started with the first point of the agenda, as described in Chapter 5: 'IAZPERKA my biggest success since the last workshop'. Coach 2 spoke about the success of the apprentice and stated that the apprentice was getting more and more self-confident whenever the task was successfully fulfilled. Coach 1 supported this view by adding that the apprentice was showing interest by asking questions and working independently. Coach 4 replied that sometimes it was not so easy to select the right task, as apprentices are individuals and therefore learn in completely different ways. Coach 3 stated that it *'is amazing to see, how different – in terms of personality apprentices are'.* Coach 1 answered, supported by significant experience, that after several years, *'whenever a new apprentice is beginning, I tend to compare the apprentice to a previous one'.* I asked why this comparison happened, and I got one common answer: *'Well, it is easy . . . they behave the same way'.* I was keen to know their opinion on the learning process, and I asked a second question about their behaviour in terms of the learning process, and they started discussing among each other. Coach 2 stated that *'this is not easy to answer, because we do not know how learning happens'.* We decided to take the learning process as a topic for the third workshop.

Implementing IAZPERKA in the outlets

The discussion about IAZPERKA and its form went on, and I wanted to switch the focus of the discussion away from performance and results towards the evaluation and the discussion taking place at the end of the IAZERKA process. The in-company coaches brought along their diary, and I took notes in my personal diary throughout the discussion. Regarding the last letter of the IAZPERKA template (evaluating), coach 3 stated that *'it is difficult just to ask open questions, without saying anything',* and I asked what made it difficult. Coach 2 answered that probably the most difficult

thing was to realise that the role of an in-company coach embedded in a constructivist setting is *'not about giving opinion but asking for insights and opinion'*. Coach 1 replied that *'fostering a higher level of thinking and reflection is important'*. Coach 4 brought up the importance for all in-company coaches to see themselves in the subrole of learner/apprentice as well as *'we have to develop this higher level of thinking and reflection as well'*.

The first part of the second workshop brought up the challenge for in-company coaches to let apprentices self-assess themselves, through open questions posed by in-company coaches, and their own learning process whenever they were working with the IAZPERKA template (see Chapter 5). From professional experience and observation, I was not surprised that in-company coaches felt uncomfortable with the idea that learning is much more about creating a safe environment in an open dialogue and creating a setting where learning can happen than providing them with fixed knowledge and right answers (which I believe seldom takes place).

In the afternoon, we went on discussing the topic of behaviour and self- and social competencies. I started with a test about behaviour to allow a discussion about what in-company coaches already stated at different times: *'well apprentices sometimes behave completely different from what we expected'* (coach 2). Even if I was (and I am) aware that not one of the personal tests existing on the labour market is 100% scientifically proven, I wanted to provide a pragmatic way to discuss with in-company coaches the different approaches to behave to better understand why people act and react in different ways. In addition, I intended to promote among the in-company coaches the importance of not judging people from their behaviour and consequently treating them without any preconceptions. Furthermore, I wanted to show in-company coaches the importance of seeing apprentices as individuals. These were the main reasons for my decision to select a personality test for in-company coaches.

After this step, we moved to the last topic on the agenda we agreed on at the end of the kick-off meeting, dedicated to competencies. We started to discuss what competencies are, and I provided them with a definition to have a common ground of discussion even though I was not interested in a definition but rather in the characteristics and properties of competencies. Coach 2 asked, *'Why do you think*

that competences are important?' Coach 3 asked what the question was about. And coach 2 stated, *'I want to hear if my opinion is right or false'.* Coach 4 took over by answering, *'You should now know, that in constructivist setting is less about right or false, but rather about personal reflection'.*

I was astonished by this answer, probably coming from a selection of literature and books about constructivism I sent to in-company coaches before starting the workshops, to allow them to read about it and deepen their knowledge. By listening to this discussion, I had the impression that the constructivist approach I wanted to promote in Switzerland's apprenticeship scheme was possible. I was and I am fully convinced that people have a great impact in making changes possible. Nevertheless, my intention in this exercise was to reflect with the in-company coaches on how important it is to have a set of self- and social competencies to build an authentic relationship with apprentices. I put 20 sheets of paper with 20 different competencies like 'empathy' and 'independence' (see Appendix 08) on the floor to choose from.

6.2.1 Outcome and analyses from the second workshop

Apprentices are individuals

From notes in my personal diary, I could spot different issues in relation to the desire of in-company coaches to adapt their behaviour to apprentices' behaviour, acknowledging that every apprentice is unique and therefore an individual with a unique personality. In-company coaches acknowledged that although being unique as a person is a fact, the personality test was useful to cluster this uniqueness as an individual into four distinctive and broad categories. These four clusters made the intention to respect the uniqueness of individuals much more manageable by providing a pragmatic guidance. With this test, I wanted at the same time to allow in-company coaches to discover and consequently reflect on their own behaviour by enhancing the importance of being credible whenever interacting with apprentices belonging to Generation Z. Nowadays it is of utmost importance for in-company coaches to be authentic whenever working with apprentices, *as Generation Z can sniff a phony from a long distance* (McCrindle & Wolfinger, 2011, p. 140).

Competencies need to be developed individually

After this point related to uniqueness and individuality, the link to an individual and tailored development of apprentices' competencies was a short step. The in-company coaches understood that because of these individuals' individuality, not only the behaviour but also apprentices' level of competence was different. Therefore, competencies must also be individually developed by every single apprentice. For in-company coaches to help in developing apprentices' competencies, it is important for themselves to rediscover their own competencies and acknowledge their own lack of them to be aware of this and to develop them.

Importance for in-company coaches to be a good role model

To be credible as an in-company coach in apprentices' eyes whenever giving negative feedback, there is a need for in-company coaches to be a good role model and not only possess but also demonstrate these competencies in practice.

I found this acknowledgment of individuality and credibility extremely important, as from my experience it is a success factor whenever working with apprentices belonging to Generation Z. This generation does not want to be treated as a group but as individuals. And as Generation Z is permanently seeking immediate feedback, it is important for in-company coaches to carefully observe their apprentices, to take notes of their observations and discuss their observation with their apprentices In a sympathetic way, as *this generation does not expect us to know all about their lifestyle. They are simply seeking understanding and respect* (McCrindle & Wolfinger, 2011, p. 140). In the evening after the second workshop, I wrote in my personal diary that an open and honest relationship between apprentices and in-company coaches in mutual respect is key to a positive environment that allows apprentices to learn. Or in other words, *they do not care how much you know until they know how much you care* (McCrindle & Wolfinger, 2011, p. 141).

After the second workshop, I wrote the following implications about teaching and coaching apprentices (personal diary):

- In-company coaches were aware that every apprentice is a unique person, and therefore, they need to tailor their behaviour to every single apprentice.
- The process of in-company coaches in recognising apprentices' behaviour and level of competencies takes time. This process needs to be transparently

carried out by in-company coaches in mutual respect by acknowledging each other as a mutual partner in a learning process.

- The learning process, whenever interacting with apprentices, must be seen as a holistic process where learning is replaced by educating. Educating goes beyond a simple passing of knowledge and skills.
- The will of in-company coaches to discover the behaviour and the personality of their apprentices is an important point to reinforce the partnership between apprentices and in-company coaches. Educating is relational.
  In-company coaches recognised that they could influence apprentices' motivation by supporting them in an individual way and by respecting them as individuals.

After the second workshop, I felt responsible to show in-company coaches that the implementation of the IAZPERKA form was also supportive in terms of promoting a true relationship with apprentices and extremely useful in terms of transparency whenever they were working together. Transparency throughout all the processes enforces trust in each other. And this trust has a positive impact in a good relationship.

6.3. Third workshop – materials

The third workshop was held in June 2017. Between the second and the third workshops, I visited the in-company coaches in their outlets. I wanted to see the outlet as well as interview the in-company coaches according to my schedule as presented in Chapter 4. The result of the first (and second) series of interviews is presented in Chapter 7. As written above, the first part of the workshop was held according to the structure and questions presented in Chapter 5. The second part of the workshop, as requested by the in-company coaches at the end of the second workshop, was centred around the learning, why and how people learn and the importance of creating the setting to allow people to learn.

The importance of becoming self-reflective

We started the workshop with an open discussion about the diaries. I asked the following question: 'What is the importance, if any, of my diary?' All in-company coaches brought along their diaries. I took notes in my personal diary. In-company

coach 3 started by showing a thick book and some of the contents. Brainstorming was combined with drawings, exclamation marks and question marks after thoughts and words. *'It forces me to question myself in a pleasant way at the end of the day, what I have done'.* In-company coach 2 added, *'When I go back and I looked what I wrote two months ago, I see my improvement'.* In-company coach 1 said, *'It is most valuable, to think about what and how I think that way'.* In-company coach 4 said, *'I found myself much more reflective, not only whenever I am working'.*

I wanted to find out what was the meaning of 'a pleasant way' for in-company coach 3, 'improvement' for in-company coach 2, 'valuable' for in-company coach 1 and finally, 'more reflective' for in-company coach 1. The reason for this question comes from my experience. Most of the time, people speak about words, defining them in a different way and not seldom, therefore giving them a completely different meaning.

In-company coach 3 started with the phrase/concept 'pleasant way'. *'Well, it is pleasant, as is done completely freely'.* In-company coach 1 added that they wrote 'pleasant' as well, as the writing of personal thoughts during the day became a habit and a record of a personal growth process. In-company coach 4 told the group that sometimes they felt a bit *'uncomfortable as the writing at the end of the day brought up unpleasant thoughts as well'.* In-company coach 2 stated, *'You can lie to anyone but not to yourself'.* I found it reassuring that everyone considered the writing process as positive. We went on with in-company coach 2 discussing the phrase/concept of *'my improvement'.* In-company coach 2 was a bit concerned with being perceived by the other in-company coaches as arrogant by stating 'my improvement'. In-company coach 1 answered, *'This is what is all about in life. To truly perceived the personal improvement'.* In-company coach 3 reassured that *'personal has also the meaning of in own opinion and opinion should not be labelled or rated'.* I wanted just to reassure them that becoming a self-reflective and self-reflected coach also means to leave the path of absolute certainty and enter the path of doubt. From my experience, it can be perceived as struggling, but it is also a path where everyone can realise personal growth in terms not only of knowledge but also of valuable personal insights.

The importance of a common definition whenever talking together

We went on with in-company coach 1 discussing the word/concept *'valuable'*. In-company coach 2 reacted a bit irritated by stating that *'apparently everything needs to have a value in this world'*. In-company coach 3 firmly reacted by stating, *'It depends on your definition of valuable',* and in-company coach 1 added, *'Valuable means to me, that it has quality worthy of personal retention'.* In-company coach 1 apologised by saying *'most of the time people consider something valuable if it has considerable monetary worth'.* In-company coach 3 added, *'Not everything that can be counted counts in life'.* In-company coach 2 added, *'And not everything that counts in life can be counted'.* We discussed the fact that one word can recall so many memories and images in our life (Bourdieu, 1990). As recorded in my personal diary, and from my experience in training people, it is essential to discuss the meaning of words and concepts. I pointed out the importance of talking with Generation Z about the word/concept 'valuable' to help them to make meaning out of their own learnings.

An increased quality of self-reflection

Finally, we discussed in-company coach 4's phrase/concept 'more reflective'. Coach 4 was a bit afraid not to be seen as a reflective person and wanted first of all to rectify the sentence by stating, *'I was already reflective before . . . but I am in a different way now'.* I thanked in-company coach 4 by smiling and pointing out that we had to discuss one more concept: 'different'. What was the concept of 'more reflective/reflective in a different way'? In-company coach 4 apologised about it, and we all supported the idea that there was nothing to apologise for and everything was fine. In-company coach 2 said that *'the reflection done in the evening had a better quality and therefore useful'.* In-company coach 3 stated, *'It is not the quantity of the writing, but what I write, which I value more'.* In-company coach 1 brought to discussion that *'not only the writing is valuable, but the reflective process before about the writing is what it is all about'.* Speaking about how we think and reflect and why we think in a certain way was a new experience for the in-company coaches. In-company coach 4 asked the group, *'Is it normal, what we are doing here or are we getting nuts?'* I intervened by asking the group what they understood by the word/concept *'normal',* and everyone started laughing. We decided not to label our discussions and thoughts in a kind of evaluation. At this point, I just reminded the

group once more that at the beginning of our journey, we agreed to be allowed to speak about everything in full confidence and that everything we spoke about would stay within the group. In-company coach 4 stated at the end of this part, *'I found it very powerful to hear, that there is no right or wrong in my reflection'*. I supported in-company coach 4 by stating that the core of constructivism is the notion that everyone constructs their own reality, and therefore, reality does not exist.

As seen above, for in-company coaches, the personal diary became a black box of their journey through the project and therefore a valuable support for them to develop themselves into reflective practitioners. I found confirmation that in-company coaches found self-reflection and personal diaries useful as seen in the statements.

Implementing IAZPERKA in the outlets

The second part of the day was traditionally dedicated to IAZPERKA and its form to discuss experiences with the apprentices. Based on diaries as well as my personal notes, I want to point out the following statements. In-company coach 4 reported that *'my apprentices has become proactive'*. I asked in-company coach 4 what was the meaning of 'proactive', and they answered, *'Well the apprentice actively seeks for work to be done and looks like self-confident and happy'*. In-company coach 2 added that *'the apprentice working with IAZPERKA is better than the apprentice attending the second year of apprenticeship in my outlet'*. We discussed the possible reasons for the statement, and I asked in-company coach 2, *'Have you have ever thought about the possibility to introduce IAZPERKA to the apprentice in the second year?'* At this point, I would like to state that in-company coaches started with the project in 2016 with the new apprentices starting their education in August 2016. Apprentices who started their training in the outlets before this date, while still in training, were led by in-company coaching with a more behaviouristic vision and concept of educating, according to in-company coaches' approaches in use before starting IAZPERKA. In-company coach 2 looked at me asking, '*Am I allowed to do that?'* We asked in-company coach 2 who was responsible for apprentices in the outlet, and the answer was, *'Next week I will introduce IAZPERKA to the other apprentices, also in the third and last year of apprenticeship'*.

In-company coach 3 spoke about the dynamic in the outlet team. *'Our apprentice is growing as a person and becomes slowly a young and self-confident youth'.* In-company coach 2 was pleased about that and said, *'This is what I also like about being in-company coach: you see the personal development'.* In-company coach 1 discussed one specific apprentice: *'he started as a child, at the age of 15 and he left as a young, confident man at the age of 18'.* I congratulated them by enforcing their opinion that in-company coaches must also have a crucial role model. They agreed by stating that unfortunately not every employee in the outlets is a role model for apprentices. I added from experience that whenever we act as in-company coaches, we are always a role model. This awareness of always being a role model should make us careful and permanently seek being a positive role model for apprentices. In-company coach 2 stated, '*This is not easy,'* and I answered by ironically saying, *'Well I hope I have never used the word "easy" so far'.*

I wanted to get back to the group dynamic brought up by in-company coach 3. I asked in-company coach 3 for clarification. In-company coach 3 told us that some employees were a bit irritated about the behaviour of the apprentice in the team. As the apprentice was more self-confident and initiative, in-company coach 3 noted that the employees started to question themselves feeling a sense of threat whenever they were working with the apprentice. In-company coach 3 reported a discussion held with a well-experienced employee who said, *'Does the apprenticeship have the right to give me feedback?'* and further, *'The apprentice told me, that I do not have always to wait for instructions*, *but I have to take initiative'.* By listening to the examples brought up by coach, I could imagine the conflict that could eventually arise in the team. In the meantime, I was pleased that the apprentice felt like not only a part of the team but also a full member with equal rights like every other employee. In-company coach 3 stated that *'sometimes employees think, apprentices do not have the right to say anything, till they have completed the apprenticeship'.* In-company coach 2 reacted by saying, *'This was the case when we were young',* and in-company coach 1 said, *'I have children myself and this is the way the young generation is'.* We further discussed this observation of in-company coach 3 in the group and especially near the end about the reason for this self-confidence and openness of the apprentice in the team. In-company coach 1 stated, *'I think the apprentice feels comfortable in the team, that is why this open communication is*

possible'. In-company coach 2 said, *'Probably the apprentice feels supported by the in-company coach and knows about the importance of taking action'.* In-company coach 4 stated *'that Generation Z is used to openly discuss in all spontaneity with everyone regardless of their hierarchical position or age'.* After a short discussion, all other coaches agreed that their outlets had similar situations. In-company coach 3 said at the end, *'I have just realised that apprentice's behaviour is part of a constructivist approach and therefore a positive outcome of the process'.* I wrote in my diary that probably this last statement of in-company coach 3 was related to the introduction regarding constructivism in the first workshop. At the end of this part, I just brought up the opportunity to inform the whole team in the outlet about IAZPERKA and the research project, as the skilled employees of the team were starting to notice that the apprentices were different.

After lunch, we moved on to learning, why and how people learn and the importance of creating the setting to allow people to learn. They just stood up and started writing on moderation cards their thoughts. After 15 minutes, we had a collection of 30 ideas (see Appendix 09). After the discussion, the in-company coaches agreed on the five most – as they stated – powerful elements:

- Apprentices' motivation (better intrinsic motivation).
- Trustworthy, friendly and open setting allowing to make mistakes.
- Interesting and realistic tasks.
- A sense of belonging to a team.
- Open communication between apprentices and in-company coaches.

At the end of the workshop, in-company coaches asked about the opportunity not to bring new items into the fourth workshop but rather reflect on what they have learned about Generation Z throughout the journey. They wanted to focus on Generation Z and their competencies, as well as the setting necessary for learning to take place.

6.3.2 Outcome and analyses from the third workshop

From notes taken on my personal diary, I could spot different issues in relation to the desire of in-company coaches to learn about how the learning process works and better understand how learning happens. I found it interesting to listen to, as in-

company coaches had passed in their professional career so many exams, and it was difficult for me to believe that they never thought about the learning process and how they learnt. From my experience, understanding how we learn is an essential asset to understand and cope with (and therefore to learn) how we assimilate new contents and concepts in life. Nevertheless, according to my notes, this reflection about how we learn seemed to be a new dimension for in-company coaches. This concept created a conflict between coaches 2 and 3. They did not agree with the need to think about how we learn as far as learning is happening. I found this idea interesting, as probably as a researcher I tend to question and analyse concepts, but

I think it is important to examine the learning process even more if it is working, to make it possible to focus on important elements making this process work. And, as stated many times, with my thesis I wanted to develop in-company coaches into reflective practitioners, and therefore, self-reflection is an important competency to think about what they are doing.

Furthermore, I was pleased to listen to their will to discover which way their apprentices learnt to adapt their behaviour whenever they were working with them and thus create a positive environment for learning. I share the view that *emotions are functionally important for human performance* (Elliot et al., 2017, p. 253). Experimental mood research suggests that emotions are important to influence a wide range of cognitive processes, including attention, memory storage and retrieval, social judgment, decision-making and cognitive problem-solving (Clore & Huntsinger, 2009; Lewis et al., 2008). To see that in-company coaches found the learning styles profile (see Chapter 5) powerful in terms of understanding how to better establish a climate of collaboration with apprentices where learning could take place was an important outcome of the workshop. The discussion related to learning styles and about differences in how people learn and what people learn was supportive in terms of understanding that these differences were not generational but personal. I fully agreed with the idea *the more we create an environment conducive to engaging with the head (knowledge), hands (application) and heart (inspiration), the more likely the learning will be embedded* (McCrindle & Wolfinger, 2011, p. 141). And this is what in-company coaches should be able to create and offer to apprentices belonging to Generation Z.

After the third workshop, I identified the following implications for teaching and coaching apprentices (personal diary):

- In-company coaches are aware that learning is an individual process not only about how apprentices learnt but also about what they decided (either consciously or unconsciously) to learn.

- This knowledge about learning style can be an asset for in-company coaches whenever they encounter difficulties in terms of communication with apprentices. As there are many ways to learn, there are also many ways to understand, and therefore in-company coaches need to adapt their communication to their apprentices to better respond to their learning style needs.

- People perceive situations in different ways. Different things have different meanings for each of us. Therefore, everybody places emphasis on the kind of information that they consider significant. There are seldom right or wrong answers; most of the time, there are simply two different perspectives.

- The meaning of learning content is a question of personal point of view. Each person evaluates information based on the convictions and attitudes developed so far. These are unique; thus, they differ from person to person. Therefore, two people who hear the same thing sometimes understand two completely different things.

- People mainly remember information they find interesting and with which they can do something immediately or with which they agree. What is important or applicable differs from person to person. That is why different people remember different things.

- People with different learning styles communicate on different wavelengths. One prefers to listen, another likes discussions. In-company coaches must be able to send information according to the wavelength of the other learning styles.

- Apprentices' motivation is surely important also whenever apprentices work. Personal initiative of apprentices should not lead in-company coaches to forget that apprentices have to work within health and safety guidelines.

After the third workshop, I felt responsible to show in-company coaches that the implementation of the IAZPERKA form also helped support every learning style by allowing apprentices to follow their own learning preferences to solve tasks. This freedom regarding how apprentices can solve tasks is an important element to promote critical thinking, as there is not a solution to be learnt by heart, but many solutions are possible.

6.4. Fourth workshop - materials

The fourth and last workshop was held in December 2017. Between the third and fourth workshops, I visited the in-company coaches in their outlets for the last time. I wanted to interview them a second time according to my plan. Also, the result of the second series of interviews will be presented in Chapter 8. As already written above, the first part of the workshop was held according to the structure and questions presented in Chapter 6. The second part of the workshop, as requested by the in-company coaches at the end of the third workshop, was centred around self- and social competencies needed when interacting with Generation Z in their role as in-company coaches. I wanted as well to discuss the challenges they have encountered as in-company coaches. According to my proposal, I wanted to integrate these aspects into a set of principles for other in-company coaches to be a supportive guideline whenever they interact with apprentices (see Chapters 8 and 9).

We started the fourth and last workshop with an open discussion about the importance of the competency of self-reflection as reflective practitioner. I asked the in-company coaches to bring their diaries along to have the opportunity to review their thoughts. I asked the following question: 'What is the importance, if any, of the competence of self-reflection as reflective practitioner?' in-company coach 1 started by saying, '*The ability to think and reflect is crucial',* and in-company coach 2 added, *'It is only by reflecting, that I gain opportunity to analyse what I have done'.* In-company coach 4 stated that *'sometimes I plan something, but the result is far away from my expectations. By reflecting I can think about the reasons'.* In-company coach 3 said, *'I hope I am not too philosophical . . . but I have the impression to growth'.* We examined these answers, and we discussed the different words/concepts. We started with in-company coach 1 and discussed the word/concept 'crucial'. What did we mean by 'crucial'? Iin-company coach 1 said, '*Well so relevant, that is needed'.* I told

the in-company coaches that I wanted to let them discuss why they think it is so relevant. In-company coach 4 started by saying that '*without self-reflection is not possible to work as in-company coach'*. In-company coach 3 brought up that *'asking apprentices to be self-reflected implies in-company coaches to develop this skill as well'.* In-company coach 1 said, *'It is a matter of being coherent',* and in-company coach 4 added, *'And being credible in apprentices' eyes'.* I asked the in-company coaches what might be missed by a person working with apprentices (or in a broader sense, in a teaching and educating context) with no – or less – reflective capacity. in-Iompany coach 1 answered, *'Probably the person could be seen as insensitive and indifferent from apprentices'.* In-company coach 2 added that '*there is no personal growth'.* In-company coach 3 added, '*No long-lasting personal and conscious growth'.* I brought up the idea that a competency is a skill that we have developed but most of the time we are not aware of anymore. If we have a competency and we do not use it actively and regularly, most of the time it disappears.

I kept notes in my personal diary, and the coaches used their own diaries. We went on with in-company coach 2, who stated, '*Is only by reflecting, that I gain opportunity to analyse what I have done'.* We discussed this sentence. In-company coach 1 said, *'It takes time to analyse, and unfortunately there is not enough time when we are working'.* In-company coach 3 said, *'It is a pity that we are kind of running the whole day, while we are working. It prevents us to reflect'.* In-company coach 4 replied, *'Is not the length of the reflection that it is important, it is the attitude to reflect'.* We discussed the different sentences, and I stressed the importance of the individual mindset towards the attitude to reflect. Paying attention not to discredit anyone, I shared the view that nowadays most of the time we have the impression of not having enough time. It probably is one of the common characteristics of Europe's cultures. We can develop the competency of self-reflection if we see the relevance for ourselves and are motivated to develop it.

We continued with in-company coach 4. *'Sometimes I plan something, but the result is far away from my expectations. By reflecting I can think about the reasons'.* The in-company coaches discussed this statement and agreed by linking this sentence to their ideas.

In-company coach 3 said, *'I hope I am not too philosophical . . . but I have the impression to growth'.* I asked in-company coach 3 what was meant by *'to growth'.*

In-company coach 3 said that the impression was to acquire new insights into how and why something happened. These insights were *'great lessons from life'* and therefore *'worth to be discovered through reflection'*. The other coaches were astonished by this statement. In-company coach 1 said, *'We all learn the whole life long'*. I stated that to me lifelong learning is a form of self-initiated education that is focused on personal development.

We went on with IAZPERKA and its form, and we discussed what happened between workshops 3 and 4 in terms of apprentices' behaviour. In-company coach 1 asked the group if *'it was necessary for the apprentice to write all the time all the steps'*. In-company coach 3 answered that the apprentice did not use the form anymore, as everything was memorised. In-company coach 3 pointed out the importance for the apprentice to write down the first and the last step. In-company coach 4 supported in-company coach 3 by stating, *'Step 1 is important as the apprentice has the opportunity permanently to look up at the original task to be done'*. In-company coach 1 confirmed this opinion, as *'sometimes apprentices have their head in the clouds'*. In-company coach 3 stated that the last step is *'also important to be written down by apprentices, as it is a result of their reflection'*. The in-company coaches asked me what I thought about the necessity to write down all the steps on IAZPERKA's form after one year of implementation. I stated that the form is just a piece of paper; the process just a timely sequential series of tasks. The most important thing to me is the mindset and the attitude of apprentices and in-company coaches alike whenever they are collaborating.

In the afternoon, we went on with the challenges they had encountered through the journey from their implementation of IAZPERKA till now. They discussed and I recorded it. The following shows one statement for each coach. They wrote the statements at the end of the last workshop. I recorded them in my personal diary and selected them, as I believe they represent all four company coaches well in their journey throughout the project.

In-company coach 1: *I took time to be aware, that I have a lot of subroles. These subroles are important also whenever I work with apprentices. These subroles protect me from expectations as well as give me strength and authority to act. But to fulfil these roles I need self- and social competences that I need to develop.*

In my diary, I reflected on the impact roles can have on the way we understand our interactions with other people. Roles helps to focus whenever we are acting. They empower and protect us at the same time by legitimising our acts.

In-company coach 2*: I have realised that I cannot teach someone, but I must create the condition for learning to happen. I am responsible to create an environment, where teaching can take place. Apprentices are responsible for their own learning process and learning outcomes. But to create this environment is a difficult task and I need myself a lot of training, to be able to do that.* I agree with this statement, as written in my diary, as I believe that learning needs to be seen as an individual responsibility which can by stimulated by the environment.

In-company coach 3: *It was quite a big step for me to realise, that everyone learns in a completely different way and therefore apprentices have different needs, when it comes to learn. This urge for an individualisation whenever in-company coaches work with apprentices. But this individualisation means that we need more time for educating apprentices.* From my records in the diary, I reflected on the fact that every individual is a unique person, and this person has a unique way of thinking, dealing and learning. Therefore, in-company coaches also need an individual approach tailored to every single apprentice.

In-company coach 4: *For the first time, I have realised that I am not teaching, but educating a person. Education is much more powerful than teaching. Education is about training the mind to think and not just to learn facts. Teaching is for the school, educating is for the life. In my role of in-company coach I have a great responsibility towards apprentices.* This is what education should be, as I recorded in my diary. And education is not learning facts but training the mind to think.

At the end of the last workshop, the in-company coaches wanted to thank me. I asked them, *'What for?'* They answered, *'For everything that you have done for us'.* I looked at them and answered, *'I have just created the conditions to be possible to happen, but you made it. Congratulations to you'.*

6.4.1 Outcome and analyses from the fourth workshop

I found the outcome of the fourth workshop an interesting overview of in-company coaches' personal development. From notes taken in my personal diary, I could spot that in-company coaches became reflective practitioners by questioning themselves before interacting with apprentices and reflecting after their interaction with them.

After the fourth workshop, I identified the following implications for teaching and coaching apprentices (personal diary):

- In-company coaches realised that they are key people in the apprentices' learning process. Research by Hattie (Hattie, 2012) and others has provided powerful evidence to support what I have always believed: that excellent coaching is more influential than any other factor in improving student achievement.

- As in-company coaches spend so much time with apprentices, it is important to take the time to work with them in a deeper understanding of their different roles in the setting of Switzerland's apprenticeship scheme on how learning happened on the importance of self-reflection and develop a constructivist setting in their outlets.

- This personal development of in-company coaches cannot be reached with a compulsory five-day course (see Chapter 2) but needs to be developed over a longer period of time and need to be seen as a continuous process of learning, known as lifelong learning. I share the idea that a '*fundamentally changed, increasingly interdependent world demands new paradigms of education and training, recognizing that what to teach, how to teach, and whom one teaches have radically changed*' (Maclean, 2007, p. 231). But I claim that this change in paradigm can only be made possible if we work closely with in-company coaches and support them in discovering new pedagogical approaches to enhance learning.

- Furthermore, in-company coaches need to be seen as an important role in the development of our youth and a central person in the development of several

skills in a changing world. I fully agree with the statement that 'development for employability must go beyond development for employment; preparation must not be for specific employment skills, but for general employability, including motor, social, and intellectual skills (Maclean, 2007, p. 231). This can only be made possible if we recognise and acknowledge in-company coaches in their role of educators in a holistic way rather than just trainers passing knowledge to apprentices. Education of Generation Z needs to be different not only to be accepted by Generation Z but also to cope with the changing world, providing the incoming generation with a set of skills that can deal with rapid changes.

This role as educator needs to be developed in all in-company coaches, and it takes time. This challenge will determine the success of Switzerland's apprenticeship scheme in the near future.

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6.5. Summary

As seen in the outcomes section after every workshop, which are already key findings, I want to sum up here that in-company coaches are in theory well aware of their different roles, but as they are struggling with pressure of time, they simply cannot fulfil all expectations. In-company coaches agreed on the fact that constructivism through IAZPERKA is an effective pedagogical tool to implement a new methodology in Switzerland's apprenticeship scheme. IAZPERKA has a positive impact on apprentices' development and performance. Nevertheless, in-company coaches' attitudes, required of educators in a constructivist setting to educate with a leaner-centred approach, brought up some challenges: missing knowledge about how the learning process occurs for apprentices and how individual this process is for everyone, missing knowledge about different apprentices' behaviour and the need to adapt one's behaviour to create a positive environment to learn and missing methods to enhance their awareness of how they can self-reflect and enhance their authenticity towards apprentices. The support given in 18 months, through four workshops, was for them a journey in which they could experience how a community of practice can be useful to produce possible solutions to overcome challenges.

7. Data Analysis – Interviews

In this chapter, you will find data analysis derived from the two rounds of interviews held with the four in-company coaches according to the schedule (see Chapter 4). As mentioned in Chapter 4, after the first two workshops, I interviewed the in-company coaches individually in their outlets according to the question list for round 1 (see Appendix 03). At the end of the fourth workshop, I interviewed the four in-company coaches a second time individually in their outlets according to the question list for round 2 (see Appendix 03). The purposes of the interviews were the following:

- To give in-company coaches the opportunity to talk in a two-way setting about the assumption that a two-way face-to-face conversation will give me, in my role as research practitioner, richer insight into the views and experiences of each individual.

- To get the opportunity to learn more valuable thoughts, feelings and insights of in-company coaches in relation to my RQs (see Chapter 1).

Every interview was voice-recorded, transcribed and analysed. As described in Chapter 4, to analyse the interviews, I conducted construct mapping (Thomas, 2017, p. 247), which puts themes in sequential order from the interview and uses lines and arrows to make connections between ideas and themes (see Appendix 16 as an example). As the two rounds of interviews were semi-structured, as described by Thomas (2017), additional questions to deepen answers were asked throughout the interviews, as seen in Appendix 04. I chose this way to gather data because combining the structure of a list of questions to be covered gives the opportunity to follow up on points as necessary. The analysis follows this brief outline of the participants' responses. Subchapters 7.1 and 7.2 are summaries of the two rounds of voice-recorded semi-structured interviews in German. The fully transcribed interviews, translated into English, can be found in Appendix 04.

7.1. Interview responses - interview questions – round 1

1. How did you feel when you started the 'active learning' project? The purpose of this question was to get precious insights into in-company coaches' thoughts after the start of the project, aiming to discover their commitment towards active learning

and to find out possible concerns. I wanted as well to see the modus operandi, as described by Bourdieu (1990), of in-company coaches prior to the introduction of 'active learning' in their outlets (see Chapter 3).

Brief summary of responses to question 1:

In-company coach 1: *I was enthusiastic about the idea of the project because I had the feeling that it was a piece/a direction that I had thought about and partly tried, but not on a sound basis.*

In-company coach 2: *I was happy. I like to do new things. (. . .) I don't want to just dictate them how they must do 'this and that'. For this reason, the whole project of 'active learning' suits me extremely well. However, I think somehow, I'm already trying to do it that way.*

In-company coach 3: *At first, when I didn't know what it was about, I thought to myself: 'That's a hell of a risk'. Then, however, as I learned more about it, I got more and more the feeling: 'No, that's not such a huge thing, it will be easy to incorporate into everyday business life'. (. . .) I am very positive and excited, because I would like to pass knowledge on to the apprentices in this way . . .*

In-company coach 4: *I asked myself a lot of questions and the first thoughts were . . . somehow there is something wrong with the current education system (. . .) And then I also started to ask myself what it could be, because I learned according to the same principle when I was apprentice myself – in a different branch, but according to the same principle. So the thing about imitating, doing it yourself . . . and yes, learning that way. And of course, I asked myself if the way I learned was not the better way. The project caused me insecurity at the beginning. That made me relatively sceptical at the beginning. I made that clear with my boss, but my boss disagreed and said, 'Yes, that's great. We simply have to support it if at all possible'. After the kick-off workshop with you at the kick-off workshop Cristian, the situation was just the other way round. I was then completely enthusiastic and the people here on site had to slow me down from time to time and often had the wish to approach everything slowly and let it work and clarify how it would be received.*

To deepen the feeling of being sceptical, I asked in-company coach 4 the following question: 'You just said that you had concerns when you heard about the project. You were even sceptical. Do you remember why?'

In-company coach 4: *Yes, it almost went to my honour, because compared to the other three in-company coaches and project members, I completed my apprentices not so long ago. I mean, I learned during my apprenticeship 1:1 like this: demonstrate – participate – imitate. In a craft trade, where I done my apprenticeship, it is perhaps even more obvious that you have to show the work to apprentices. I almost felt like I was being attacked in some way, because I have learnt it the old way, completed the apprenticeship well and then you come and say, I think . . . it won't last as long. Then one is already like a bit . . . not offended, but somehow you also have to start doubting a bit and ask yourself: 'Wait a minute, could I have done my apprenticeship and learning years better with this method?' That's what I've come up against as a human being.*

2. How did you get started in your outlet after you received the information (kick-off session)? I wanted to know how in-company coaches implemented the information received in their own outlet in everyday business life. The purpose of this question was to get information on how in-company coaches worked with the material received at the kick-off workshop. Following Bourdieu (1990), I wanted to explore the concept of 'orientation towards expectations' as a frame of orientation in their working life (see Chapter 3).

Brief summary of responses to question 2:

In-company coach 1: *After the kick-off workshop I went home and narrowed down and studied the information and asked the following questions: what fits with what we do, what we think, what is congruent, what is new, what is different, what is adapted. I then realised that many things are similar. However, we have not done them in writing until now, but the thoughts when I gave the assignment were similar.*

In-company coach 2: *In June 2016 we had a meeting/an event with the employees. At this event I informed them directly how the project was going and then we started*

in August 2016. In mid-August 2016, we used the methods for the first time in designing a point of sale.

In-company coach 3: *Well, first I studied the documents carefully. I got the whole team in my outlet together and informed them so that they all knew what everything was about. Then I started to work with your documents Cristian, looked carefully at what was on them and what was in them. On top of that, I also made an example with my apprentices and then we started the project here on site, in my outlet. I mean . . . step by step.*

In-company coach 4: *I basically did a summary of the information provided by information you received. There were the core titles, and one was your first presentation. I took from it what was and is crucial for me. And I have processed this essential content for myself. I function like this: when I write something and process it, it stays with me. (. . .) I then presented your information again to the managing director and the deputy managing director in my outlet. I told them what it was about and carefully observed their reactions.*

3. How did you feel about the proposed IAZPERKA structures? The purpose of this question was to collect information about the proposed structure of IAZPERKA. As seen in Chapter 1, the definition of 'active learning' as a term for instructional activities is broad. With IAZPERKA, I wanted to propose a pragmatic tool to be implemented by in-company coaches in their outlets. It seems that in-company coaches reacted in a positive way mainly because they could understand and apply the steps proposed in IAZPERKA's template (see Appendix 02). This need for a structure through IAZPERKA was welcomed by the in-company coaches.

Brief summary of responses to question 3:

In-company coach 1: *I went to the office, I looked in your papers and I thought 'cool' . . . that's exactly how I imagine it. I haven't quite got to where you are yet and realised it could still be a challenge because our generation thinks differently.*

In-company coach 2: *I find it like a guide. I can give it to the learner 1:1 and say: 'Now please make a sales point' and he can then fill it out like that. He doesn't forget*

a single step. Whether or not every field on the form has to be filled in, that is perhaps rarely the case. But 60% to 70% of the fields are filled in.

In-company coach 3: *Hhhm, somehow the points were not so new to me. It's more like a logical process for me, where I think – somehow – you always do it. Maybe not so consciously and not so completely. Also not that one passed on the orders like that. I think when you used to pass on the orders, you gave far too much information. It would have been helpful if one had 'kept one's mouth shut' and not always had the feeling: 'I want to give them some good advice'.*

In-company coach 4: *I have to be honest, I'm not a fan of forms/template. (. . .) Of course it makes sense because the learners fill out something very similar for the learning documentation . . . with recap and everything . . . but it interrupts, in my opinion, the process they should be learning . . . the idea at the end is that all the phases naturally run into each other and flow.*

4. Have you noticed any changes in applying the new method compared to the traditional method? Have you observed or been aware of any changes? The purpose of this question was to find out if and which kind of impact a constructivist approach might have on the way in-company coaches interact with apprentices.

Brief summary of responses to question 4:

In-company coach 1: *I just handed over such an IAZPERKA form to the apprentice last week. The current apprentice is the least independent in the outlet at the moment. I told to the apprentice: 'That's your job now' and asked: 'What would you do?' . . . briefly about the task I have delegate: In the area of 'fruits and vegetables' we are not quite where we want to be with her according to the training plan. That's why I asked the apprentice: 'What would you do? . . . Here you have the IAZPERKA template, you know it, go there and think what you would do now . . . in relation to the current season'. Nothing more/no further information I passed on. Done. And then the apprentice went away and all of a sudden came back and said, 'Come with me and let's have a look'. There was already a first process of change. The apprentice didn't wait until I said something anymore, but she became active and approached me. The apprentice said, 'It's almost Easter, I could . . . well, am I allowed to do*

anything at all for Easter's season?' I answered: 'Of course you can' and then I realised that the process really started with the leaf . . . the apprentice was actively thinking and reflecting on its own.

In-company coach 2: *Well, I personally give more time at the learner. So, I give the time to plan. And in that sense, in the outlet we all (. . .) use the same methods. So, we all speak the same language and have the same lineage whenever we are working with apprentices. That has certainly changed for the better.*

In-company coach 3: *Hhmm, that's difficult to say now. I don't think it's quite so strikingly different. But when you talk more and more with the apprentices in this way, you notice that they know the structure and the processes.*

In-company coach 4: *Yes, the advantage at the moment, with the apprentice with whom we are currently implementing the new method 'active learning', is that the father also is a in-company coach and therefore has the responsibility for learners in the company is working for. He works in the maintenance and is the manager of the maintenance yard. He does exactly the same thing that I do here in my outlet, i.e. he looks after apprentices. When we talk to each other and exchange ideas, he sometimes says: 'Yes, you know, if they (apprentices) would sometimes work more independently . . .' or 'If the apprentices would also think a bit'.*

5. How did the apprentices react to the method where you launched it? As described in Chapter 4, I intentionally chose not to interview apprentices. Nevertheless, I was interested in collecting data about the apprentices belonging to Generation Z on their reactions to IAZPERKA.

Brief summary of responses to question 5:

In-company coach 1: *The apprentice is motivated, independent. So I mean, if I were afraid of the apprentice, that would get out of hand, then I would even say 'worryingly independent'. The apprentice goes along with it and is reliable. Sure, mistakes happen. It's not always perfect. But the apprentice always comes back and then we discuss: 'Try it again' and then the apprentice says: 'That wasn't optimal yet'. When the two of them work together (first- and second-year apprentices) I notice the*

difference: the apprentice in the first year is already more independent than the apprentice in second year of apprenticeship. It's great.

In-company coach 2: *So basically, it has been received positively from the apprentice. The apprentice even enjoys it because realises that we delegate work and trust him. He takes pleasure in it.*

In-company coach 3: *It was new to him (. . .). He also had no preconceptions about how we 'should' do it or how we interact with the other learners or how we usually do it. He was positive in any case and for him it didn't matter. (. . .) He accepted it as quite natural. He was positive and he also said: 'Yeah, sure, no problem'. (. . .) He was even pleased at the time that so much trust was placed in him. That was the positive effect for me. Somehow being allowed to watch the reaction: 'Aha . . . yes . . . I have to think about it myself, but I am allowed to think about it myself'. That is the positive effect that I felt and observed with him.*

In-company coach 4: *The learner didn't react much to it, because he doesn't know anything different. We implemented it like that from the beginning (the new method).*

6. If you think about workshop 1 (introductory workshop), where did you feel secure? With this question, I wanted to record which kind of information, if any, supported in-company coaches in this project.

Brief summary of responses to question 6:

In-company coach 1: *In my own thinking process/in the understanding I immediately thought: 'I can do that, because we already tick like that'. What has been more difficult, I thought about it, is the written way. I'm not always the one who sticks to it 'step by step'. I prefer to let it go. I think you're allowed to do that, but it's not so easy in the introductory phase. Because the learner then comes with the assignment and the sheet or goes to the colleague and asks, 'You, what do you think?' Then the old pattern comes out, the old method. That is the challenge I underestimated.*

In-company coach 2: *As I said, I never see big problems, because I look forward to the 'new'. Moreover, I accept the new very gladly. From that point of view . . .*

In-company coach 3: *At the beginning I felt rather insecure. (. . .) I was unsure, because I didn't know how I wanted to implement it in my outlet. And at the same time, I had the feeling that it wasn't so new. So, I felt very confident in this area. And somehow, I was inspired by a feeling that . . . 'Yes, I can implement that'. I didn't know how the reactions would turn out in practical implementation.*

In-company coach 4: *I have concerns that there is a lack of integration in everyday working life. Yes, of course, it might work for some learners, but not for others.*

7. If you think about workshop 1 (introductory workshop), where did you feel less secure or even insecure? With this question, I wanted to record which kind of information, if any, in-company coaches were missing after the kick-off workshop. Furthermore, I wanted to get feedback about the kick-off workshop.

Brief summary of responses to question 7:

In-company coach 1: *Where you introduced the IAZPERKA model, I noticed with the different letters, but it needs step by step. In theory you learn that it is a process. (. . .). In the end, however, this new method is to be the future of our practical training.*

In-company coach 2: *The only problem I saw was with the staff. I was afraid of them actively noticing and participating.*

In-company coach 3: *I was unsure, because I didn't know how I wanted to implement it. And at the same time, I had the feeling that it wasn't so new.*

In-company coach 4: *I have concerns that there is a lack of integration in everyday working life.*

8. What opportunities do you see in the 'active learning' method? For your company, for the vocational trainers, for the trainees? My intention was to get insights into in-company coaches' thoughts and feelings for all three different stakeholders.

Brief summary of responses to question 8:

In-company coach 1: *So the chances for the learner is that he is faster in the process, where he feels like a full employee.*

In-company coach 2: *First of all, I see the advantage that the training is looked at differently. That the learner is no longer guided so closely. As a result, new ideas and new impulses come from the learner.*

In-company coach 3: *Opportunities are . . . if of course we can continue with it . . . is certainly a long process until it is 'through', but if of course all employees would think and work this way, it will simplify everyday work. (. . .) And if we put this into practice, the positive effect in a few years could be that all outlets have such employees with such a mindset, which would theoretically simplify the work. If every employee could think and work on the basis of an assignment, it would be great. Delegate and let it run.*

In-company coach 4: *(. . .) But I think the most beautiful thing is that the training is more conscious. That is certainly also a big step in terms of quality in relation to the vocational trainer. It doesn't matter whether he was good or bad, with the new method we make the quality of training more conscious. It adds value to the whole quality of training.*

9. Have you observed or been aware of changes in the team? I wanted to learn about changes in the team, if any, due to the implementation of the new method.

Brief summary of responses to question 9:

In-company coach 1: *They kind of look forward to it in advance without me having to say anything. That is part of the process that they have gone through. It's an opportunity for us as employers and team.*

In-company coach 2: *Yes, I see – as I said – positive changes. They are more active (. . .)*

In-company coach 3: *No, not at all. The employees have accepted the project very well. It was never a problem for them (. . .)*

In-company coach 4: *There are certain employees . . . who said 'That's not possible . . . we used to do it differently . . . 50 years ago, as an apprentice, you had to mop the room all day'.*

10. Do you see risks in applying the new 'active learning' method? What can be done to combat or avoid these? As in-company coaches are responsible for apprentices, I wanted to record risks and determine possible solutions as to how to overcome these.

Brief summary of responses to question 10:

In-company coach 1: *If the team doesn't function as a team, then there's a danger that apprentices end up with 16 employees with 20 opinions in front of them. That's very important: the team in the outlet has to act as a joint team. And the team must be able to put up with the fact that the apprentices are good. Not everyone in the team does think this way. I still have team members that held a negative opinion on apprentices.*

In-company coach 2: *The only risk I see is that you don't spend as much time with apprentices as one should. So apprentices feel free and confident, but because of the reduced contact, as in-company coach you don't feel certain things immediately, such as possible mistakes made by apprentices. That is perhaps the dangerous thing about it.*

In-company coach 3: *No, I don't see any risks. If I notice how we succeed with IAZPERKA here, then no.*

In-company coach 4: *Yes, I see risks depending on the learner. Depending on how good apprentice is or how apprentice can cope with being left 'alone'. So . . . I mean in theory we don't leave apprentice alone. It's a huge break with what apprentice has been through at school so far. They have had everything chewed out from their teacher at compulsory school for nine years. (. . .) That what do with apprentices now with this project, that's a huge break with the traditional school system.*

11. Do you have any other comments? I wanted to give the opportunity to in-company coaches to freely talk about any subject they found important related to the project.

Brief summary of responses to question 11:

In-company coach 1: *How should I put it? For me, the question is still whether we want to institutionalise this new method for all 250 outlets. That will be a bit of a challenge, how we get it done. Especially in the thinking process, because we have a lot of in-company coaches in our organisation that they don't think that way.*

In-company coach 2: *To continue by all means. I think the method is great and I don't want to stop under any circumstances or say 'this is completely strange' (. . .) Working with the apprentices is also different: more relaxed. I think it's great to be more relaxed in everyday work. We must continue to work like this.*

In-company coach 3: I *still have a lot of fun with the project. However, sometimes I can't implement it as 100% as I would like to . . . because I still have other things to do. But I still think it's a very good thing (. . .) and I'm happy to be part of it (. . .) So it's very positive.*

In-company coach 4: *(. . .). For myself, the whole training process has become more conscious. (. . .) I have become more conscious in my training and in my role. What I find cool is the IAZPERKA template (. . .) I didn't know IAZPERKA when I did my apprenticeship. But I am also sure that very few people are aware of the meaning of this abbreviation and its importance for later life.*

7.2. Interview responses - interview questions – round 2
1. What positive insights do you draw from the 'active learning' method in your role as an in-company coach? I decided to ask this question at the second and last interview rounds to know in-company coaches' opinions about IAZPERKA after 18 months of implementation.

Brief summary of responses to question 1:

In-company coach 1: *Well, I received weak criticism before the start of the project, I don't do the training in my role as in-company coach completely according to the system and today I know that I was already on the way and unconsciously trained in the direction of 'active learning'. For me it is wonderful to see that what I have tried to train exists as a system (of course better, of course developed, of course well-founded) but that is a path I want to take (. . .) That's the best thing for me: to realise that 'active learning' and IAZPERKA really works. Walk with them, run with them, let them think, let them make mistakes, let them get better. Not being afraid that a young person will be better than me and that I will slow them down. But to take pleasure in it, then an apprentice can also overtake me.*

In-company coach 2: *Finally, I get to do something new. It motivates me to be allowed to implement something new. Something that has never existed before. It's certainly something positive.*

In-company coach 3: *That you see progress, and you see how the qualified apprentices in the outlet become open to other things. That the employees also begin to think themselves.*

In-company coach 4: *Well, what is positive for us is that the apprentices think further. So they have in mind . . . (pause) . . . I don't know how to express it . . . so apprentices are aware of what they triggers when they do something (. . .). For us in the team, IAZPERKA has caused us to distribute the tasks more consciously, because before we handed something over to the apprentices without any plan and intention, the work that just came up . . . so more or less without thinking. (. . .) But basically, I want to say that IAZPERKA works – for us now – even with a apprentices who are not easy 'to handle'. That's certainly the advantage.*

2. What personal and interpersonal difficulties did you experience with the 'active learning' method? As the project finished after the fourth workshop, I wanted to get insights into difficulties to reflect on them and to think about how I could – as a reflective practitioner – prevent or even avoid them.

Brief summary of responses to question 2:

In-company coach 1: *What is difficult in the day-to-day business is to implement the paper template faithfully, and not because I don't think it is right, but because with the paper a system is broken that is not inside us.*

In-company coach 2: *Well, mainly personal difficulties with myself. That I always implement the new method, or that I briefly 'stop' and say: 'Now I have to take out the form', that I implement it correctly and check it correctly at the end. Those were the challenges.*

In-company coach 3: *Some employees have trouble with the form and are dismissive and say: 'That certainly won't work'. In these cases, I simply have to be patient and let them be. (. . .) I think they need more time. It's just like that. Now I let them do it like that. But they also see with time that it has positive effects. And that's what I mean. That with time they start to change their thoughts consciously or unconsciously.*

In-company coach 4: *What difficulties we have had . . . (thinks about it) . . . convincing the people around us, especially in the beginning, to participate at all. So . . . that we have everyone in the 'boat', so to speak, that everyone can stand behind it.*

3. Have you noticed any personal changes in your attitude towards trainees in your role as an in-company coach? If yes, please specify. One of the intentions of this project was to develop in-company coaches as reflective practitioners. With this question, I wanted to record in-company coaches' changes in their attitude, if any.

Brief summary of responses to question 3:

In-company coach 1: *I have become more generous in letting them think. (. . .) I've also become more generous when the task doesn't work out and I say: 'come on, we'll try it again, we'll take a step back here' or leave it out completely for today, we'll do it 'another time'. Knowing that when it's done consciously, it's long-lasting learning process.*

In-company coach 2: *I think it is the same. It's still difficult to say, but I don't think anything has changed. (. . .) I always looked at apprentices developing themselves and thinking for themselves. From that point of view, it's like I am doing something even more consciously.*

In-company coach 3: *(. . .) You catch yourself right away . . . because you want to be so nice and tell apprentices about possible mistakes in advance. 'Please make sure that . . . and look at this and that'. So, I still have to pull myself together and avoid talking about possible mistake in advance.*

In-company coach 4: *Yes, several competences have been added.*

4. Have you developed your own qualities/skills as an in-company coach because of the new methods? If yes, please specify. The point of this question was to determine in-company coaches' skills development, if any.

Brief summary of responses to question 4:

In-company coach 1: *Yes, of course. The new method only works when I want it to work. So I'm sure the new method is difficult if I am not motivated as in-company coaches. I have to want it to succeed (. . .)*

In-company coach 2: *No, I don't think so. (. . .)*

In-company coach 3: *Well, I don't think completely differently. I think . . . I already had this basic attitude. But now I deal with it much more consciously. (. . .)*

In-company coach 4: *I can't say it was just the project or the new training plan. It was certainly both factors that led me to new competences.*

5. In your opinion, what are the essential personal, social and methodological skills you need to be able to work with the new method as an in-company-coach? With this question, I wanted to learn about their experience and the skills needed to implement the new method, as they had gotten through the project for 18 months.

Brief summary of responses to question 5:

In-company coach 1: *For me there are two points that are crucial. I have to want it, to understand it, I have to want to implement the method and I must not be afraid of it, of the result.*

In-company coach 2: *(. . .) It is extremely important to be inspiring.*

In-company coach 3: *Well, one need to be open to letting someone do it. That you hand over the responsibility (. . .) must also be able to trust. (. . .). One has to be accommodating and say yes.*

In-company coach 4: *So these two points: that in the beginning I think more about what work I can give to apprentices and plan over (. . .)*

6. Do you feel that in-company coaches who want to work with the new method require external support? If yes, please specify. This question focused especially on my RQs 1 and 2. Therefore, by answering this question, I wanted to reflect on their answers and include them in my answers to the RQs above.

Brief summary of responses to question 6:

In-company coach 1: *I think . . . there are two points. I think . . . it gets certain information, certain pre-education in advance and also here, he wants to absorb this information. So it goes away from the information session and says . . . yeah cool . . . I want to try that now, or says 'I just have to do that'. The one who has to, has to be guided and coached.*

In-company coach 2: *Yes, the will itself is extremely important*

In-company coach 3: *Yes, I think somehow, he needs some kind of support if he wants to implement the method for the first time. It certainly always depends on the person. I, for example, am always happy when I know: 'I have someone I can ask' or I get feedback or a newsletter in between, which somehow provides a line and tips.*

In-company coach 4: *(. . .) You need a certain position so that you can implement the new method.*

7. Have the trainees developed in terms of personal, social and methodological skills over the last 18 months? If yes, please specify. I wanted to learn from in-company coaches' observations, as in this project I did not work with apprentices myself.

Brief summary of responses to question 7:

In-company coach 1: *What I notice, you could also base it on the year, but I don't want to do it on purpose, is that they pass on the knowledge more consciously than before (before the introduction of the method). They try things together, they look for solutions together when they are in a team and develop things together (. . .)*

In-company coach 2: *He is still enthusiastic and motivated to learn something new. The question here is whether it is human or a natural talent. Hence the comparison. But he has not experienced a low like the other learners because he is always motivated to learn something new.*

In-company coach 3: *To work on the task is not difficult. It is the power of reflection (. . .)*

In-company coach 4: *(. . .) But what is, he is much, much more independent than with the old method . . . and if you would have looked at this two years ago, where the last learners were in the second year of the apprenticeship, they surely didn't have so much confidence in themselves.*

8. How are trainees reacting to the new method 18 months after its introduction? The intention of this question was to listen to in-company coaches about apprentices' behaviour after the introductory stage of the new method.

Brief summary of responses to question 8:

In-company coach 1: Well . . . the young ones are also in the process.

In-company coach 2: Yes, I always think it's great when they have to assess the time themselves.

In-company coach 3: We are in the process.

In-company coach 4: I think for him it's basically kind of 'normal'. It is also because we stopped relatively quickly with the template (. . .)

9. Have you observed or been aware of changes in the team? With this question, I wanted to know how the whole team in the outlet coped with the new method 18 months after introduction.

Brief summary of responses to question 9:

In-company coach 1: *(. . .) There are some staff members who can understand the process and 'leave it' like that and other staff members who come from the 'old' school and cannot and do not want to understand that the new way is good, even better than the old one.*

In-company coach 2: *No, no.*

In-company coach 3: *Not specifically, actually*

In-company coach 4: *Actually no. No it's the scepticism (. . .) either they don't say anything anymore, or they are not sceptical anymore.*

10. Do you see risks in applying the new 'active learning' method now? If yes, what can be done to combat these? I wanted to re-ask this question, as in round 1, as I wanted to learn – after 18 months – if in-company coaches had detected more risks.

Brief summary of responses to question 10:

In-company coach 1: *I was thinking . . . where are the critical points. There is a risk that I as a vocational trainer will slack off and 'fall off the wagon'.*

In-company coach 2: *I don't want to go back to the method: 'I go and say . . . look, this is how you have to do it. Here you have the template . . . this is top, everything else is flop'. There is a risk in terms of recidivism.*

In-company coach 3: *No, not. I can't imagine any risks.*

In-company coach 4: *I don't think there are any. . . . Hhhmm. What I think it could be is if the vocational trainers concerned resist it and they have to implement it (. . .).*

11. Do you have any other comments relating to the new 'active learning' method? I wanted to give in-company coaches the opportunity – as in round 1 – to freely talk about any subject they found important related to the project.

Brief summary of responses to question 11:

In-company coach 1: *I am a person who likes to have a workshop and then go into implementation and then look at the next workshop: Where do we stand? Where do I stand? I don't like to have a lot of paperwork in everyday life to implement something. Instead, I want to implement immediately what I have heard and seen . . . and then report on it.*

In-company coach 2: *I find it fascinating what can emerge. As I said earlier. The development of the apprentices. It's exciting how it works. At the beginning of the project, we four in-company coaches were all afraid of . . . 'Hhmm, it might be difficult and a bit heavy and dangerous'. And then turn down as predicted by you Cristian . . . the first two months after starting with the new apprentice and implementing IAZPERKA we had timely more work. After the two months we had less time investment and then IAZPERKA rans on its own.*

In-company coach 3: *I still find it difficult. I still think it's a good project. But I'm certainly not finished with it yet, you still need a certain amount of time until it's really 'inside' of both in-company coaches and apprentices. But I think we are on a super good path. And I think . . . I have a strong feeling that it is spreading over to the other staff members. (. . .)*

In-company coach 4: *Yes, I have already said a lot. What amazes me is to realise that here in the company we were already unconsciously very far along in terms of the method. We did it unconsciously. (. . .)*

7.3. Themes that emerged from the interviews

After the analyses of the interviews (see Appendix 16 as an example), several themes emerged. I have presented them supported by the participants' answers, and I have presented my own voice in the form of vignettes.

7.3.1 In-company coaches' fear of the unknown and the influence of past experiences – adults' personal biography and Bordieu

Adults built new knowledge by means of information on existing knowledge (Bordieu, 1990). Not only did the four in-company coaches approach the project with different feelings towards changes, but they also worked with the received information at the kick-off workshop completely differently. In terms of personal fear, in-company coaches' answers were different. In-company coaches 1 and 2 had already tried other paths to teach before joining the project team either because they personally believed that there was another way to pass knowledge ('*I had the feeling that there has to be more than "textbook"/schoolmaster "cookbook" training whenever I was working with apprentices*' (in-company coach 1)) or because of personal conviction due to personal preferences whenever working ('*I don't want to just dictate them how they must do "this and that"* (in-company coach 2)). It can clearly be stated that their personal drive to look for alternatives in interacting with apprentices already before joying the project team, made them feel confident to succeed in the implementation of IAZPERKA. On the other hand, in-company coaches 3 and 4 seemed to still train apprentices by following the method 'demonstrate–participate–imitate' either because they were worried about possible risks (in-company coach 3) or because they themselves had been taught that way when they were apprentices (in-company coach 4). In-company coach 4 stated: 'demonstrate, participate, imitate as method experienced during apprenticeship' (in-company coach 4). According to Bordieu (1990), imitating is a possible behaviour to learn, so in-company coach 4 just reproduced what he had seen and experienced during their apprenticeship with their own in-company coach.

I was not surprised to find that both ways of interacting with apprentices were possible, as in-company coaches – as seen in Chapter 2 – are most of the time left

alone in their outlets whenever they interact with their apprentices. I believe both approaches to teaching were tolerated by their management/supervisors if apprentices' results at the final federal exams were positive. As seen in Chapter 2, the quality of training provided by a host company 'is primarily demonstrated by the success of the learners in the qualification procedure, which is organized by the cantonal authorities or on their behalf' (Wettstein et al., 2017, p. 217). In case of apprentices' failure, the supervisors/management would show more attention towards the teaching process, making the connection between the fact that the apprentice did not pass the final examinations because of the poor quality of how apprentices were trained by their in-company coaches. To pass or fail the final examination seems to be perceived by the supervisors/management as the key indicator for in-company coaches' quality in training apprentices. In-company coach 1 stated (question 1, round 1), 'I had also received criticism because I couldn't train like that. But they couldn't do anything about it because I always had good learners with good results'. This personal fear is also linked to the fact that in-company coaches' quality in training apprentices and apprentices' results at the final federal exams in supervisors' and management's eyes have a direct correlation.

As written at the beginning of this subchapter, I could observe that in-company coaches adopted completely different ways of working, analysing and conceptualising the information received at the kick-off workshop when they went back to their outlets (question 2, round 1). They built on their personal biography to make sense and cope with information received and started in different ways either by comparing the current way the training took place with the apprentice and quickly looking for similarities and differences (in-company coach 1) or informing the rest of the team and then starting straightforwardly (in-company coach 2). In-company coaches 3 and 4 seemed to deeply analyse the information received either by summing up (in-company coach 4) or reading carefully (in-company coach 3) before informing the team.

I was positively surprised to record the answers regarding the different ways adults make sense of information received, and I believe that this difference and individuality also apply whenever apprentices need to make sense of such information. As I also believe that reality does not exist but is constructed by

individuals, I wanted to observe how the individual's past influenced the way they perceived and built the present. This experience for in-company coaches of being put in a situation where they had to learn was an opportunity for them to revisit a similar situation apprentices were experiencing during their apprenticeship.

7.3.2 In-company coaches' intrinsic motivation and openness to learn – the importance of a positive personal mindset

As seen in the previous subchapter, personal fear and personal biography have an influence on the way an individual/a person thinks and acts. Nevertheless, individuals are not prisoners of their past, but with a positive mindset, they can develop themselves and finally learn. The importance of a personal intrinsic motivation (see Chapter 3) was cited in different questions. '*For me there are two points that are crucial. I have to want it, to understand it, I have to want to implement the method*' (in-company coach 1). In-company coach 2 replied, '*Yes, the will itself is extremely important*'. Despite these answers, even though in-company coaches' intrinsic motivation is important, other elements have to be present to support the initial positive mindset. In-company coach 4 brought up the importance of the support of the whole management, in addition to intrinsic motivation: '*Well, it depends on the company and the management. If we look at the organizational chart, depending on where the job descriptions of in-company coaches are located*'. Intrinsic motivation must be supported by an organisational frame that gives in-company coaches the necessary rights to train apprentices following IAZPERKA. In addition to the organisational frame, competencies also play an important role. The fact that an in-company coach is intrinsically motivated does not automatically mean that the in-company coach is allowed by the management/company to implement IAZPERKA (as brought up by in-company coach 4). In addition to these elements, in-company coaches need role awareness and personal competencies: '*Well, the person has to be open to letting someone do it. That you hand over the responsibility. Yes, I think we must also be able to trust*' (in-company coach 3)*.

I agree with in-company coaches' answers that an intrinsic motivation and a spirit of openness towards 'active learning' is central for in-company coaches to be willing to implement IAZPERKA, this also in light of Bordieu's habitus (1990). IAZPERKA

works if in-company coaches' attitudes and motivation towards the pedagogical tool are supported by a positive mindset. But in addition to this, a supportive organisational framework and an awareness of roles and the required competencies are of decisive importance. It is not enough to be intrinsically motivated and lack competencies. And unfortunately, it is still not enough to be intrinsically motivated and to have trained and built up the competencies needed for IAZPERKA if, in your role as in-company coach, you are not allowed by the company/management to implement it. I believe that all three elements are equally important for any project.

As written at the beginning of this subchapter, intrinsic motivation is important. This intrinsic motivation has an important impact on in-company coaches' behaviour whenever they are interacting with apprentices. Also, in-company coaches act as role models for apprentices; that is why a positive attitude can lead to a positive impact in terms of being a role model. But sometimes, even though in-company coaches are intrinsically motivated, doubts arise especially whenever apprentices are comparing themselves to those trained in other companies. In fact, a further point was reported by in-company coaches about their apprentices comparing the IAZPERKA method with the method other apprentices at the VET school were trained in. For example, '*Yeah sure, they talk in the vocational school, what happens with you. (. . .) And then at the table they speak to us . . . You . . . I heard . . . Or did you know that . . . Is it normal? Because we apprentices don't like that. Then I ask apprentices: "Yes, what does normal mean?" . . . And then "Do you want to be trained like that too?" and I get the answer: "No, never!"* (in-company coach 1). These social moments between in-company coaches and apprentices are crucial and are in line with current literature. As Filliettaz (2010) stated, 'Vocational learning, is not only a cognitive process, but also a social one, involving transitions and identity transformation' (p. 145). This view of transitions and identity transformations needed by teachers (and in-company coaches) is also supported by Lave and Wenger (1991), Eraut (2007) and Billet (2009).

Through this answer, I could record how much in-company coaches are interacting with their apprentices and how important it is for them that in-company coaches stand by their beliefs and defend their convictions by transparently

communicating with apprentices. Again, in-company coaches' intrinsic motivation and will are important when implementing IAZPERKA. But in-company coaches are also aware that intrinsic motivation is important not only at the beginning of the project but also during the implementation process, and finally, intrinsic motivation is permanently exposed to be tested by external circumstances and persons. One needs to decide and stand up for it several times. Furthermore, I believe that transparent and open communication between in-company coaches and apprentices is important to share values. Finally, the fact that their apprentices liked the way they were trained was a confirmation for in-company coaches that they were having a positive impact on apprentices by implementing IAZPERKA.

7.3.3 In-company coaches and IAZPERKA as a pedagogical tool – a shift in how in-company coaches look at the learning process

As seen in the previous subchapter, intrinsic motivation and openness to learn are crucial. The determination of in-company coaches to take over the role of leader in implementing changes is central. The IAZPERKA form as a pedagogical tool was meant as a support to make this transition from behaviourism to constructivism possible. The form found high acceptance from in-company coaches and for different reasons. For example, *'I went to the office, I looked in your papers and I thought "cool" . . . that's exactly how I imagine it'* (in-company coach 1) or *'I find it like a guide. I can give it to the learner 1:1'* (in-company coach 2). In-company coach 4 found it useful although they did not like the fact that needs to be in written form: '*Of course it makes sense because the learners fill out something very similar for the learning documentation . . . with recap and everything . . . but it interrupts, in my opinion, the process they should be learning'* (in-company coach 4). Finally, in-company coach 3 stated, '*I was unsure, because I didn't know how I wanted to implement it. And at the same time, I had the feeling that it wasn't so new. So, I felt very confident in this area'* (in-company coach 3)*.

I was pleased to read that the acceptance of the form was mostly linked to the fact that in-company coaches could recognise the IAZPERKA template as a pedagogical tool supporting the apprentices' learning process. The pragmatic idea behind this form is to structure a constructivist way of learning, and this structure is a

support, as in-company coach 2 stated, 'Whether or not every field on the form has to be filled in, that is perhaps rarely the case. But 60% to 70% of the fields are filled in' (in-company coach 2). Despite the fact that the template looks like a rigid form, it allows apprentices to work with a certain flexibility and finally enable them to learn even if only 60% to 70% is filled out. The IAZPERKA template is just a pragmatic pedagogical tool for in-company coaches whenever they are training the apprentices. The relevant issue behind this template is the shift in how learning can happen in terms of process. And acceptance of the pedagogical tool by the in-company coach is essential to support this shift to a constructivist approach to training. With the IAZPERKA template, I wanted to test the usefulness of this media, as according to Wettstein et al., 'the media which are used to instruct have not been developed with learning in mind but rather for solving problems, fulfilling orders and optimising the cost-benefit ratio' (Wettstein et al., 2017, p. 148).

The time factor is critical. For in-company coaches, it is difficult to find the time needed. This is in line with the literature review, as seen in Chapter 2: 'another issue often raised by instructions in the workplace is their problematic temporal alignment with the ongoing process of work' (Filliettaz, 2010, p. 150). Wettstein et al. (2017) went one step further by stating that if in-company coaches in companies have to deal with apprentices and also carry out their main activity, 'they will be told to focus on their main activity first of all' (p. 148). Even if in-company coaches found the IAPZERKA template useful, it was not easy for them to implement it. For in-company coaches 1 and 2, it is not because of the fact that they do not believe in its usefulness in training but because IAZPERKA was not a part of their daily business and behaviour yet. '*Well, mainly personal difficulties with myself. That I always implement the new method, or that I briefly stop and say . . . Now I have to take out the form*' (in-company coach 2). Thus, in-company coaches 1 and 2 needed time to internalise IAZPERKA and to make it a natural part of them. In-company coaches 3 and 4 found different challenges in which time played an important role. For in-company coach 3, it was the reluctance of some employees in the outlet: (. . .) '*they also see with time that it has positive effects'.* And finally, for in-company coach 4, it is the time needed to convince the whole team.

From my experience as trainer, I can confirm from many observations over several years in different situations and contexts that changes in behaviour take time even if one finds changes useful and attractive. And in-company coaches need time to convince the whole team.

But the introduction of IAZPERKA in the four outlets boosted in-company coaches, the team and apprentices in many ways. I will discuss apprentices in the subsection 7.3.5. in this chapter. In-company coach 1 found confirmation not only that their approach before getting to know IAZPERKA was intuitively right but also that it existed and was working: *'The best thing for me: to realise that "active learning" and IAZPERKA really works'* (in-company coach 1). In-company coach 2 experienced a positive flow, as *'it motivates me to be allowed to implement something new'* (in-company coach 2). A positive impact on the whole team was reported by in-company coach 3: *'that the employees also begin to think themselves'*. And IAZPERKA is useful with apprentices with some learning difficulties as well, as cited by in-company coach 4: *'But basically, I want to say that IAZPERKA works – for us now – even with apprentices who are not easy to handle. That's certainly the advantage'* (in-company coach 4). This statement is in line with Filliettaz (2010) as seen in Chapter 2: *'Learning to work and becoming a member of professional communities very much relies on discourse and interaction'* (p. 145).

To see that the implementation of IAZPERKA benefited the whole team was a surprise. However, the extent to which this is linked to the fact that it is a novelty or is influenced by in-company coaches' intrinsic motivation is difficult to say. Even more difficult is to state how long-lasting this positive effect would be in the outlet. Nevertheless, during the 18 months (the time I was accompanying in-company coaches), they did not report any changes.

7.3.4 In-company coaches' changes in attitude and behaviour towards apprentices – from teacher to partner with an increased awareness of their roles and the need for self-reflection

The constructivist approach with IAZPERKA of in-company coaches with apprentices has a positive influence on motivation and an increased awareness

whenever in-company coaches were interacting with apprentices. In-company coach 4 stated, *'After the kick-off workshop I was completely enthusiastic and the people here on site had to slow me down'* (in-company coach 4). But the fact that in-company coaches are fully motivated does not mean that the whole team in the outlets is ready for this switch: *'I realised it could still be a challenge, because our generation thinks differently'* (in-company coach 1). Nevertheless, IAZPERKA has led to an increased awareness of in-company coaches' roles. In-company coach 2 reported granting more time to the apprentice whenever they delegate a task: *'I personally give more time to the learner'.* They became aware of the fact that learning takes time and that when apprentices were learning, it is normal for the learning process to take time. In-company coach 1, reported that IAZPERKA had a positive impact on regular communication, where everyone can learn from everyone. Thus, an exchange of opinions with apprentices became part of the daily business. A further point was linked to seeing apprentices as independent thinkers and seeing how much apprentices enjoyed it: *'Aha . . . yes . . . I have to think about it myself, but I am allowed to think about myself'.*

These answers regarding in-company coaches' journeys were just great insights into this transition from teacher following behaviourism to an in-company coach led by a constructivist approach. This transition already led in-company coaches to adapt their approach and the way of thinking whenever they were interacting with their apprentices.

But in-company coaches also started to think about the quality of training provided in the outlet as a whole. First is the awareness of what training apprentices means: *'the training is more conscious'* (in-company coach 4). Second is the importance of the quality of the relationship between apprentices and in-company coaches, and last is the added value of IAZPERKA to the whole quality of training.

This awareness of in-company coaches began when they were selecting tasks to be delegated to apprentices. In-company coach 1 said, '*I have moved on as a reflective practitioner myself and now is not imitating that drives me in apprenticeship, but constructing tasks, that allow apprenticeship to think'.*

This statement was very powerful, and I had a confirmation that in-company coaches need to become reflective practitioners as well because when they work with a constructivist approach, they have to self-reflect quite often. And this approach seems to be so effective for in-company coaches and for apprentices that another in-company coach stated, *'I do not want to get back to the old method anymore'* (in-company coach 1). This paradigm shift in learning for the in-companyc coaches is perceived as positive and enhances the partnership between apprentices and in-company coaches.

But probably the strongest statement concerning this subtheme was brought up by in-company coach 4: *'I could have done my apprenticeship and the learning years at compulsory schools better with this method'.* This was the confirmation that not only in-company coaches found the approach useful but also that they regretted not being educated that way themselves.

This increased awareness of in-company coaches' roles whenever they are training apprentices is the key for a successful change in the paradigm shift towards a constructivist approach. Only when in-company coaches learn to see themselves as a key person who can construct tasks that allow apprentices to think will they support a real learning process for apprentices, where they can learn through thinking. I agree with Fullan (2016b), as seen in Chapter 2, when he said, *'Teachers are uncertain about how to influence students, and about whether they are having an influence'* (p. 21), and therefore, we need to rethink this importance.

Finally, in-company coaches discovered for themselves the usefulness of self-reflection not only when they were thinking about their roles but also whenever they were challenging apprentices at the end of the performance and – through open questions – challenged apprentices to self-reflect on their performance (see Chapter 9). Becoming a reflective practitioner was for in-company coaches a double loop about their understanding of in-company coaches' role: thinking about what they were doing and thinking about their thinking when they were interacting with apprentices.

7.3.5 In-company coaches' observations about apprentices' behaviour – IAZPERKA supports apprentices' personal development

I intentionally did not want to interview apprentices (see Chapter 10 for more information). Nevertheless, I was interested in in-company coaches' observations and how they react to IAZPERKA, knowing that for apprentices this was new not because they were taught with another system before but because they were entering the labour market for the first time and were exposed to IAZPERKA for the first time.

Apprentices take more initiative when they are working not only in terms of performing but also in terms of communication with in-company coaches. *'The apprentice did not wait until I said something anymore but became active and approached me'* (in-company coach 1). This led to an increased confidence among apprentices, and one answer was stated as *'worryingly independent'* (in-company coach 1), as apprentices started to be so confident about themselves that they took over tasks without asking or having knowledge about it. Nevertheless, I think that it is easier to talk with apprentices and convince them on the importance of asking before performing than to activate inactive apprentices. As in-company coaches are also responsible for the well-being and health of apprentices, I can understand this need of communication between in-company coaches and apprentices before taking over new tasks.

It can be stated that IAZPERKA has a positive impact on apprentices' behaviour according to in-company coaches' observations. Apprentices feel the trust of in-company coaches, take more initiative and become independent whenever they are working. As seen in Chapter 2, these competencies belong to transferable skills (Appendix 13), and I support the opinion that transferable skills are 'necessary for apprentices to develop into responsible citizens giving them a comparative advantage in the labour market' (Pavlova et al., 2018, p. 35).

Furthermore, in-company coaches reported an increased level of apprentices' self-initiative and self-reflection, personal commitment as well as reflective discussions among apprentices and between in-company coaches and apprentices. This was the case when in-company coaches just asked open questions, and the

apprentices answered them: *'They try things together, they look for solutions together when they are in a team and develop things together'* (in-company-coach 1) but also *'after the two months we had less time investment and then IAZPERKA rans on its own'* (in-company coach 3). In-company coach 1 added, *'But what is, he is much much more independent than with the old method . . . and if you would have looked at this 2 years ago, where the last learners were in the second year of the apprenticeship, they surely didn't have so much confidence in themselves'.* This is in line, as seen in Chapter 2, with Wettstein et al. (2017) when he posited that apprentices 'can learn only by reflecting on their experiences' (p. 155), and this process or reflection requires time and knowledge as a basis for reflection (Kaiser, 2005).

The observations made by in-company coaches confirmed the positive impact of IAZPERKA on apprentices. This positive impact on apprentices' development and behaviour can be confirmed if in-company coaches compare apprentices trained with IAZPERKA with other apprentices not trained with it (see above, in-company coach 1). Nevertheless, the fact that in-company coaches were trained during the 18 months to become reflective practitioners in working with apprentices in a constructivist setting has surely had an impact on their reshaped or newly developed competence to intensively observe and deeply reflect whenever they are interacting with them. To briefly sum up, they not only look at a process through different eyes but they also self-reflect differently.

Another point to report is the apprentices' fun and positivity reported by in-company coaches whenever apprentices were working with IAZPERKA. I am fully convinced that positive feelings are important not only because they have an influence on motivation (see Chapter 3) but also because they facilitate the process of learning, driving curiosity and stamina. For example, in-company coach 1 stated, *'So it goes away from the information session and says . . . yeah cool . . . want to try that now'* (in-company coach 1). This positive mindset has a positive influence on the learning process, apprentices' interest in taking over new tasks, apprentices' self-esteem on their way to be a full and qualified worker, apprentices' perception of being capable to take over real tasks and apprentices' independence.

Finally, in-company coaches reported a point I had never heard before since I started my project: 'I find it fascinating what can emerge (. . .) the development of the apprentices. It's exciting how it works' (in-company coach 2). In-company coaches realised that through their work, they actively contributed to apprentices' personal development. And this task is not only in-company coaches' responsibility but also a great privilege. This point sums up well the need to see apprenticeship as a holistic training preparing apprentices not only for work but also for life (see Chapter 10).

7.3.6 In-company coaches on the support needed – training apprentices is everyone's responsibility

As seen in Chapter 2, in-company coaches seldom have enough time to train apprentices, Furthermore, most of the time they are left alone in the company and outlets to train apprentices. During a professional trip in Africa, I heard a person saying, 'It takes a whole village to educate a child'. In this subchapter, I would like to say, 'It takes a whole team to train an apprentice', meaning that training an apprentice in a company is not only and exclusively in-company coaches' task, but everyone in the team can also contribute to it.

There is a need for a team to work and act as a team. Every team member should be aware that they are every time a role model for an apprentice, as apprentices observe them during the day. By acting or not acting, talking or not talking, team members' behaviour always has an impact on apprentices. Furthermore, the whole team should be aware of the need for coherence and unity. The whole team should act and speak on the same line whenever they interact with apprentices. In-company coach 1 reported, *'That is very important: the team in the outlet hast to act as a joint team'* (in-company coach 1). *And the whole team should jointly think about the tasks they are delegating to apprentices as seen in Chapter 2:* 'The respective activity of learning situation is based on the principles of authenticity, model function, situation and social interaction that promote learning and transfer of knowledge' (Maclean; & Wilson, 2009, p. 2642).

In addition, all team members should have a positive attitude towards apprentices, not seeing them as a concurrence but an enrichment to oneself, and admit that they can even be better than us. According to in-company coach 1, *'The*

team must be able to put up with the fact that apprentices are good. (. . .) still have team members that held a negative opinion on apprentices'. There is also a need for time allowance whenever apprentices are learning. IAZPERKA as a pedagogical tool supports this idea of taking time (see Chapter 5) whenever apprentices are learning. And this time allowance needs to be granted by companies and outlets primarily to their in-company coaches. To train an apprentice is a full job and not something in-company coaches do by the way. And this time allowance needs to be granted to apprentices whenever they are learning because learning in fact takes time.

Training apprentices should be seen as a joint responsibility of the whole company: beginning from the board, as a strategic decision to train upcoming employees to ensure qualified workers for their company, followed by teams, which should recognise that they are training future colleagues, and finally, the apprentices themselves.

7.4. Summary

As seen in this chapter, in-company coaches stated the importance of a positive mindset and intrinsic motivation to work in a constructivist setting. Fear in front of a new challenge seems to be perceived as normal, especially when the path to follow is unclear. Nevertheless, if the mindset is positive and the readiness and openness towards something new is there, in-company coaches are able to cope and integrate upcoming challenges with IAZPERKA. This different attitude and answers to changes are due to in-company coaches' biography and social background (Bourdieu, 1990).

IAZPERKA as a pedagogical tool was well accepted by in-company coaches not only because it was a pragmatic solution that is easy to integrate into everyday business life but also because it was logical for in-company coaches and not completely new for some of them. The only reticence from some of the in-company coaches came from the fact that for them the form needs to be filled out. They later realised for themselves that the form is just supporting a new constructivist approach to see the training process, apprentices and the task to be delegated to apprentices.

There is a clear development of in-company coaches' self-reflection and a switch to a role of reflective practitioner whenever they were training apprentices. This

switch is essential to see their task and role not only as 'a transmitter of knowledges' but also a holistic trainer for their whole life. The impact of IAZPERKA as a form on apprentices together with a more reflective approach of in-company coaches whenever they were interacting with apprentices resulted in an increased self-initiative among apprentices. Furthermore, in-company coaches reported an increased motivation, joy and activity not only among themselves but also in the whole team. As reported by different in-company coaches, not only has it provided a positive impact whenever they worked with apprentices, but employees have started to become more self-reflective and independent as well.

Finally, the need for support from the whole team and the company was clearly stated. This support needs to be in the form of time allowance as well, as training an apprentice takes time and is everyone's responsibility.

8. Findings

In this chapter, you will find results regarding the potential of active learning in Switzerland's apprentice scheme. The findings were built from workshop analyses as presented in chapter 6 as well as interview analyses as presented in Chapter 7.

I present the findings along the five questions of my thesis, following the structure and content of the workshops (see Chapter 5), based on the analysis in Chapter 6 regarding workshops and the two rounds of interviews in Chapter 7. The last research question will be presented in Chapter 9, as it is about my personal growth in my role as trainer throughout the PhD journey.

8.1. Research questions 1 and 2

1. What difficulties (if any) do the in-company coaches encounter in dealing with the new method of 'active learning'?
2. In what ways (if any) do in-company coaches need support to implement active learning in their retail outlet?

Challenges in perceiving roles and subroles in a constructivist setting

The first challenge in-company coaches encountered was linked to the concepts of roles and subroles when interacting as in-company coaches with apprentices in a constructivist approach. As seen in Chapter 3, UNESCO stated that 'the importance of the role of the teacher as an agent of change has never been more obvious than today' (UNESCO, 1996, p. 102). This importance of the role of the teacher has been confirmed by UNESCO in 2021 (UNESCO, 2021).

I fully agree, but as seen in Chapter 3, there is a gap in the literature regarding in-company coaches' roles in Switzerland. According to Fullan, success for effective learning is linked to the importance of teachers' roles, and therefore, 'the solution is to revamp the learning relationship between and among students and teachers' (Fullan, 2016b, p. 152). In-company coaches were aware of having different tasks to carry out whenever they were acting in their role in daily business (analyses of personal diaries after the kick-off workshop).

Unfortunately, they were not aware that these several tasks – most of the time – were required of in-company coaches to adopt a different behaviour, different styles

of communication towards apprentices and other self- and social competencies. These tasks are calling for an adequate awareness of subroles different from what in-company coaches perceived as *their* main and principal role of teaching whenever they were acting with apprentices. As seen in Chapter 3, 'VET becomes increasingly more knowledge oriented, the role of the teachers and in-company coaches must change for the didactic imparting of skills and knowledge to the facilitation of learning' (Maclean; & Wilson, 2009).

I fully agree, but this change must be supported by an effective development of in-company coaches' competencies. Because in-company coaches at the beginning of the project were perceiving their role of teaching as a kind of personal vocation, they felt consequently responsible for having to do everything in their power to transfer all their knowledge in their profession to the apprentices within the duration of the apprenticeship. As seen in Chapters 2 and 7, the management linked in-company coaches' performance and quality directly with apprentices' success in the final qualification. As written in Chapter 2, nowadays the quality of the training provided by a host company 'is primarily demonstrated by the success of the learners in the qualification procedure' (Wettstein et al., 2017, p. 28). In-company coaches stated that they felt personally responsible for the process of transmitting knowledge and clearly showed how challenging it is to switch from a behaviouristic approach of teaching role towards a constructivist role, where they were not owners of all duties and responsibilities anymore with regard to educating apprentices.

Although they were highly motivated, as seen in the interview analysis in Chapter 7, to take over the role of in-company coaches following constructivism, I felt they were overstraining themselves mainly because of two points:

- The fact that all four in-company coaches were socialised into the labour market through apprenticeship implied that they had their habitus (Bourdieu, 1990) inclusive of preconception and prejudice about how teaching and learning in Switzerland's apprenticeship scheme should happen.
- Unfortunately, they never had specific training during the five-day compulsory training (see Chapters 1 and 2) on the concepts of roles and subroles, including the discussion about raising awareness of these roles and subroles. Beyond that,

they never had the opportunity to reflect on the roles and to train and deepen the competencies needed to fulfil these subroles.

> **The first support in-company coaches needed was a pragmatic description of their roles and subroles to enhance their roles' awareness. This clear description included expectations linked to their roles. In-company coaches needed support in developing awareness about the need to protect themselves behind their professional role. With increased expectations from different partners and their own personal values, they would risk mental and physical exhaustion by attempting to fulfil everyone's expectations.**

Challenges in perceiving apprentices' individual behaviour

As written in Chapter 2, 'vocational learning, is not only a cognitive process, but also a social one, involving transition and identity transformation' (Filliettaz, 2010, p. 145). The second challenge the in-company coaches encountered were in perceiving the diverse behaviours and individuality they encountered when working with apprentices by knowing that an authentic and personal professional relationship is the foundation of a positive environment where learning can happen. As seen in Chapter 6, they agreed on 10 statements, but difficulties arose in putting them into practice (see interview analyses in Chapter 7). This process of perceiving the individuality of an apprentice is an important asset for in-company coaches to adapt one's communication and behaviour. This aspect was rated by in-company coaches as extremely useful and helpful also for their self-reflection process, even more because they agreed on the fact that 'learning to work and becoming a member of professional communities very much relies on discourse and interactions' (Filliettaz, 2010, p. 145).

> **The second support needed by in-company coaches was a practical tool to help them identify different behaviours. Despite the fact that no behavioural model and test is 100% scientifically proven, it is useful for in-company coaches to be aware of differences and similarities when it comes to educating and working with apprentices. Furthermore, after this step, we had a common dictionary to effectively speak about apprentices' actions and reactions whenever working with in-company coaches.**

Challenges in developing themselves as reflective practitioners

The third challenge the in-company coaches reported was the difficulty to become an effective self-reflective practitioner. As written in Chapter 2, Wettstein et al. (2017) posited that apprentices 'can learn only by reflecting on their experiences' (Wettstein et al., 2017, p. 155). In-company coaches wanted to develop their role as reflective practitioners to support apprentices in developing their ability to reflect. In-company coaches asked for tools for enhancing discussions about self-reflection and on how they could challenge themselves; I decided to work with one tool created with the intention of discovering and improving the self-perception in their role as in-company coaches (see Appendix 11) as well as strengthening their faculty to think as reflective practitioners. This skill is in line with what Kaiser (2005) stated, as seen in Chapter 2, that the process of reflection requires time and knowledge as a basis for reflection. Thus, in-company coaches can only reflect if they know how to reflect.

> **The third support in-company coaches needed was a pragmatic tool to enhance self-reflection through self- and others' perception. They were aware that self-development happened most of the time through deep personal reflection, which needs self-reflection.**

Challenges in relation to the approach of the learning process following constructivist learning theory

As seen in Chapter 3, 'constructivism is not offered a single pedagogical approach or educational panacea' (Ausubel et al., 1968, p. 14). And this was an issue among in-company coaches seeking a pragmatic tool to implement constructivism in their outlet. Interview analyses brought up that in-company coaches 3 and 4, after the kick-off workshop, were not sure how to put constructivism into practice. We decided to discuss together in workshop 3 how learning happened and how the learning process is working to have some insights. The following list is based on personal reflection on the first personal diary after the literature review (Brater, 2014; Glasersfeld, 1984; Knowles, 1980; Maclean, 2007). I shared the list and discussed it with the in-company coaches.

1. The learning process is individual. In-company coaches cannot teach contents, but they can teach apprentices how to learn.

2. The learning process is a partnership between the in-company coach and the apprentice. It is based on mutual trust and respect, openness and transparent communication.

3. The learning process is extremely demanding for the apprentice, as when the apprentice is learning, not only enjoyment and fun are important but also individual commitment, motivation and perseverance.

4. The learning process must be rewarded at some time. Despite the intrinsic motivation, it is important to get an extrinsic reward to make a kind of compensation for the effort made.

5. The learning process needs activity. Activity (from the Latin 'muovere') is applied to three different domains: cognitive activity, feelings activity and physical activity. The learning process should 'move' all three levels and thus be meaningful.

6. The learning process is built on a social partnership. It must happen in a social context in a social group where everyone has a supportive attitude towards learning.

7. The learning process should be activated by skilled in-company coaches in the domain of pedagogy, as it is highly important to know why and how apprentices learn.

8. The learning process needs a structure in the process itself as well as the outlines.

9. The learning process takes time. Learning always takes time. There is no real and long-lasting learning under time pressure.

10. Mistakes are essential to the learning process. Learning implies mistakes, as we are creating new links in our brain.

11. Real learning takes place by acting, not by listening.

The fourth support in-company coaches needed was an awareness of how the learning process in a constructivist environment happens as well as reasons for the needed shift from in-company coaches teaching apprentices to accompanying and educating them.

Challenges to the implementation of active learning

The literature brought up that the media in use in companies to train apprentices do not focus on the reflection on the learning process but are rather task- or process-oriented (Wettstein et al., 2017, p. 148); that is why I presented IAZPERKA as pedagogical tool to implement active learning in the outlets.

Image 3: IAZPERKA form – Cristian Moro

Sharing the view of Pavlova that 'apprenticeship has proven to be an effective way of linking the world of education, training and work' (Pavlova et al., 2018, p. 6), but 'there is no integrated theory about the transition from school to work' (Pavlova et al., 2018, p. 2), I wanted to address through active learning, derived from constructivism, this gap. This urged, as seen in Chapter 3, that 'constructivism is not offered a single pedagogical approach or educational panacea' (Ausubel et al., 1968, p. 14), but in-company coaches were seeking a pragmatic tool to work with.

The in-company coaches found the template extremely useful and had plenty of questions related to the different steps of IAZPERKA. As seen in Chapter 2, 'duality

as a didactic principle when designing training means the interconnection of action and reflection, doing and thinking, working and learning, practice and theory' (Euler & Löb, 2000, p. 9 et seq.). As seen in Chapter 7, in the interviews in-company coaches stated that IAZPERKA was a useful tool to work with.

> **The fifth support in-company coaches needed was a pragmatic tool to implement active learning in their outlet. IAZPERKA is a template to support apprentices in everyday situations whenever carrying out tasks that in-company coaches and apprentices jointly agreed on.**

8.2. Research question 3

What impacts of active learning (if any) do in-company coaches report on apprentices' personal development and performance?

As seen in Chapter 3, according to Madden (2017), 'Generation Z is not consumer but also the collaborators of the content' (p. 153), and Seels (1989) posited that 'learning occurs because personal knowledge is constructed by an active and self-regulated learner . . . who reflects on theoretical explanations' (p. 11). As presented in Chapter 4, the four in-company coaches have years of experience in working with apprentices. Some of them do have more than 20 years of experience, and that is the reason why in-company coaches tend to compare the actual apprentices trained with active learning with the former apprentices who had already completed their apprenticeship. In-company coaches reported, as seen in Chapter 7, a positive development of apprentices. I have decided to present the main developments in the following cluster.

Impact on apprentices' performance and their personal development

As seen in Chapter 3, Kyriacou (1997) described learning as a change in a person's behaviour that takes place as a result of being engaged in an educational experience. In Chapter 7, in-company coaches reported that the apprentices generally took over in the first days of apprenticeship their role, without any major difference between them and previous apprentices not educated with IAZPERKA. As also seen in Chapter 3, 'education is about the development of knowledge, skills and attitudes (Maclean, 2007, p. 36).

In Chapter 7, in-company coaches reported that apprentices showed a higher degree of self-motivation, as after a short information/delegation of the task by the in-company coach, they had the chance to work independently through all the IAZPERKA steps. This higher degree of self-motivation, according to the in-company coaches (see Chapter 7), is due to the fact that the apprentices appreciated very much the fact that they were allowed to work and try out without having to listen too long to in-company coaches. Furthermore, in-company coaches reported that they were more motivated by positive results. The positive results gave apprentices self-confidence, that is, confidence in the fact that they were able to carry out tasks by themselves and succeed. According to in-company coaches, the higher self-motivation and self-confidence of apprentices turned out with a raised self-initiative (see interview with in-company coach 1, first round). Apprentices were more active and proactive in seeking work when they were finished with their tasks. Two in-company coaches even reported that sometimes they had to stop their apprentices, as they were starting to carry out tasks without having knowledge in the field (see in-company coaches 1 and 4, first round).

Regarding apprentices in their first apprenticeship year educated with IAZPERKA compared with the ones in their second and third apprenticeship year who had not been educated with IAZPERKA, one in-company coach stated that apprentices in the first year are more independent and more self-motivated and self-confident (see Chapter 7, in-company coach 1). This behaviour leads apprentices to perform better in terms of not only quantity but also quality. Moreover, at the end of the IAZPERKA process, by step 'A' ('evaluating'), whenever in-company coaches gave apprentices open questions, apprentices showed higher self-reflection and a better capacity to assess themselves and their performance in a precise way. This is a confirmation of what was seen in Chapter 3: 'education is about the development of knowledge, skills and attitudes (Maclean, 2007, p. 36).

To cope with these continuous changes in society, the concept of lifelong learning can assist in maintaining continuous employment (Hughes, 1995).

Impact on apprentices' learning process

As seen in Chapter 3, 'learning how to learn is the key to lifelong learning' (Delors, 1998, p. 24). Following the constructivist approach of active learning (as seen in

Chapters 2 and 3), a 'knowledge worker is on who is able to use-logical-abstract thinking to diagnose problems, research and apply knowledge, propose solutions, and design and implement those solutions, often as a member of team' (Maclean, 2007, p. 215). The apprentices see themselves as actors of their own apprenticeship and not just as spectators, as they can contribute actively to their learning process and to their success (as seen in Chapter 7). Whenever apprentices were experiencing success, they were just in a flow, and they independently started to increase their level of task accuracy to achieve better-quality results (as seen in Chapter 7, in-company coach 1, first round of interview). When apprentices were experiencing failure, they just felt they had to prove to in-company coaches that they deserved a second chance by showing how they could better perform. Overall, apprentices were much more self-critical than in-company coaches expected them to be and sometimes more strict than the in-company coaches would be towards apprentices. Some of the in-company coaches reported (in-company coaches 1 and 2), for example, that the apprentices were not satisfied with their performances even if for in-company coaches the performance was fulfilled. The readiness of the apprentices educated with IAZPERKA to learn and to involve themselves in the learning process is higher than that of other apprentices not raised with IAZPERKA (as seen in Chapter 7). According to in-company coaches' statements, this is probably because the apprentices saw the direct benefit of learning: if they understand the theoretical skills and knowledge at VET school and branch courses, they will better know how to put this theoretical knowledge into practice and perform. And this readiness to learn is crucial; if one can cope with these continuous changes in society, the concept of lifelong learning can assist in maintaining continuous employment (Hughes, 1995).

Impact derived from IAZPERKA form and quality of performance

The most divergent result was about the readiness of apprentices to use and apply the IAZPERKA form (as seen in Chapter 7). In the kick-off meeting, I discussed extensively with in-company coaches all forms of possible resistance by the apprentices against using the IAZPERKA form. During the second workshop, I got the unanimous feedback that every apprentice used the IAZPERKA form without any resistance or questions as to the reason. Together with in-company coaches, we

discussed this behaviour, and we agreed that it was probably because of the fact that apprentices did not have any other regular working experiences before starting their apprenticeships. After the workshop, I reflected on this. I started to note some possible reasons like 'they probably see the utility for themselves'. During my reflection, I went back to my personal diary, and I found the following note during the kick-off workshop: *we are discussing pretty a long time about possible resistance of apprentices on the IAZPERKA form'.* Later, I added the following sentence: *'I wonder if in-company coaches discussion during the kick-off workshop about possible apprentices' negative reaction were not more showing in-company coaches' resistance, as they might perceive my pedagogic tool of IAZPERKA a dominant form of imposition in their field of competences, rather than being worried about apprentices' possible negative reaction'* (see Chapter 7, interview with in-company coach 4, stating 'I am not fond of forms'). Nevertheless, apprentices seemed to see the IAZPERKA form as a tool to structure their learning process by taking notes and documenting their own thinking. And this is what should it be: a pedagogical tool to enhance active learning and not a rigid template to be filled out.

8.3. Research question 4

What impact of training in 'active learning' (if any) do in-company coaches report on their own behaviour as educators?

As seen in Chapter 3, 'the respective activity of learning situation is based on the principles of authenticity, model function, situation and social interaction that promote learning and transfer of knowledge' (Maclean; & Wilson, 2009, p. p. 2642).
I share this view, and this is the main reason why, for my thesis, I selected PAR (as seen in Chapter 4). My attitude towards in-company coaches is also shared by Maclean, when he stated, 'In order for teachers to be committed to changing their practice, and not merely compliant teachers must be involved in both the decision-making and discussion about why changes are needed' (Maclean, 2007). During the four workshops (see Chapter 6) and in the two rounds of interviews (see Chapter 7), I got many insights into in-company coaches' feelings and the process of self-reflection. The in-company coaches were talking about impacts/changes on different levels/dimensions of their own personality. I asked them about what they meant by the word 'dimensions', and I got the following answers:

Interpersonal dimension: The in-company coaches realised that the success of a good apprenticeship is based on a good and true partnership between in-company coaches and apprentices (as seen in Chapters 6 and 7). For example, as seen in Chapter 7, second interview round, question 5, in-company coach 3 stated, 'Well, one need to be open to letting someone do it. That you hand over the responsibility (. . .) must also be able to trust'. This professional partnership is reinforced throughout the IAZPERKA process. There is a positive impact on this partnership, for example, when apprentices present their solutions to in-company coaches or when they jointly evaluate/assess and reflect on the performance. To build this partnership, apprentices and in-company coaches need time. And this partnership needs to be cultivated every day. This partnership contributes to an increase in confidence and transparency. Apprentices need to be treated by in-company coaches as individuals with specific attention and care (as seen in Chapters 6 and 7).

In-company coach dimension: The in-company coaches reported that they felt a higher responsibility in terms of quality of communication by delegating tasks to apprentices (as seen in Chapter 6). For example, as seen in Chapter 7, first interview round, question 11, in-company coach 4 stated, 'For myself, the whole training process has become more conscious (. . .) I have become more conscious in my training and my role. What I find cool is the IAZPERA template'. With the IAZPERKA form, they realised how important it is to be precise in communication by employing precise and measurable actions and avoiding the use of technical language, as most of the time at the beginning of apprenticeship, technical language for apprentices is a kind of black box without any meaning. Furthermore, the in-company coaches realised how important it is to give regular feedback on performance.

Personal dimension: The in-company coaches stated that they were stuck in their learning biography. For example, as seen in Chapter 7, first interview round, question 2, in-company coach 4 stated, 'I completed my apprentices not so long ago. I mean, I learned during my apprenticeship 1:1 like this: demonstrate – participate – imitate'. They were extremely grateful that through the project they were able to see and get to know 'other reality' regarding the learning process, their responsibility in

the learning process, their role as in-company coaches as well as the importance of the new role of facilitator in the learning process by creating learning opportunities for apprentices. As seen in Chapter 3, I shared this view, as 'it is high time . . . for education to move beyond the acquisition of knowledge and literacy and numeracy skills, which has been the dominant purpose of education in the economic discourse of formal education since the 1960's' (Pavlova et al., 2018, p. 49).

9 Personal reflection

I decided to write the answer to the fifth question in a separate chapter, as I think it is complex and multifaceted. This answer is dived into three subchapters with the intention of giving insights into the thesis findings and a personal reflection on my role as a reflective practitioner. However, I believe that what is described in this chapter, based on my personal diary, represents only a part of what and how this PhD journey has changed me in my role as in-company coach trainer, in the way I conceive adults' learning process as well as in my personal role as a PhD student. From my learning biography, I am fully convinced that I will realise in greater impact in the upcoming years as to how valuable in terms of personal and professional maturation this PhD journey was. The past seven years spent in the PhD journey were not only my first attempt at academic writing but also in a third foreign language based on a project conducted in German, which is my first foreign language, as my mother tongue is Italian.

Comparing my personal diary at the beginning of the PhD journey with what I had written close to the end of the thesis, I can affirm that my PhD journey, consisting of the academic development and the implementation of active learning and the writing of the thesis, has changed me as a person on a different level. The first level concerns my personal behaviour towards other people. I have observed and noted in my personal diary that I have become calmer and more reflective when it comes to giving an answer or opinion. I reflect before answering, and before doing so, I have observed that I ask open-ended questions to make sure I have understood. Moreover, I have learned to inform in an open manner before giving an answer, whether what I say is my opinion, whether it is based on facts or is just based on emotions (which I try to avoid at all costs). Furthermore, I realised how meaningful

and insightful it can be to pause for a while and think and rethink before answering and interacting with other people, to consider and reconsider, for example, conversations, contents of literature, interviews and what I had experienced during the fourth workshop and the process of IAZPERKA implementation.

But I realised that it would not have been possible without external support. The supervisor team, the teachers I met during the PhD modules and the in-company coaches brought me behind the scenes and let me discover a new part of myself. This happened not only through the process of imparting knowledge but also by challenging me. In my personal diary, I have written this sentence: '*Through the eyes of others, I discover myself'*. I believe it happened for the first time in my life, and I am so deeply thankful for this gift. Among all discoveries, I would like to point out the ability to take a clear position without being influenced by other people and their opinions. Before the PhD journey, I never dared to take a clear position, especially if against the trend of other people. I have been aware of this for a long time. The first module, 'Reflective Professional Development', made this evolution possible. I just sensed that I grew a few inches taller intellectually and emotionally during these past years and that I should not let my fear of not meeting someone's expectations numb me. Thanks to the PhD journey, I came across a prominent theoretician, Dewey (1998). His book *Experience & Education* contributed to a deep shift in my personal view on education and made me realise how much potential and dynamism there is in educating people and being educated. Before reading this book, I saw education – and therefore the taught modules – as building materials, bricks of data to build a personal edifice of knowledge. But as it transpires, education can be a nonstatic experience and can be conveyed in such a fashion that it becomes a continuum. So instead of building an edifice, one may build an intangible universe full of galaxies of knowledge and information, intertwined and interconnected, as ultimately everything in life is.

Even though I found myself to be even more socially isolated than before I started the PhD module, I am so thankful for this time. Time for oneself is a real gift, and it allowed me to reflect and to continue the most fascinating journey in one's life – the journey with oneself. Through the PhD journey, I realised that being alone has nothing to do with the feeling of being lonely, as the time spent alone can be very intensive, creative, challenging and incredibly interesting.

9.1. Research question 5

How has the training in active learning influenced my behaviour in my role as educator?

9.2. Professional and personal development in my role as in-company coaches' trainer

In my role as trainer, by comparing the entries in my personal diary, I experienced a significant professional development. The first development is inherent to how I plan courses within adult education settings. The exchanges with in-company coaches during workshops and the two rounds of interviews, recorded in my diary, as well as the literature review on Bourdieu (see Chapter 3) has shown how important it is to consider every single course participant as a unique and individual human being. Therefore, I have adopted application forms to register for my courses. As described below, I want to get relevant information in advance to better tailor the course to my participants. Furthermore, whilst I am planning a course, I plan different activities to get to know my participants deeper. This means that I have found myself to analyse participants in a much more detailed way, as I have learnt and am aware that detailed information and insights about them are essential to hold a course in a way that fits their characteristics, inclusive of adapting activities throughout the course. According to entries in my diary, these are the relevant fields/elements I am looking at whenever I get an application form back:

- Participants' motivation to attend the course. I want to read about the personal motivation for attending the course, as I have learnt from literature (see Chapter 3) that a participant's intrinsic motivation to follow a course is an essential factor in achieving course's objectives. Their intrinsic motivation has a positive effect on their willingness to commit themselves actively during the course. On the other hand, participants not willing to attend the course and who have been forced to are just attending the course because of a final certificate. They are more extrinsically motivated and less ready to actively commit themselves during the course. As I work with intrinsically and extrinsically motivated participants, I adapt my activities accordingly: the more participants are intrinsically motivated, the

more I am in the lead in my role as trainer, and consequently, I give a lot of information by presenting and letting participants discuss. On the other hand, the more participants are extrinsically motivated, the more I let them from the very beginning of the course work actively with the course contents, with the purpose to let them discover why they are in the course. Further, with extrinsically motivated participants, to improve motivation, I ask what they are ready to bring to the group in terms of attitude and social and self-competencies. I want them to be aware of the fact that they are a crucial part of course's process and success.

- Participants' expectations towards the course content. As written in my personal diary after the second workshop, I do not ask participants about course expectations anymore. The word 'expectations' could put participants in a passive mindset whenever attending the course. In the application form, I ask participants what they want to learn in the course according to the course description. I want to make sure on the one hand that they acknowledge and are aware of the fact that they enrol for a course to learn. They have to commit themselves to the learning process and have an active mindset. On the other hand, by asking what they want to learn, I want to draw their attention towards the course's learning targets.

- Participants' learning biography. I ask them about their educational path in the application form. Where did they go to school? When? Are they used to following courses? When was last time they have followed a course? According to their learning biography, I can adapt my learning activities and present the course content in different ways, for example, in terms of specific or more general vocabulary, with more or less textual content or with more or less images. Participants' learning biography has become a key point whenever I am planning. Planning without knowing and considering participants' learning biography is at high risk of making mistakes.

- Participants' professional field. I ask them about their professional status during the application process. Because of this, I can prepare exercises and examples that are close to their professional reality. In the past, before starting with my PhD

journey, I saw in many courses where I was a participant myself that many participants were puzzled when the trainer made an example with the aim of putting theory into practice. The participants could not transfer the theory into their professional practice.

- Participants' personal characteristics. I ask in the application form questions like: What do you find easy about learning? What do you like when you go to courses? What challenges you? The intention of these questions is to get information and clues about the personal learning characteristics of each participant in my course. My professional goal during the course is to satisfy every single participant.

The second development is linked to being a reflective person/reflective practitioner. I have discovered/rediscovered how important it is to reflect **before**, **during** and **after** a course. In my role as trainer, I have a great responsibility towards my participants: I could destabilise their self-concept with completely new knowledge. Trainers share depending on which subject they teach participants on different levels: on a personal level, for example, by moving their value system, or on a professional level, by showing participants their gap between the contents learned and the upcoming challenges arising from new technologies. Whatever trainers do, they have to carefully plan their actions throughout the course. According to my personal diary, these are the biggest challenges **before** carrying out the course. I must reflect on the following factors:

- Even though I have all relevant participant data from the application form, I do not know their behaviour. I can prepare myself and work out strategies and activities to promote the transfer of content. But possible challenges arising from participants' personal behavioural as well as group dynamic issues will come up during the course only.

- Even though I have carefully planned the course according to learning targets, I do not know in advance how situational constraints might influence the course. How will participants react to the fact that the weather is sunny and hot? Will participants be under these conditions ready to commit?

- Which kind of challenges could I encounter as a trainer with the group? With the course content? With the time allowance? These are just a few questions to consider to develop different strategies for the course and not just one.

According to my personal diary, these are the biggest challenges **during** carrying out the course. I must reflect on the following factors:

- As a trainer, I am teaching and trying different methods and activities to transfer the core message and show exactly why such knowledge is so relevant for the participants. In the meantime, in your role as trainer, you can feel during the course if you are triggering the class or not. Are they listening to you? If not, why? What should you do to make them listen to you? This reflection process is happening in concomitance with the course itself.

- Do the participants respect themselves, and is there a quiet atmosphere to learn? Do participants follow the rules? Are there any verbal/nonverbal conflicts? If yes, why? Should I act if participants have conflicts? If yes, how? Should I let the group discipline themselves? These are questions in my head whilst I am teaching.

- Is everyone on board? Do I concentrate also on weaker participants, or am I just working with strong participants? What can I do to include more weaker participants as well?

According to my personal diary, these are the biggest challenges **after** carrying out the course. I must reflect on the following factors:

- What worked well during the lesson? What should I improve? Why did it work well? Was it just a lucky strike? Why did something not work well/as planned? Because of me? Because of the participants? I wrote in my personal diary about the importance of writing down crucial points immediately after courses. This is a kind of lesson learned about the decisive points during the lesson.

- Did I manage to reach the targets? Why? How? If no, what should I do to offer a solution? I also learnt to analyse the content, as most of the time I just analysed participants' behaviour. According to discussions with in-company coaches in my records, I think it is important to equally treat target fulfilment and participants' responses/behaviour in the course.

- How do I rate participants' motivation, willingness to learn, openness towards new content and capacity to listen to feedback (even negative feedback)? I have learnt to write down after every course a short statement about my impression regarding every single participant. It helps me throughout my self-reflection process.

The third development is linked to my personality and value. I have discovered how important it is to be congruent as a person, to be and stay myself, without pretending to play a role as an actor whenever I am teaching. Surely when I am working as a trainer, I am a role bearer. But with some limitations, my behaviour should be the closest to my personality, as the participants can quickly realise if I am not acting as myself and thus not congruent. Being congruent means being aware of my own values and living and demonstrating these values before, during and after lesson, acting as a positive model. According to the record in my diary, being congruent is one of the key success factors to be convincing and credible to participants.

The fourth development is linked to a positive attitude and self-motivation towards participant and content. It is important to be convinced about what you are teaching and the fact that you still trust and believe in your students' positive attitude and performance. A positive atmosphere linked with a moderate enthusiasm for the content is a crucial component to get students fully involved. I keep thinking every morning how important my positive motivation is in my role as educator in the learning process.

The fifth development was the most important in terms of personality. I need to trust myself more and be confident, before, during and after the course. As written at the beginning of this chapter, I sensed that I grew a few inches taller intellectually

and emotionally during these years and that I should not let my fear of not meeting someone's expectations numb me. I am confident in the content and my behaviour during the teaching sessions, relying on my reflection process.

This is the development I underwent and am currently going through, and I feel privileged to have this great opportunity of questioning myself.

9.3. Regarding adults' learning process

Regarding the learning process, I also experienced development on different levels. I would like to sum up these different levels as follows:

- Learning responsibility. It is not my responsibility if participants do not learn, as I do not have the power as trainer to transfer content the way we would transfer liquid from one container into the other. My task is to create a situation where my participants can learn, as learning is an individual process. I must make it transparent to the participants from the very beginning. Therefore, I have to accept and encourage participants' initiation of ideas and use participative thinking, experiences and interest to drive courses.

- Everyone has their own learning biography regarding lessons and courses, which consists of positive or negative experiences. These experiences arise in part as a result of the way participants had been taught. I have to consider, when preparing the course, that not everyone will see the learning process as an enjoyable experience as I do. Therefore, I have to encourage participants to challenge each other's ideas and give adequate time for reflection and analyses. I have to respect and use all ideas that participants generate.

- We live what we learn. The learning process begins in childhood and is paved with a lot of 'why' questions. As far as we can remember, children have a lot of questions because the process of knowing is something natural. During my courses, I want to help bring back this pleasure in learning by acting in a social constructivist way and not behaving according to behaviourism. Therefore, I

seek participants' ideas before presenting my ideas or before letting participants study ideas from textbooks or other resources.

- We learn by doing. I promote activities in my courses. I encourage the use of alternative sources for information. As written in my diary and recorded during the interviews with the in-company coaches, activities are powerful in supporting the learning process.

- 'Constructivism is not a unitary theoretical position, rather, it is a continuum' (Doolittle, 1999, p. 1). I would like to add that it is a continuum that has various junctions along the way. Therefore, during courses, I encourage participants to suggest causes for events and situations and encourage them to predict consequences. Furthermore, I encourage self-analyses, collection of real evidence to support ideas and reformulation of ideas in light of new knowledge. Finally, I encourage self-evaluation among participants and allow them to extend learning beyond the class period and courses.

9.4. Regarding my role as a PhD student

During my PhD journey and implementation of active learning, there were highs and lows. Highs were feeling exhilarated and being assured that I want to research a new pedagogical tool, IAZPERKA, to be implemented in Switzerland's apprenticeship scheme. The purpose of my research was and still is, at the end of the whole thesis, to share my experiences with the in-company coaches and instil in them the desire to go on learning and experiencing.

Lows were signified by my low self-value as a potential researcher and a sense of futility and efforts wasted. But lows were also a kind of gift, as they challenged my determination in carrying out the thesis.

The biggest changes and outcomes, as recorded in my personal agenda, from the very beginning of the writing process in November 2016 in my role as PhD student are the following:

- **Time:** I need time to assimilate new concepts, read about them and get to understand them. Time is the key to look up at proven resources and to check what has been written about them.

- **Critical thinking:** Ideas, concepts and opinions need to be challenged. Even if whenever I am working I do not have the time and the opportunity to challenge everyone and everything openly, I am already adopting this attitude.

- **Philosophy and stance:** When I take a 'position' in a discussion, I should be clear about my stance and my philosophy to be congruent.

- **Facts, figures and data:** I want my work to be based on data, figures and facts and not on emotions. Emotions are subject to possible bias.

- **Reflection:** I have learnt to think about the content, about why I think about it the way I do and how I could think otherwise, and to be introspective. I have started to reflect on nearly every action in my professional life: why am I dealing and thinking like that? To get an appropriate framework, I have started meditating. This is a further gift of my PhD curricula: reflection always plays a crucial role.

- **Enjoy the process of learning:** I have learnt to enjoy the process of learning as a process of personal growth and discover how to overcome difficulties in the process. 'I live, I learn' is my motto.

Sometimes I feel like I am back in my officer's school in Berne, Switzerland, in 1996. One day, we had to learn how to interpret geographical maps. On the one hand, on a map, one can find much information: a map is a symbolic depiction highlighting relationships between elements of some space, such as objects, regions and themes. The four modules and the DBA and later PhD journey taught me how to read information on a kind of academic map. On the other hand, the map does not give any suggestions regarding the path one has to follow.

In my role as researcher, I am proud of this unique experience I had the privilege to follow. I have an academic map, and I have an idea how to proceed and get through the journey.

I strongly believe that there cannot be professional development without personal development, and personal development would not take place without academic development. Dr Wards and Dr Carter said in the first module in November 2016, 'You

are going to be the expert on your subject, and you are going to contribute to knowledge'. With their voices on my mind and my heart, I will continue my journey.

Last but not least, I would like to personally thank every teacher for their contributions to my development—first as human beings, second as professionals. They all were a perfect example of humility, knowledge and structure.

10. Summary of findings and conclusion

10.1 Overview

At the beginning of this thesis, I stated that I wanted to explore the potential of active learning, based on social constructivism, in the apprenticeship scheme in Switzerland by implementing the pedagogical tool IAZPERKA, which I have adapted based on the explanations presented in Chapter 5. My intention was to suggest a possible solution to be implemented by in-company coaches in their outlets to stop the trend of noncompletion of apprenticeship in Switzerland. As presented in Chapter 1, it seems in Switzerland's apprenticeship scheme we are in a challenging situation, with two opposing generations. I had the impression of being stuck in the following dilemma: bringing together the two generations by supporting in-company coaches with a shift towards a new pedagogical approach based on social constructivism and IAZPERKA.

Comparing my personal experiences (as recorded in my personal diary) in my role as behavioural trainer and the ones of the in-company coaches with apprentices belonging to Generation Z (as recorded in my personal diary after the kick-off workshop), I could identify seven similarities in terms of everyday experiences in professional life at the workplace by interacting with the apprentices:

- Passive behaviour during the day, by not actively seeking extra work if they were not told by their in-company coaches to do so.
- Disrupted motivation due to different factors related to age (and puberty) and competition with other digital gadgets and social media.
- Hypersensitivity to negative feedback given by in-company coaches due to – generally – an overestimation of their selves (self-image). Strong need for individual attention, with empathetic behaviour and the use of social skills.
- Generally, a difficulty following and respecting rules, regulations and structures (e.g. safety guidelines) during the workday, experienced by them as coercion without any sense or justification.
- Need for fun and variety during the day. General inability to cope for more than 15 minutes in the same activity or method (unless it is kinaesthetic and thus hands on/practical), especially if the activity itself is rated by the apprentice in a subjective way as not producing any fun or being interesting.

- Time-intensive discussion to explain the 'why', most precisely, the reason for an activity or for a theory. The explanations have to be brought up immediately, and the return of investment for apprentices has to be short term.

I took these seven points as preassumptions, finding basis in the books of Kring and Hurrelmann (2019), even if these seven points should not be understood as strict, rigid and valid for every single youth belonging to Generation Z. These behavioural paths characterising Generation Z and postmodern society (see Chapter 3) will most probably not radically change in the upcoming years. Therefore, in this thesis, I focused my efforts on supporting in-company coaches in implementing IAZPERKA to facilitate the shift to a social constructivist approach whenever interacting with apprentices.

Before presenting in detail the primary findings, I want to emphasise two outcomes of my thesis that contribute to knowledge and practice (see subsection 1.5):

As seen in Chapters 6 and 7, IAZPERKA has a positive effect and facilitate change among in-company coaches' approach to working with apprentices. IAZPERKA allows in-company coaches to give back to apprentices the responsibility for their own learning process. Apprentices' learning process is enhanced throughout the IAZPERKA process (see Chapter 5). Moreover, IAZPERKA supports a professional partnership between in-company coaches and apprentices based on mutual trust, respect and transparency, in which both partners can learn from each other.

As seen in Chapters 6 and 7, IAZPERKA has a positive impact on apprentices' self-development, self-reflection and performance. IAZPERKA is therefore not only a valuable alternative to engage apprentices in their learning process but also (according to data in the second round of interviews) has a positive impact on apprentices' self-development. By delegating tasks with the IAZPERKA pedagogical tool, in-company coaches put apprentices in a situation where they can immediately engage with their learning. As seen in Chapters 2 and 3, apprentices belonging to Generation Z prefer to be creators of their learnings rather than just spectators.

IAZPERKA allows apprentices to act and create their own and personal learning process.

In the next section, you will find recommendations for companies and in-company coaches willing to shift and adopt a new teaching paradigm (from behaviourism to social constructivism) and who are ready to implement active learning through the support of the pedagogical tool IAZPERKA.

10.2 Primary findings

To also cope with Generation Z, in-company coaches should consider these three principles:

- Individuals and therefore apprentices belonging to Generation Z need to be approached individually rather than with a standardised treatment. Therefore, a personal and good relationship between in-company coaches and every single apprentice is of utmost importance and priority to give apprentices the feeling of being valued as an individual person.

- In-company coaches' attitude of respect and consideration for apprentices' lifeworld is of great importance. Therefore, although there is an age difference between in-company coaches and apprentices, an open and value-free approach with apprentices is important to establish a relationship based on mutual trust.

- In-company coaches' awareness of apprentices' preference for a form of activation that is more reflexive than directive is essential. Therefore, a task-oriented learning approach is more efficient than a long oral-based instruction, where apprentices must listen for a long time to in-company coaches before getting the chance to demonstrate what they are capable of performing.

For the abovementioned reasons, the constructivist approach must be the predominant learning theory, engaging apprentices belonging to Generation Z in Switzerland's apprenticeship scheme in their own learning process. The social constructivist approach implies a switch from the current behavioural approach towards a social constructivist approach among in-company coaches. To allow a better understanding of the change, I have put the key elements in the following table as a pragmatic and schematic summary. This summary is derived from personal

notes on my diaries and discussions and reflections on the four workshops jointly held with in-company coaches:

	Old concept of training/behaviouristic approach	**New concept of education in the apprenticeship scheme/social constructivist approach**
Focus of classes/ groups	To convey knowledge to everyone in the same way.	To educate apprentices on how to gain knowledge (lifelong learning).
In-company coaches' orientation	Product-oriented, i.e. based on the achievement of a common goal.	Process-oriented, i.e. based on the path taken leading to an individual result.
Knowledge	Conveyed to apprentices as finished products without any opportunity to discuss them.	Conveyed along with associated cognitive processes. Opportunity to discuss the process and the results.
Apprentices	Are mainly passive recipients of knowledge.	Are mainly active discoverers of knowledge.
In-company coaches	Are mainly active presenters.	Are mainly facilitators/moderators of apprentices' learning process.
Criterion for success	For the contents covered to be reproduced as authentically as possible.	For knowledge which is autonomously available and transformable to be created, still leading to results.
Content	Completeness is aimed for. Every content is taught.	Difficulties/focus areas of a subject is selected by apprentices through open questions to allow apprentices' own learning.
Language	Specific terminology is important.	Colloquial language is important at the beginning. Specific terminology is following when the apprentices is mastering the content.
Focus of educating in companies	Is theory	Is practice learning happening also through practice
Autonomy	Dependence on experts in oral and written teaching	Autonomous thinking and actions are supported and encouraged by in-company coaches throughout the whole learning process.

Table 4: From the old concept of education to the new concept of education – Cristian Moro

In a social constructivist environment, in-company coaches need to be aware of their specific roles and subroles as presented in Chapters 8 and 9. These roles and subroles imply rights and duties but also limitations. Being an in-company coach in Switzerland's apprenticeship scheme means fulfilling a professional role, but it does not mean that they have to be able to meet every expectation. The new role awareness of the in-company coaches in accordance with the social constructivist approach required the following switch, strongly supported by employing the IAZPERKA form as seen in Chapter 5:

Former role of the in-company-coaches based on behaviourism	New role of the in-company-coaches based on social constructivism based on the pedagogical tool IAZPERKA
In-company coaches are instructors	In-company coaches are an educating guide, a facilitator
In-company coaches follow the principle of show and copy	In-company coaches set real work tasks to be carried out independently by the apprentices
Provide to apprentices all the information required in advance	Let apprentices themselves acquire the information required by linking theory and practice learnt
Try to avoid mistakes by telling apprentices every possible source of danger in advance	Allow mistakes as opportunities to learn and know that mistakes are an invaluable process for learning
Instruct step by step by showing everything	Remain in the background after they had been given the mission and observe. They are available to answer questions, if necessary; wait and take notes for the feedback at the end.
Lead apprentices towards 'one correct' solution	Allow multiple correct solutions to be discovered independently by the apprentices.
Discuss everything in detail beforehand, as they think to be responsible for apprentices' learning process and outcomes.	Discuss everything in depth afterwards with the apprentice by asking open questions and letting apprentices answer by self-reflecting on their learning process.

Table 5: Former and new roles of in-company coaches – Cristian Moro

As seen in Chapter 8, the in-company coaches need support to take over this new role, as they have been socialised with a behaviouristic approach (see Chapters 1 and 2). This transition needs time and should be supported actively by the companies and the whole team, as being an in-company coach is just an additional task besides the main task of craft and productive worker/employee in the company. Because in-company coaches very seldom – not to say never – have a deep pedagogical education (as seen in Chapter 2), this support should be a professional one over a regular period (see subchapter 10.5).

The in-company coaches also need support when apprentices might encounter problems with their learning process. As the learning process is an individual and personal process, in the event of major problems, the in-company coaches should get support from their companies reinforcing them that learning is not always an enjoyable process linked with fun. As seen in Chapter 3, learning has much to do with personal motivation, effort, failure and time.

Regarding the apprentices, during the recruitment process, they should be openly and proactively told by recruiters about the expectations of the company in relation to the apprenticeship. As apprentices are entering the labour market for the first time, it is recommended to talk to them frankly and inform them about the personal motivation, self-engagement and responsibility needed in the company not only for their own daily learning process but also to make apprentices aware of the fact that this personal motivation is needed over the three to four years required to accomplish the apprenticeship. Furthermore, apprentices must be motivated to learn in a social constructivist environment, based on active learning, by employing the IAZPERKA form. Apprentices need to be informed about advantages and possible challenges due to IAZPERKA at the beginning of their apprenticeship. This is because most apprentices have never experienced a social constructivist approach in their educational path. As seen in Chapter 5, this means that in-company coaches will not give apprentices solutions but tasks to be fulfilled for them to actively learn.

The following advantages of IAZPERKA for the apprentices must be discussed during the recruitment process:

- With the pedagogical tool IAZPERKA, apprentices can (must) bring themselves and their own ideas actively in their own working process from the first week of their apprenticeship onwards by carrying out real and meaningful tasks (or part of them). As seen in Chapter 7, first interview round, question 5, 'The apprentice is motivated, independent (. . .). The apprentice goes along with it and is reliable' (in-company coach 1), or 'the apprentice even enjoys it because realises that we delegate work and trust him. The apprentice takes pleasure in it' (in-company coach 2).

- IAZPERKA allows and enhances the link of theoretical contents learnt at the VPET school and practical tasks at the workplace. This linkage allows apprentices to learn more practically by creating their own learning experiences. As seen in Chapter 7, first interview round, question 5, 'The apprentice was even please at the time that so much trust was placed in its person. That was the positive effect for me. Somehow being allow to what apprentice's reaction "Aha . . . yes . . . I have to think about it myself, but I am allowed to think about it myself"' (in-company coach 3).

- By carrying out their own plan worked out with IAZPERKA (see Chapter 5), apprentices will be able to see immediately the results of their own cognitive process. If they are successful, their self-motivation and self-confidence will rise. In the event of failure, what in-company coaches and apprentices should be considered as normal as they are learning, apprentices will realise their gaps. We learn from mistakes. This failure will show apprentices where they need to revise and deepen their knowledge and finally learn. As seen in Chapter 7, first interview round, question 5, 'Sure, mistakes happen. It's not always perfect. But the apprentice always comes back and then we discuss: "Try it again" and then the apprentice says: "That wasn't optimal yet"' (in-company coach 1).

- With IAZPERKA, apprentices improve their self- and social competencies (see Appendix 13) and so, by the end of their apprenticeship, an independent young adult is able to work and carry out the tasks independently in a labour market in the Age of Information. As seen in Chapter 7, first interview round, question 5: 'When the two of them work together (first- and second-year apprentices) I notice the difference: the apprentice in the first year is already more independent than the apprentice in second year of apprenticeship. It's great' (in-company coach 1).

Furthermore, the in-company coaches should discuss with apprentices at the beginning of the apprenticeship the principles of the learning process (inclusive of in-company coaches' responsibilities in it) to make apprentices understand how the learning process in human beings works and how learning happens and to give back to apprentices the responsibility for their own learning process and learning outcomes.

10.3 Recommendations

As seen in this chapter, active learning, with a different understanding of the role of the in-company-coaches in the Switzerland's apprenticeship scheme, currently has the potential to become a valuable and valid method to be implemented in the scheme. Active learning, based on social constructivism, must be the predominant learning theory, promoting apprentices' activities and self-reflection. As active learning does not just happen without the important support of in-company coaches, it is necessary to focus on in-company coaches' instruction to implement the method. Companies are requested to support their in-company coaches in their roles, subroles and tasks by granting them sufficient time allowance, as in-company coaches are most of the time full productive workers with the additional role of in-company coaches.

10.3.1 Recommendations for companies

Apprenticeship is the core of Switzerland's competitiveness, as seen in Chapter 1. The Swiss labour market needs apprentices, as at the end of the apprenticeship most apprentices will enter the labour market as fully skilled and qualified employees. Companies must be committed to keep this system successful by giving the opportunity to the young generation to follow an apprenticeship. Generation Z is entering the labour market in a postmodern time (as seen in Chapter 3). If companies want to remain attractive for apprentices, they have to rethink the way they conceive their apprenticeship in terms of learning theory (as seen in Chapters 3, 5, 6 and 7). If they are not willing to change, they eventually risk not getting apprentices who are willing to follow an apprenticeship in their companies anymore.

To cope with Generation Z, companies must grant greater support in terms of time to their in-company coaches, as nowadays apprentices require – as seen in Chapter 3 – a close and individual treatment to make them feel welcome in the labour market and in their companies. This support for in-company coaches can be of various forms:

- By dispensing in-company coaches totally or partially from being a productive employee, as the pressure of being 100% productive could have a negative influence on the time spent with apprentices.

- By communicating to everyone in the company the importance of having apprentices. Today's apprentices are tomorrow's employees, as most of the time – just after the completion of the apprenticeship – apprentices remain in the same company. By communicating such importance, the comprehension and understanding of the apprentices and of the work of in-company coaches can be improved among employees.

- By granting in-company coaches regularly paid courses to develop their teaching skills to keep up with the evolution on teaching methods.

10.3.2 Recommendations for in-company coaches

The constructivist approach must be the predominant learning theory, engaging today's apprentices in their own learning process. In-company coaches should understand their role as important to assure the next generation of employees. In-company coaches contribute in a decisive way to youths' first experiences in the labour market. Not seldom, when skilled workers are asked just before retirement who was the most important person in their professional career, they answer: 'Der Lehrmeister!' (a German term for in-company coaches). By becoming aware of their importance in their role, in-company coaches should gain distance from exaggerated expectations and are not tempted to fulfil expectations they are not expected to fulfil or that should be fulfilled by other authorities (like parents, schools).

Finally, in-company coaches should consider that the young generation is neither better nor worse than other generations. They are just different. Therefore, in-company coaches should keep a sympathetic but firm attitude towards apprentices belonging to Generation Z whilst they are working and interacting with them.

10.4. Critique of the research process

This section takes the form of a reflective narrative and critically evaluates my research journey, the outcomes that have arisen from it and the impact it has had on my pedagogical and research practice. With regard to validity, verification and limitations of the approaches and methods used, I want to demonstrate credence in terms of academic and research rigour arising from conducting research within an interpretivist framework (after Thomas, 2009). Nonetheless, I suggest that emphasis on rigour, whether implicit in the design frame or in the integrity of the process, is important in whatever approach to research is undertaken. Internal to my research, the mixed-methods approach using in-company coaches' diaries, two rounds of interviews, four workshops and my personal diary entries provide methods of triangulation and can be argued to enhance the validity of the data and the integrity of the study. Throughout, I have kept an audit trail and ensured that my own analysis and interpretation, especially of the focus interview transcript and workshops' observations, were triangulated by a formal verification of a colleague of mine and informally several months later from two in-company coaches who took part in the project. Outcomes from the literature search, as evidenced in Chapters 2 and 3, corroborate and underpin the process used in my data collection and analysis and were instrumental in the interpretation and presentation of my findings. I recognised and appreciated the need to state my own experiences within the area of study as a means of attempted 'bracketing' (after Moustakas, cited in Creswell, 2007) and setting aside, as far as possible, any bias and preconceptions regarding the phenomenon under study. I used my diary and opportunities for reflective practice to support the process of setting aside assumptions and beliefs by identifying my preconceptions. Creswell (2007) suggested that formally acknowledging such bias enables a fresh perspective to emerge based on the research participants' lived experiences; I believe this took place, as it enabled me to recognise a 'baseline' from my own perspective.

Regarding limitations of approaches and methods used, I want to affirm that the research undertaken to inform this thesis was clearly influenced by my ontological standing at the time. This subsequently determined the research design and the various techniques used for gathering data. Sample size was intentionally limited to four in-company coaches to ensure the practicability of this thesis. I tried to ensure

reliability and validity throughout my work as explained above. As Thomas (2006) explained, these are not ground rules for interpretative research. On critical reflection, the thesis would probably have benefited from more data. The in-company coaches represented only one company, and insufficient data were generated to warrant valid usage beyond the tentative conclusions as discussed in this chapter. To rectify this, I selected four different in-company coaches working in four different outlets in four different locations in Switzerland. With recognition of the limitations identified above, I suggest that the data generated from my research provides valid elements that warrant recognition and constitute a unique and noteworthy insight into these in-company coaches and my learning process between 2016 and 2018. As Thomas (2009) stated, generalisations cannot be drawn from such interpretative research; indeed, this is not its purpose. It does, however, give an insight into the potential of active learning in Switzerland's apprenticeship scheme.

10.5. Contribution to theory and contribution to practice

My thesis wanted to contribute to theory and knowledge, as despite the importance of in-company coaches, there is a gap in the role of in-company coaches not only in Switzerland but across Europe: *'It should be noted that there is a paucity of work on people who are at the heart of the dual system. This invisibility is also found at the European level, where studies dealing with in-company coaches are rare'* (Lamamra et al., 2019, p. 4). The near invisibility in terms of literature concerning in-company coaches in Switzerland is inexplicable, '*as in-company coaches' importance as reference persons has been highlighted by various works on the dual system'.* (Lamamra et al., 2019, p. 4). With my thesis, I gave in-company coaches a voice by answering RQ 1. It can be clearly seen that in-company coaches are more or less left alone whenever they are educating apprentices. The process of educating apprentices needs not only enough time but also the support of in-company coaches at different levels and from different persons:

- SERI: in-company coaches in Switzerland's apprenticeship scheme need regular training to learn new strategies and skills whenever they interact with apprentices. A five-day once-in-a-lifetime course is not enough (see Chapter 1). Furthermore, the decision of SERI about the exclusive use of Bloom's Taxonomy (see Chapter 3) when it comes to setting targets for apprentices in all curricula in Switzerland

needs to be rethought, as this taxonomy poorly fits the development of transferable skills (see Appendix 13) and the effective training of skills necessary in the labour market.

- The board/management: they should see educating apprentices in their own companies as one of their strategic tasks and goals, as by educating apprentices they contribute to educating and forming updated, skilled and professional future employees. These employees will be able to carry out professional tasks and provide high-quality services in a labour market in the Age of Information (see Chapter 2). By educating apprentices in their own companies/outlets, the board/management assures the future of their outlets and companies, as these skilled apprentices will be in future skilled and professional employees. Furthermore, the board/management needs to rediscover the importance of their in-company coaches in their outlets and companies. Their in-company coaches are not only at the core of the dual system, but they are also contributing to socialise the apprentices in the labour market and actively help build apprentices' professional identification. In addition, in-company coaches are also seen by apprentices (and probably by their parents) in a role of ambassador of the whole company whenever they are interacting with apprentices.

- The team and every single person in the team: They should increase their awareness of being a role model for every apprentice even if they are not interacting directly with them. Further, they should adhere to the educating philosophy in the outlet and work as one team, as everyone should speak the same language when it comes to working with apprentices.

My thesis also wanted to contribute to practice by proposing a pragmatic solution (IAPZERKA) to enhance the professional relationship between apprentices and in-company coaches in Switzerland's apprenticeship scheme in the age of postmodernism (see Chapter 2). Constructivism has become a key concept used in literature, conference presentations and other professional arenas with respect to adult learning. My thesis contributed to changes in practice (apprenticeship) by proposing a set of principles to look at as a guide by in-company coaches. If people are convinced that constructivism is an important theoretical base for educating apprentices belonging to Generation Z in a postmodern age, then my thesis will

contribute to a better, deeper understanding of how to apply the theory through active learning by means of the pedagogical tool IAZPERKA (see Chapter 5).

10.6. Dissemination and further research

In terms of dissemination of this research, I am confident that there are several avenues to pursue. First, the company that allowed me to work with the four in-company coaches has implemented in all retail stores Swiss-wide active learning and IAZPERKA from 2 August 2019. More than 280 in-company coaches are now involved with IAZPERKA and are making the transition towards a social constructivism approach based on active learning with their apprentices.

Many in-company coaches I occasionally spoke to beyond this thesis were interested in the project and welcomed the fact that it was being carried out by a trainer. I look forward to getting some feedback on the research from them. Because of the fact that with this project I won the 'Swiss Entepreize Award' in March 2017, I got great publicity in different mass media. Various companies in Switzerland contacted me, as they were facing the same challenges as the Canton of Zürich in 2011 (see Chapter 1). I will work with other companies as well to introduce active learning in their apprenticeship scheme with their in-company coaches. Furthermore, I have been asked by various in-company coaches to write a handbook/manual with the outcomes of the research inclusive of the set of principles and tools necessary to implement active learning through IAZPERKA. Writing a handbook will be a new challenge for me, as I have never written a book, but I am keen to share my findings with a wider public, and I believe that this thesis is neither the right format nor the appropriate level of language wanted by in-company coaches.

Finally, in support of their work, I will send a copy of this thesis to the head of education and further training of the company that allowed me to work with the in-company coaches to add the thesis to their online resources. In terms of further research, I believe the most urgent area of study is to find ways to get a deeper, longer and greater support for the pedagogical education of in-company coaches from the very beginning of their career.

On a personal level, I would like to conduct a research on the factors affecting the successful implementation of active learning in other companies, as other companies are already implementing IAZPERKA. I am keen to find out, without my participation

as a reflective practitioner, which factors and elements are crucial for a successful and positive implementation of active learning in other companies. If other companies managed to successfully introduce active learning in their companies without any external support, I will have largely surpassed my objective, which gave birth to this thesis.

I wish to all those who want to implement IAZPERKA a great determination, self-motivation and passion by keeping in mind that 'every school building, curriculum and teaching method is just one generation away from extinction. To engage with the educational times we must first understand the time and respond to the ever-changing learners' (McCrindle & Wolfinger, 2011, p. 139).

Glossary of terms

Active learning: A method of learning in which apprentices are actively involved in their own learning process and where they have to think about what they are doing.

Andragogy: Refers to methods and principles used in adult education.

Constructivism: A view of the world that upholds the belief that individuals develop subjective meanings of their experiences and the world around them. This is often viewed as synonymous with interpretivism. Although information exists, knowing, understanding and being able to use that information are unique and personal to the knower. An extreme version of this view would claim that it is impossible to share our knowledge, as each person constructs their own interpretation of the phenomenon/information available. I believe that externalisation of this knowledge is important, and societal influences play a significant role in this, hence the term 'social constructivism'.

Epistemological: Positioning oneself within an understanding of knowledge.

Ontology: The study of 'being' or knowledge.

Pedagogical tool: A pedagogical tool is anything that a person uses to learn or teach ways in which such goals may be achieved.

Pedagogy: The study of methods, including the aims of educating students.

Social constructivism: Information is constructed, amassed and influenced/determined by a community of people external to the knower, i.e. a government organisation determining the curriculum and what should be taught.

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Appendix

IAZPERKA – How to complete my task successfully

INFORMING
What information do I have?

ANALYSIS
What do I still require or need to know?
Etc.: What is the current situation?

OBJECTIVE/GOAL
What?
Time?

PLANNING
How do I plan the task.
Who does what? Where? When?
How much? With this material, information, resources...etc. Might there be several solution options?

DECISION-MAKING
Which option will I choose? Why?

REALISATION
How I plan the implementation.

IMPLEMENTATION

CHECKING
What?
How?
When?

EVALUATING
Self-reflection

Appendix 03

The following questions were asked.

Interview Questions – Round 1

1. How did you feel when you started the 'active learning' project?
2. How did you get started in your outlet after you received the information (kick-off session)?
3. How did you feel about the proposed IAZPERKA structures?
4. Have you noticed any changes in applying the new method compared to the traditional method? Have you observed or been aware of any changes …?
5. How did the apprentices react to the method where you launched it?
6. If you think about the kick-off workshop (first workshop), where did you feel secure?
7. If you think about the kick-off workshop (first workshop), where did you feel less secure or even insecure?
8. What opportunities do you see in the 'active learning' method? For your outlet, for in-company coaches, for apprentices?
9. Have you observed or been aware of changes in the team?
10. Do you see risks in applying the new 'active learning' method? What can be done to combat or avoid these?
11. Do you have any other comments?

Interview Questions – Round 2

1. What positive insights do you draw from the 'active learning' method in your role as an "in-company coach?
2. What personal and interpersonal difficulties did you experience with the "active learning" method?
3. Have you noticed any personal changes in your attitude towards apprentices in your role as an in-company coach? If yes, please specify.
4. Have you developed your own qualities/skills as an in-company coach thanks to the new methods? If yes, please specify.

5. In your opinion, what are the essential personal, social, and methodological skills you need to be able to work with the new method as an in-company-coach?

6. Do you feel that in-company coaches who want to work with the new method require external support? If yes, please specify.

7. Have the apprentices developed in terms of personal, social and methodological skills over the last 18 months? If yes, please specify.

8. How are apprentices reacting to the new method 18 months after its introduction?

9. Have you observed or been aware of changes in the team?

10. Do you see risks in applying the new 'active learning' method now? If yes, what can be done to combat these?

11. Do you have any other comments relating to the new 'active learning' method?

04 Interviews – transcriptions

First round of questions

Cristian Moro: How did you feel when you started the project "Discovery Learning"?

I: In-company coach 1: The first information was at the ERFA meeting with Landi Switzerland. I was enthusiastic about the idea because I had the feeling that it was a piece / a direction that I had thought about and partly tried, but not on a sound basis. I had the feeling that there has to be more than "textbook" / schoolmaster "cookbook" training. I had also received criticism because I couldn't train like that. But they couldn't do anything about it because I always had good learners. #00:00:48-3#

B: Cristian Moro: Exactly ... then you had good learners with good grades but maybe you had good learners with good grades exactly for the reason that you went your way. #00:00:51-7#

I: In-company coach 1: : Answer: Yes exactly. I believe it too. #00:00:54-8#
#00:01:02-2#

B: Cristian Moro: I find it exciting. When people leave the familiar path, they always have a hard time. However, a new dynamic can emerge from this. You then got information about the project and then you were with me at the kick off - Anno dazumal - and now the next question. #00:01:11-5#

Cristian Moro: How did you specifically start in the Landi shop after you got the information (Kich-off session)? #00:01:16-7#

I: After the kick off I went home and narrowed down and studied the information and asked the following questions: what fits with what we do, what we think, what is congruent, what is new, what is different, what is adapted. I then realised that many things are similar. However, we have not done them in writing until now, but the thoughts when I gave the assignment were similar. I gave the assignment and said: try it out, before you do a "Seich", you ask "in the sense". Sometimes there were reproaches: "You explain it too little" in advance. I let these criticisms roll off my back. But nowadays I know why. It is like this. The reproach "You don't explain enough" has come from people who don't understand your system. But then I went to the office, I looked in your papers and I thought "cool"... that's exactly how I imagine it. I haven't quite got to where you are yet and realised it could still be a challenge because our generation thinks differently. #00:02:39-4#

B: Cristian Moro: that's it dear in-company coach 1. We will then come to the topic of "opportunities and threats" later in the interview and the last question: "What else do you want to say about this?" there is the possibility to express such points. However, I agree with it in principle. My point is - as in-company coach 1 told us in the Kick Off - to "cause" the minimal interventions in everyday life. I have told you this several times. The new method has to fit into the daily routine, it doesn't have to change anything big by not requiring additional paperwork and work for you trainers. And later in the project, which we will discuss in August, we will decide when we will no longer require planning in written form, but still orally, so that we can carry out the

evaluation with the learners orally. For me, the basic idea is that of a new method that needs a new basic attitude on the part of the vocational trainers. And to see how the whole thing (the new method) fits together. That is exciting for me. #00:03:28-1#

How did you feel about the proposed/preset structures "IAZPERKA"? #00:03:28-2# #00:03:28-2#

Already answered in the previous question. #00:03:23-1#

4. did you notice/see any changes because of the use of the new method compared to the "traditional" method? #00:03:22-9#

I: So the learners involved, they had a mixture of different feelings: we are already doing it; joy; and what else is new. And for the people, I say, who are standing around (from the rest of the team) it was a mixture between "He's got something new again" to "What else can be?". We are basically always afraid of having to do more work. People are always afraid of more work. But...there are...
As far as agreements are concerned, I just handed over such an IAZPERKA form to the two-year apprentice daughter last week. She is the least independent in the shop - then I told her: "That's your job" and asked her: "What would you do?" ... briefly about the situation: In the area of "fruits and vegetables" we are not quite where we want to be with her in the area of "training". That's why I asked her: "What would you do? ...here you have the IAZPERKA sheet, you know it, go there and think what you would do now ...related to the season". Nothing more / no further information passed on. Done. And then she went away and all of a sudden she came back and said, "Come with me and let's have a look". There was already a first process change. She didn't wait until I said something, but she became active and approached me. She said, "It's almost Easter, I could ...am I allowed to do anything at all for Easter?" I answered her: "Of course you can" and then I realised that the process really started with the leaf. However, I don't want to have two / three sheets filled out every week, but selectively for larger tasks. At some point it has to run by itself, without a sheet ...at the end of the teaching. Because a change in behaviour has to work without a sheet. But the leaf needs to be there from time to time so that you can say, "Ok, it's coming this step now, and also so that no step is skipped". I think the extra effort on the punctual "we'll do it by the textbook" is there - of course - but in the overall sum is a good thing. Yes, definitely. Really a very good thing. #00:05:43-3#

B: Cristian Moro: Yes exactly in-company coach 1. . We already talked at the kick off about the fact that in the beginning there is an extra effort to explain it to the learners, to accompany them intensively and so on. However, over time, as theory and the theoretical models of Dr. Prof. Brater say, the effort decreases rapidly. Because then, exactly what you said triggers. They come directly to you to present the whole / the result. It is like a new train of thought that is anchored. It is then a new link where there is in the brain. I am really curious - you know - the longer you are on it, or we stay on it in the project, whether this link really takes place. And above all whether it exists after several years. Nadine Larsson (Head of Training at Landi Switzerland) is very satisfied with the first results, also from the feedback. She said: we absolutely have to keep it up. We have to spread it to the outside world. #00:06:41-8#

I: In-company coach 1: I would like to say something about this. The person who is the load manager in Widen did the apprenticeship with me. I think she was the first person to finish the apprenticeship here. And she once told me how she felt about me ..back when she was an apprentice: "In-company coach 1 gives short orders, few orders and wants a lot of results". "And?" I asked her.
"And ...you came across much harder than you want to admit. And yet I went through the whole process of thinking on my own when you weren't running with me, because you didn't control as much and you didn't tell me everything"...and on... "Until I realised...aha...that's a style without paper. That appealed to me".
Of course, if you have a learner who is the same tick as you, it works wonderfully. If, on the other hand, you have a person who you have to lead by the hand, then of course the challenge is greater. In that case, I run the risk of her avoiding me because I give so little information and she looks for a person in the shop who can help her/him. #00:08:05-7#

B: Cristian Moro: You know what's exciting for me, in-company coach 1 ? If you have it in the taster weeks, I would keep an eye out in terms of independence. Whereas - as I said - we've already talked about it a few times, please don't reproach yourself because of today's youth. It's the parents, in part, who mother the children so much that they can't go on afterwards. And that's why it's interesting for me to see how you react to the new method...and of course to the learners. But if we now take the shop manager of Widen, she has "become someone". I mean ...now she is the shop manager in Widen. That is, she is living proof that at some point the "20 centimes" / the fiver or I don't know what you say in Canton Aargau ...but it gets through to people. They realise afterwards what this kind of leadership has been good for. #00:08:59-5#

I: In-company coach 1: Exactly. I spoke to the third-year apprentice daughter. She said: "In-company coach 1, I want to stand in front at the graduation ceremony". The first 20 best apprentices are allowed to go to the front. Of course it's amazing for me when someone has such a goal. Of course, she also makes mistakes. That's natural, isn't it? ...we all do. But I ask her in between? ... "You Corinna, would you be satisfied as a customer if you had been served like that? Then she asks in horror: "What did I do? What was that?" and I stand by her, watch calmly and she then says: "Yes, it's true, but ..."... and then her reflection begins. And then I ask her directly, "Was your behaviour an old pattern or a new one?". To which she replies, "No, it was an old pattern". So the thinking process is going on. We always think ..it is easy to leave familiar patterns. In fact, 15 years has somehow been imprinted on young people. I see this at home. My wife, I mean in her family, was asked three times: "Have you thought about it? With my family, on the other hand, they let me go without asking. Because I only learn something when I do something ...without being saved at the last second. #00:10:14-7#

B: Cristian Moro: Yes exactly dear in-company coach 1. "Learning takes place through action and not through telling". And you learn, dear in-company coach 1 , most through your own mistakes. Mistakes that you make in the process anyway, because it's the first time. And I just think we have forgotten that. I'm reading a lot of books at the moment in connection with my studies. In one book it said that 70% of what we learn and use for life is not learned in school. This is proof that we can learn

a lot ourselves in life. If we are naturally motivated. #00:10:48-2#

I: In-company coach 1: It is a challenge. I now have a request for the 2018 apprenticeship. It is a learner with learning disabilities. For me the question is: do we apply "discovering learning" and thus the new method, or do we go another way according to the motto: "Sorry, it doesn't apply to you". #00:11:09-5#

B: Cristian Moro: It's an exciting question in-company coach 1. #00:11:09-5#

I: In-company coach 1: I once had someone with the IV (disability insurance) status "learning disability". So she came to us and had a level in terms of arithmetic of a 3rd - 4th grader. Of course, that's not enough to pass the exams. Quite simply not. Then she was supported by the IV. She was always with me for 4 days and one day at the IV school. After half a year she said: "I want to do the apprenticeship with you". Then I asked her: "What made you think of that? And then I thought about it and said ..hhmm, there must be something behind it. And then I asked her: "Hey, let's be direct, is it because you are in a school at the moment where there are disabled people? Then she blushed and I told her: "It's all right. You don't need to give an answer to it. I already know the answer". She simply doesn't want to have the status anymore .... "I am disabled! I simply want to be normal. That's exactly why I want to do the apprenticeship, so that I can get to "normal status"". Then I told her: "Yes, well, you work well in the end. You will probably have difficulties at school ... we can manage that. The crucial thing is that we two trust each other and you want and something you should know ...there will be a massive pressure on you. The important thing is that we are one ...who says what". It's a typical case: she was a child of divorce. There were a lot of different things going on, or ...and then I reported it to the IV and a conversation took place. The person in charge of the IV, the Integra counsellor, the mother and the two of us and one other person came. The person in charge of the IV, a typical IV person, with an anthracite jacket, a black portfolio, 60 years old and then asked her: "So ... listen, now I would like to know why you want to do it". I mean, that's frontal attack ...and then I intervened and said... "we've talked it over, I'll take it from here". #00:13:10-4#

B: Cristian Moro: Sorry in-company coach 1 if I intervene. I wonder where the social competences of this IV responsible are. #00:13:15-6#

I: In-company coach 1: Yes...in any case he didn't believe me that we would get them through the exams. I told him, "As far as the vocational school is concerned, on the other hand, you have to look directly from the IV. Because you have given them this status, not me".

At that he started stuttering.

Then we did it and I realised ... I can really demand the IV because they want to get rid of the case. And so I challenged them and demanded, there must be a teacher who is fit / fit. The person who is currently being used for my learners is definitely not fit. He said, "You can't say that". I told him I didn't care. From my point of view, she was unfit. This teacher was really there to support the handicapped, at 3rd and 4th grade level. My future teacher daughter, on the other hand, would need an adult to

accompany her.

Then they actually organised a secondary school teacher at Integra. She then got through the exams and not only with a grade of 4.0, but with a grade of 4.2. Well then something happened that still upsets me today, she overestimated herself according to the motto: "Now it's me". Then I told her I would write her a confirmation so that she could only work 60% and get the remaining 40% salary from the IV office. She replied to this, "I am normal as I have passed the normal exams": #00:14:38-0#

B: Cristian Moro: Where is she now in-company coach 1 ? #00:14:38-0#

I: In-company coach 1: She works part-time somewhere in the service. She somehow had a child and different men. #00:14:48-3#

B: Cristian Moro: I think in-company coach 1, I am also a very social person. People are not better or worse. They are just different and we have to support people like that. I also see the economic aspect behind it. We simply can't have a society that "hangs around", because otherwise it simply doesn't add up any more... I also find it difficult for people who are still working. #00:15:11-6#

I: In-company coach 1: I mean, she listened to her stepfather. She then got a job with a person I know. I said to this person, "Look, you may let her walk in this narrow area. She is a good woman. That's all it takes. But she is good in this area. Good ...and then the stepfather told her, "Are you crazy...you have to drive for half an hour to get to the workplace, I'm sure you won't accept that." #00:15:36-2#

B: Cristian Moro: "I find it strange how people influence other people, because nowadays you just have to drive to a job. And half an hour is still "around the corner" when I see how certain people drive from the canton of Glarus to Zurich, there and back with traffic jams to boot. I think half an hour ... You see here ... people think it's always the young people who don't want to work, but in the end it's also the parents who influence young people. And when you hear that at that age, you feel that it's true. #00:16:00-6#

I: In-company coach 1: Then she didn't take the job. Took another job instead, which was geographically closer, but she failed there. And that was because the support that I could have offered her via my acquaintance didn't exist there.

How did the learner react to the method where you started? #00:16:31-7#

I: In-company coach 1: So, do you mean the one who is in the new year? At the first moment it was almost as if she said, "Oh dear, there's more to come". So, you know, the learners from the different years always talk among themselves. And then I got the feeling from her: "Now I'm the one who's starting over and you're also trying something new". The first month she set the bar the highest for herself, not for me, according to the motto: "Yes, that will come too". I mean, they know that when they start their apprenticeship they have high goals: at the beginning they hope to get a grade of 5.5 at the end, or a grade of 5.0 if things go "badly". So when they start they have the feeling, oh dear, I have to do something new...that is already a high demand

for them, that means high stress at the beginning of the apprenticeship. But it is like that. She is motivated, independent. So I mean, if I were afraid of her, that she would get out of hand, then I would even say "worryingly independent". She goes along with it, she's reliable. Sure, mistakes happen. It's not always perfect. But she always comes back and then we discuss: "Try it again" and then she says: "That wasn't optimal yet". When the two of them work together (1st and 2nd year apprentices) I notice the difference: she in the first year apprentice is already more independent. It's great. #00:18:11-5#

6) When you think about your introduction in Wangen bei Olten, where did you feel safe? #00:18:33-6#

I: In-company coach 1: How do you mean? In the thinking process? Ok. So in the thinking process / in the understanding I immediately thought: "I can do that, because we already tick like that". What has been more difficult, I thought about it, is the written way. I'm not always the one who sticks to it "step by step". I prefer to let it go. I think you're allowed to do that, but it's not so easy in the introductory phase. Because the learner then comes with the assignment and the sheet or goes to the colleague and asks, "You, what do you think?". Then the old pattern comes out, the old method. That is the challenge I underestimated. But I knew: the thought process, the way of the new method ... combined with my high tolerance for mistakes, even though I am known as a strict person with the learners, that is not a problem, I can do it. I will also have and manage the personal level. That's just a bummer for me with the new method because we tick as a "we-group" as "we-people", I notice when I take exams it has a lot of learners who are lone wolves and they get frustrated at the end. #00:20:08-3#

B: Cristian Moro: ...and then remember, dear in-company coach 1, that this is their first work experience. If they start life with a bad experience, it's like in the Swiss army. If you had to experience a bad leadership experience in the Swiss Army, then you keep that experience for the whole life. #00:20:16-4#

7) When you think back to your introduction in Wangen bei Olten, where did you feel, do I feel less safe or even unsafe?   #00:20:24-0#

I: In-company coach 1: Where you introduced the IAZPERKA model, I noticed with the different letters, but it needs step by step. In theory you learn that it is a process. But you can do it even better with a practical example if you fade out everything else and say: "Eh, we'll do it now with this practical example". But it doesn't work like that in everyday life. As I said before, it has to become an automatic thought process. For a long time I felt guilty about it and thought, ok, I won't do a whole beige of sheets, but I'll do an example with one sheet, knowing that for me and for them it will nevertheless be a recurring thought process. However, in everyday life we will probably "skip" one step or pull two together. In the end, however, this new method is to be the future of our practical training. #00:21:17-2#

B: Cristian Moro: For me, this is wonderful, dear in-company coach 1. What you get from me is all theory and you know it. In the beginning there was IPERKA, then it

became IAZPERKA. I only had the following thoughts: somehow you must have "something" in your hands to implement the new method. But of course I can tell you that when you are "immersed" in everyday life, then perhaps the different steps will merge. However, my wish is that you don't invest more time with the paper than with the job. But still, that something like a structure comes in, where people like a problem solving process. #00:21:51-6#

I: In-company coach 1: yes exactly. What is good about the sheet, on the other hand, and I completely underestimated this, is that I can sit with the learner concretely and he/she says: "There, in this point I am not quite satisfied yet". I can then ask back and ask: "So you are not completely satisfied with your result. What do you mean, when and where did you drop out of the system? So it's not the system that's a mess, but at what point did you not quite fulfil the work as you planned it, after which the result became different.
You cannot do this reflection if you have only planned the work orally. You can only do this if you have planned the work in writing. And because our working life changes so quickly, it also happened that the planned apples did not arrive because they were not available. Then the learner has to decide, ok, I'll do something different, I'll place something else instead of the apples. That's just the process, because when the planning doesn't work out, that's the challenge. The cool thing about paper: the learner has planned it on paper and sees, something comes up that I didn't plan ...now what do I do with it specifically? I then tell him, "It's none of my business." #00:22:58-9#

B: Cristian Moro: I think, in-company coach1, that will be the next step. I'm thinking, how do we accompany them for a few more years but what do we do if something unforeseen happens. But as you said, you can only deviate when you originally had a plan. Otherwise you will always be surprised. I think when the unexpected happens, it's okay. And that's how it is in life. But ... without planning and a plan, it doesn't work. And with this system, I want that before they do something, they have to have a plan and thus think, so that you can then discuss with them and ask: "For what reason did you do it?". If they don't have a plan, they also usually answer: "Yes, I don't really know". Then we are both standing on the mountain, you and me. I mean the teacher and you as the vocational trainer. But what is central for me, in-company coach 1, is the reflection phase that you mentioned earlier. That you can "nail" him at the end with the written assignment - please excuse the expression - and say: "Here you have written down and planned". Otherwise the end result will be a ping-pong discussion along the lines of: "That's not true, I never claimed / said that". And in the end it degenerates into a free discussion. My point is not to blame the learners for anything because of the planning, but to let them show and reflect on the result of their planning. And I think in our age where everybody talks and nobody can put anything in writing, then you can have them put down the few steps of them. #00:24:02-9#

What opportunities do you see in the method of "discovery learning"? For Landi, for the vocational trainers, for the learners #00:24:24-7#

I: In-company coach 1: So the chances for the learner is that he is faster in the process, where he feels like a full employee. That has been important to me for

years. I don't want to have "first year" learners and then they feel different from the others. Instead, I want to have employees who quickly get to the point and dare to say: "I can do it, I can stand in front and say hello, I can do something". Because "not knowing" is not a mistake, but an opportunity to know even more afterwards. But the process is very valuable. For this reason I have trouble with the training plan where we vocational trainers have to fulfil and complete. Because ...for example ...yesterday we were at the counter/cash register, because that is also a place they have to go through. They get a security by working at the cash register, but I tell them, at the end you "can't do anything". I mean, you can operate a cash register, but nothing else. Apprentices have to be in the shop and that's why they are allowed to run an area in the first year of their apprenticeship. A whole area ..like shoes, clothes. It's a huge area, especially after the start, when it goes towards autumn and winter. It gives them the feeling like, "It's my little shop". And I as an apprentice am responsible for that and I can stand and answer questions from customers, mostly are simple questions. So they can give information and they learn about customer contact. They also learn to give unpleasant answers, for example, if the goods are missing, so they can practice self-criticism: "Oops, I missed ordering that, that would be my fault now" and not simply: "Ok, it ran out". No, that already gives them a responsibility. It's an area where if you make a mistake there are no big consequences. I notice it, after the first year of apprenticeship and the first experiences they are somehow more ready according to the motto: "I can go anywhere and to any department. I feel comfortable". But this is a team process and the chance to get into this thinking is to really be able to watch the learner go through a development. He goes through a development for himself where he feels complete. At the end she knows that she is a full member of the team. She is a part of the team and feels like a full team member. The whole process starts with oneself. It's just the process of being able to stand on the big stage. #00:26:51-3#

B: Cristian Moro: That was the look at the apprentices. Do you see more differentiated opportunities at Landi or with the vocational trainers? #00:27:02-8#

I: In-company coach 1: Well, what is positive for Landi is that we have a wide but flat range of products. So ... we are relatively chaotic, to put it negatively. But there are a lot of opportunities, because the assortment changes so quickly. So if you are a person who likes things to be "orderly" in life, then you are in the wrong place at Landi. You should like to have new things, like to have changes, then you are in the right place with us. And in this process, the system of "discovery learning" with the IPERKA method is exactly right, because the learners learn to deal with the system. Not "Oh, something new is coming, let's wait and see what the boss says and means, then I'll do it. Otherwise they learn that it starts with the order ...how will it be delivered then, when how where and they can already think about it in advance. So they kind of look forward to it in advance without me having to say anything. That is part of the process that they have gone through. It's an opportunity for us as employers. #00:28:05-5#

I: In-company coach 1: for us as trainers, I think they challenge and encourage me. I think if I challenge and encourage them, they challenge and encourage me, or. Because they have more questions and they have them immediately. They don't wait for the next interview in half a year. But they come without me having to say anything

and ask: "Shall we go to the coffee break together?" because I know, ok...now it's my turn again. Before, I had asked the question, "Come on, let's go to the coffee break together" and then asked them, "What did I do wrong?". To which I replied, "Nothing". Now, on the other hand, they associate the coffee break with something positive...so, now we are going to the coffee break because I have a question. These are the opportunities because if I show everything, then this is the wrong way. #00:28:51-2# #00:28:58-4#

B: Cristian Moro: ...and in-company coach 1, do you also see dangers where you think, "We haven't thought of that yet". #00:28:58-3#

I: In-company coach 1: If the team doesn't function as a team, then there's a danger that learners end up with 16 employees with 20 opinions in front of them. That's very important: the team has to act as a team, otherwise you go for the weak. And the team must be able to put up with the fact that the learner is good. Not everyone likes to resent that. I have a case like that in my company. She works part-time, is about 60 years old and doesn't like it when the apprentices are good or even better than her. I think out of sheer existential fear ... along the lines of: "It could be that at the end of the apprenticeship the learner will stay and I won't be allowed to work as much". Really, I think people are easier to understand.... but that's my job as a leader: on the one hand with the 60 year old person ...to calm them down and with the learners to say "Eh, that's good, step on it and express yourself, only if you are sure". Then the 60 year old person says ... "You know, the learner says to me, I have to ..."....and I reply: "Yes, she can do that". And she replies: "Yes, but she is only an apprentice". And I answer: "It doesn't matter". #00:30:24-8#

B: Cristian Moro: I understand that. However, we are there as a team and it is always a "togetherness". #00:30:38-4#

9: Have you noticed or been able to observe changes in the team? #00:00:00-0# #00:30:48-6#

I: In-company coach 1: has already been answered. #00:30:48-6#

10: Do you see risks in using the new method "discovery learning"? What to do for or against it?   #00:30:48-6#

I: In-company coach 1: has already been answered.

11.   Was möchtest Du noch sagen? #00:30:48-6#

I: In-company coach 1: How should I put it? For me, the question is still whether we want to institutionalise this new method at the "Landi Schweiz" level. That will be a bit of a challenge, how we get it done. Especially in the thinking process, because we have a lot of vocational trainers in the Landi world who don't think that way. Recently, about a month ago, I had a trial run of a final exam and I am / I think the learners are cool. This is also the last moment where I also have the opportunity to ask formative questions. But I was really shocked to hear that certain learners answered my

questions as follows: "We are not allowed to do that in our company" or "That's what men do in our company". And to that I reply, "Excuse me?" I didn't know where the person was from. It was also a year older than when people graduate, because he completed a secondary education. I asked, "Hello?" ..and sought conversation before the person left the room. I then told her: "Look, if I am looking for a person on the labour market and they have passed the exams, then I assume that they "can do everything" in the sense of being a fully trained employee. I can therefore use them anywhere. They can stand in front of people, take over Rayon. What do I do if this person never did this in the apprenticeship?". She then replied: "Look, that's what the boss does here". I said: "Hello, go home and stand on your boss's feet (because I know who his boss is, of course I didn't tell her that, did I) ...stand on the boss's feet and say: "You, I have to be able to do this too, I have to take the exams with it, I want to be fully present". She replied: "Yes, but" ... and I replied: "What, yes, but?" ... "He's afraid of it, mistakes happen". I told her, "Look, if he doesn't make mistakes, then hats off. But I know it differently." #00:32:46-9#

B: Cristian Moro: Absolutely, I agree with you. In Switzerland, a diploma, a federal certificate, should guarantee that everyone can do the same thing. That's why there are education plans. #00:32:59-8#

Question: Working with me in-company coach 1? Do you find it good? Is it pleasant? Do you receive too much information, too many newsletters (every 8 to 9 weeks)? Should I reduce the number? Or increase the number? #00:33:09-6#

I: In-company coach 1: No, it's tiptop. #00:33:14-0#

B: Cristian Moro: You know in-company coach 1, I never wanted you - project members - to get the feeling, "Oh no, now we're getting more mail...there's a person coming along". My goal is to reach a "good" frequency so that you stay tuned. #00:33:37-2#

I: In-company coach 1: Thanks a lot Cristian. I am still enthusiastic. #00:33:38-8#

B: Cristian Moro: You know in-company coach 1, I think it's wonderful what we can do and move. Because we are making small appreciative steps, which I think is great. We are the first and we are a tandem. Nadine Larsson, Head of Training at Landi Schweiz AG, already has plans. She will inform you personally in August 2017. She wants to use you as ambassadors at the conference. Because she also thinks that you should be in the front. She also thought the website was great. I said that you should be in the front ... because I am simply a vegetable. We will also look together in August, in-company coach 1, at the next steps and the next interviews, how we are going to proceed. On this day we will also do a short training on the topic "Persolog - colour model for learners" or even more precisely, "what is it for a learner in terms of learning type". So that you could also better assess who is in front of you. #00:34:36-7#

I: In-company coach 1: Exactly, I did it earlier, or one / two years ago with the learners. There is such a catalogue: what kind of learner am I in terms of learning type. Are you the one who likes to touch, hear, or with the eyes...? correlates a bit

further with the colours, not quite, but almost. I already bring it up in the taster week...I use it in the taster interview. If a person doesn't want to be there, I don't hire them, even if other companies don't have to do it (the test) I don't care. Because for me it's not decisive whether he has a grade of 4.5 or 4.7 in school, but what is decisive is whether we understand each other in day-to-day business. Because if he has the feeling: "Yes, that's what I do", I think he's in the wrong place. Because I'm not the vocational trainer who makes a check mark on the training plan every week. There's much more to it than that: independence has to run. Because it's his training that I'm supporting, not my training that he's doing...and at this point there are already different reactions. One person is beaming and others, on the other hand, are almost frightened. #00:35:48-1#

B: Cristian Moro: in-company coach 1, I just think ...although I don't like to use it as a word ... it's common sense. Because if you as a parent send your "child" to an apprenticeship, because in every company - where there are so many tasks, such as educational measures, role model function, etc. - you also have a responsibility as a vocational trainer: to prepare the apprentices for life. If you don't get it done in the 3 to 4 years of apprenticeship, when do you want to start teaching the young people these important points? I think that many parents have an uneasiness ... between a lot of school, with compulsory schools and when everything happens there ... like a "wish programme" and the pupils can choose for themselves when they want to be absent and can decide for themselves ...think if they then enter the professional world and the parents hope that their own child will then learn certain points there, the whole thing simply cannot work. With the principle of "hope" it doesn't work. For this reason, it is important for me that we consistently delegate and "follow through" with the new method. Earlier in the interview you mentioned the person who is now the "leader". I think, as she mentioned in the interview in relation to your being strict, sooner or later they notice. If we also think back in the past, always the person who was...let's say...formally "tougher" (but had the heart in the right place), those are the persons we learned the most from. #00:37:10-6#

I: In-company coach 1: yes, that was also tedious. When I think back to my training ...where I had a boss and knew "he means well with me" ...but at the same time he challenged me and encouraged me and above all, what he said was also valid ...then I learned and profited the most from him. #00:37:25-9#

B: Cristian Moro: This attitude is called "pedagogical rigour" ...a funny name, but "pedagogical rigour" means that if you act fairly and are fair / or exemplify fairness and demand and promote it, then the young people will "eat out of your hand". I can tell you that, because I also see it in the military. You just have to grab them fairly .... #00:37:52-0#

Question: is there anything else you want to say in-company coach 1? #00:37:52-0#

I: In-company coach 1: Thank you very much ... simply thank you very much. The work, the extra work makes me proud. I'm happy to be able to participate in the knowledge that ... it benefits me, but it benefits the next generation even more. Investing in the next generation is hugely important and we do far too much academising today - in my opinion. #00:38:24-3#

B: Cristian Moro: that's so. #00:38:24-3#

I: In-company coach 1: practical intelligence..so I mean the concept of "practical intelligence" is almost scarce. I mean, of course I'm proud and happy when a person with a grade of 5.4 or 5.8 is allowed to stand in front at the award ceremony and maybe goes on to study something afterwards. That is not the question. But for me, what is more valuable is that she has learned something in life: creating (working) and not "Daddy, I need money, I have to go to the next school." #00:38:53-8#

B: Cristian Moro: That's so in-company coach 1. And at the moment I am writing a manual. The basic idea behind it is that other people can also do something with the new method. We're going to do a kind of introductory day and then interested people and people who are interested. The book will not be "thick". 50 to 60 pages with testimonials from you. A page where people can find what you find fascinating about the new method and so that other Landi employees can see you and say: "In-company coach 1 is also a Landi employee". At the moment, more and more people are interested in the new method. They then go to Nadine Larsson ..that will already take dimensions, because you realise that it is a way where you can do "something good". Of course we won't be able to benefit immediately and the next day ..with this new method..but we will benefit. #00:40:16-3#

...Administrative notes follow. #00:40:16-3#

I: In-company coach 1: It's exactly the cool thing about it. And it's very important that you stay on it as Cristian Moro. A lot is done ... and then somehow it gets lost. It's important that you keep at it, because they only come out of the apprenticeship after three years. Because then they say: "Good ... it was a good year". No, the system has to establish itself ..and not only with us ..also with the apprentices. We want them to say. "Yeah, that was cool". The learners should make the cross-comparison with the learners who didn't learn that way and then see the added value. I have an example from last week. The learner from the third year, who is not learning according to the new system, came to me last week and said: "Hey, I have a question from school". She then told me that they had had a problem in class ... and all the other learners are afraid of upsetting their own vocational trainer. The apprentice at the Landi replied: "I will ask my teacher"...and now she is asking me the question. It is interesting for me: "On the one hand you have the feeling that I am strict with the learners and on the other hand they are sitting in class and nobody has the feeling to ask their own vocational trainer". No, even "You ask your vocational trainer". Everyone else said: "Ask your boss". I'm happy about that, because that's part of my world of values: "Have confidence in the young person and let them run". Of course, it may "come across stern" to the learners. But I think: "They want it too". #00:41:47-8#

B: Cristian Moro: You know, in-company coach 1, I call it the "Conchita Wurst syndrome" at the moment. Young people no longer know what they are allowed or not allowed to do these days. They have the feeling that everything is allowed in the working world. It isn't. That's why when they suddenly find clear structures and a person who deals with them fairly, works with them clearly and openly. Transparent

and comprehensible ...they eat out of your hand. As I said, I also have this experience in the military. People then say to me: "Do you know what is nice when we work with you?" To which I say... "No". They then answer ... "That you are predictable". And I think I am predictable because I work in a structured way...I am also strict...and also a role model. I stay with and with you and lead by example. If something is not right, I say so too. As it is with you I am also predictable ..I told you I would be with you at 14:00 ...and so I am with you at 14:00. The young people have to experience this again: we are strict ...but we are there and we are fair. That is, not working until Sunday evening or something.... We will work together. I am aware that Nadine Larsson has chosen you specifically. It is already clear to me, if I can say it directly, that you are "the best" and "the most motivated" among the vocational trainers. This helps me a lot because I get great qualitative input. Not only qualitatively but also quantitatively. And above all ... if we are all convinced ... and we 6 are all convinced, then we have a chance. Because if we are not convinced of the cause, then we don't have to spend the time. I need "doers" like you, who have a "visionary thinking", who don't "stay" in their position and just have the "feeling" that you can do everything. This amazed me so much when I was with Philipp in Küssnacht am Rigi ...he said to me: "You know Cristian, at the beginning of the project I was almost irritated ...and disturbed ...because I have just finished my apprenticeship and now you come along with a method and I ask myself if everything I have done in my apprenticeship is no longer worth anything". And I said to him: "You know, Philip, it's crazy..." that you think like that only after 3 years after completing your apprenticeship... instead of saying: "You know what, everything is developing ... and now there is a new method". In the workshop in August 2017 we will have time and see where we are. Nadine Larsson, Head of Training Landi Schweiz AG, will also be there. #00:44:02-8#

I: The following is information related to administration. #00:44:02-7#

B: In-company coach 1: I have the feeling, at best, a challenge is to reach the boss "at our level". Because I have the feeling that certain bosses see themselves as kings and are also "small-minded". I am lucky to have a boss who gives me freedom because he trusts me. He also sees the profit we have ...even at Landi Schweiz AG level, because I also have various functions. I take exams, I am involved in various committees. That will not be the case with all bosses. Andreas Althaus is a good one to have as managing director. It's important that we all stay involved and don't "talk down" to everyone #00:45:31-6#

I: Cristian Moro: I want us to act as one. The way I feel you guys. Opportunities and dangers are there. All news takes opportunities and dangers with it. I have learned in life to always pay attention and focus on the opportunities. The dangers interest me very little. Otherwise you can wait in bed at home for death. I also strongly feel the urge to change something. And I want to do it now. One day I don't want to be at the regulars' table and say: "I would / I do". When I retire, I won't be able to change anything. But I can now ... And I want to. #00:46:09-6#

Thank you very much dear in-company coach 1!

1. How did you feel when you started the project "Discovering Learning"? #00:00:00-

0#

I: In-company coach 2: So you mean from August 2016, or before with you? #00:00:24-5#

B: Cristian Moro: So right from the beginning when you heard about the project "Discovering Learning". What were your feelings? #00:00:30-0#

I: In-company coach 2: I was happy. I like to do new things. So also something different. So, I'm happy when I can work with the learner in such a way that he has to work his way out himself and thus becomes "big". Because I don't want to just dictate that you have to do this and that. So the whole project suits me extremely well. However, I think somehow I'm already trying to do it that way. #00:00:58-7#

B: Cristian Moro: In that case, did you have positive feelings towards the project? No fears? #00:00:59-0#

I: In-company coach 2: No. #00:01:03-2#

2: How did you specifically start in the Landi shop after you received the information (Kich-off session)? #00:01:17-5#

I: In-company coach 2: In June 2016 we had a meeting / an event with the employees. At this event I informed them directly how the project was going and then we started in August 2016. In mid-August 2016, we used the methods for the first time in designing a point of sale. It was about woodworking tools and then we applied the methods like that until today. I would say to date we have applied the methods to 6 - 7 major projects. It is not always so easy for me to choose for which work I can apply the method and which with the method. "Demonstrate - participate - imitate". I still have to find that out myself as a vocational trainer. Often it was about sales points that I designed, or had the apprentice design. #00:02:11-7#

B: Cristian Moro: We'll come back to this point Roger, to discuss which jobs agree or disagree with the new method. #00:02:20-6#

3: How did you feel about the proposed/prescribed structures "IAZPERKA"? More as a restriction or support in everyday life? #00:02:33-8#

I: In-company coach 2: I find it like a guide. I can give it to the learner 1:1 and say: "Now please make a sales point" and he can then fill it out like that. He doesn't forget a single step. Whether or not every field on the form has to be filled in, that is perhaps rarely the case. But 60% to 70% of the fields are filled in. #00:03:03-1#

B: Cristian Moro: So do you experience the IAZPERKA method and the form more as support? #00:03:03-0#

I: In-company coach 2: Definitely, yes. #00:03:08-0#

Have you noticed/seen any changes because of the use of the new method compared to the "traditional" method?   #00:03:25-3#

I: In-company coach 2: Well, I personally give more time at the learner. So, he gives me the time he needs to plan. That is, I restrict him less. And in that sense we give him, my staff in the green area, area managers and shop managers, job representatives, so all the people who "carry" the learner, give him the same hand and use the same methods. So we all speak the same language and have the same lineage. That has certainly changed for the better.

B: Cristian Moro: hhhmm #00:04:14-6#

I: In-company coach 2: And the reflection at the end is also looked at better. You consciously take time for it. Before - before the introduction - I didn't do this step at all or rarely. If I had time for it, I mentioned it briefly, otherwise not. I also deliberately suppressed it. Now I make time for it. #00:04:28-1#

5.   How did the learner react to the method where you started? #00:04:45-8#

I: In-company coach 2: So basically it has been received positively. He even enjoys it because he realises that we give him work and trust him. He takes pleasure in it. You can see it in the expression on his face. What I have noticed is that he asks less questions back. I think that if we train with these new methods, he should ask more in the beginning. However, he is someone like now in school with the grades, he just does and doesn't ask. I don't know if he doesn't dare. I don't know. In any case, he asks far too little. I think he should ask more. He somehow does something and in the end realises that maybe it would have been better differently. He does realise when he's in the implementation that he's planned something wrong, but goes on instead of asking. #00:05:37-5#

B: Cristian Moro: Did you report these observations back to him? I mean, did you tell him that even in the implementation he can change his mind if he realises that he is not making progress. Of course he also learns from his mistakes, but I mean - it would be original - if he didn't always make the same mistakes. He should notice himself in the process and ask himself: "Eh, why don't I change this". Have you reported this back to him? #00:05:56-9#

I: In-company coach 2: Yes, I told him to ask more questions and that he is allowed to ask questions. But every time it is different. It is still difficult. But I definitely want to work with him on asking more questions. But at the moment I do it by gut feeling when I feel, "Now he needs more help from me." #00:06:11-7#

6) When you think about your introduction in Wangen bei Olten, where did you feel that I felt safe?   #00:06:38-1#

I: In-company coach 2: So you mean in relation to the whole project? #00:06:47-8#

B: Cristian Moro: Yes, exactly Roger. I mean the whole project, where you got to

know the whole method for the first time. On different levels: you as a person, you as a vocational trainer, you as a former apprentice. Where did you have the feeling: "Yes, now I have a good feeling?" #00:07:08-0#

I: In-company coach 2: As I said, I never see big problems, because I look forward to the "new". Moreover, I accept the new very gladly. From that point of view ... #00:07:13-8#

B: Cristian Moro: In that case there was not something special where you said ... is something positive. #00:07:21-2#

I: In-company coach 2: Yes, of course it was positive in that I received the confirmation that I can let the learner do more on his own and therefore I have to give him less. So all that remains with me is the guidance. That suits me very well. That is the first thing I saw as an opportunity in the project. I said, "Cool. That's it!". #00:07:38-5#

7) When you think back to your introduction in Wangen bei Olten, where did you feel, do I feel less safe or even unsafe? #00:08:04-5#

I: In-company coach 2: The only problem I saw was with the staff. I was afraid of them actively noticing and participating. I was probably far too afraid of that. Because in the end we are 3 people in the whole, who hand over complex work to the learner. So, guiding him like that with the new method. #00:08:23-9#

B: Cristian Moro: And the employees move in the same direction? #00:08:26-1#

I: In-company coach 2: Yes definitely. #00:08:27-9#

B: Cristian Moro: Has it gone down well with them? #00:08:27-9#

I: In-company coach 2: Yes, definitely. #00:08:30-9#

B: Cristian Moro: Perfect, then you're all pulling in the same direction. #00:08:33-5#

8.   What opportunities do you see in the "discovery learning" method? For Landi, for the vocational trainers, for the learners? What would you say - almost like at a promotional event, after the first months? #00:09:10-7#

I: In-company coach 2: First of all, I see the advantage that the training is looked at differently. That the learner is no longer guided so closely. As a result, new ideas and new impulses come from the learner. That was the case, for example, with the Easter campaign. I would never have imagined that he could do something like that. But it was quite simply ingenious. #00:09:39-6#

B: Cristian Moro: Did he do it independently? #00:09:39-6#

I: In-company coach 2: Yes, himself. #00:09:39-6#

B: Cristian Moro: Can you please show me? #00:09:39-9#

I: In-company coach 2: Yes. It was just great. If I had done it the usual way and said: "Look, it's Easter, do this, this, this and this you can still use" because it would have come out differently for sure. He came up with new ideas himself that are simply cool. The result is more open. ...and what are the other advantages? ... The learner has to defend himself - in that sense. And switch on the brain himself. That is certainly a huge advantage. When I look at the other learners, I see the difference. They simply wait until something comes from me. He, on the other hand, has to become active himself, create something. What you notice very well is that he can occupy himself very well. If he doesn't have any work at the moment, he comes forward or actively looks for work. For example, he thinks: "I have to put new labels in the racks now". It just comes up itself. With the other apprentices, on the other hand, I have to say. That's a huge advantage. #00:10:35-8#

B: Cristian Moro: So you see the proactivity of him? When you compare the other learners. ... this would be the very next question. #00:10:40-5#

9: Did you notice or observe any changes in the team? #00:10:44-0#

I: In-company coach 2: Yes, I see - as I said - positive changes. They are more active ... than the existing learners (who were / are not instructed with the new methods). #00:10:57-0#

B: Cristian Moro: How do the other learners react, if I may ask you? #00:10:57-0#

I: In-company coach 2: Not in any negative way or anything. They don't feel disturbed by the new method (laughs). #00:11:07-1#

B: Cristian Moro: But they notice that something is different with them. #00:11:09-9#

I: In-company coach 2: Of course they do. The learner in the third year of apprenticeship is fully occupied with the final exams. So he is satisfied if nothing new comes along or in between. #00:11:22-6#

10: Do you see any risks in using the new method "discovery learning"? What to do for or against it? #00:11:44-2#

B: In-company coach 2: The only risk I see is that you don't spend as much time with the learner. So he feels free, but because of the reduced contact, you don't feel certain things immediately, such as possible mistakes. That is perhaps the dangerous thing about it. #00:12:05-5#

I: Cristian Moro: What could you do about it Roger, you as a professional, what would you recommend? #00:12:05-6#

B: In-company coach 2: I would go on gut feeling and observe more and not only delegate the work and go away, but "observe" more how it develops. And align the observations with the gut feeling. #00:12:28-6#

I: Cristian Moro: I'm adding that to the sheet right now. #00:12:28-6#

What else would you like to say? About the whole? About the project, detached. #00:12:43-8#

B: In-company coach 2: To continue by all means. I think the method is great and I don't want to stop under any circumstances or say "this is completely foreign". It's actually fun, also with you Cristian and also with the others. Working with the learners is also different: more relaxed. I think it's great to be more relaxed in everyday work. We must continue to work like this. #00:13:28-2#

I: Cristian Moro: Perfect Roger. I can only confirm that. Also the communication with you guys is just great. Also with the newsletters, with which I don't want to "fill you up" with communication, but show that I am also on the way with the project ... and my gifts to you are pure appreciation and to say thank you. I also want to show you that you are in my thoughts. They are short moments where I can show that I am there for you as you are there for me. They come from the heart as a thank you. #00:13:57-2#

1. How did you feel when you started the project "Discovering Learning"? #00:00:22-4#

I: In-company coach 4: In the beginning it was like this, when I heard about it for the first time, I had quite a lot of questions. I asked myself a lot of questions and the first thoughts were ... somehow there is something wrong with the current education system. That was the very first thought. And then I also started to ask myself what it could be, because I learned according to the same principle - in a different branch, but according to the same principle. So the thing about imitating, doing it yourself ... and yes, learning that way. And of course I asked myself if the way I learned was not the better way. The project caused me insecurity at the beginning. That made me relatively skeptical at the beginning. I made that clear, but my superiors disagreed and said: "Yes, that's great. We simply have to support it if at all possible. After the first information event with you, the situation was just the other way round. I was then completely enthusiastic and the people here on site had to slow me down from time to time and often had the wish to approach everything slowly and let it work and clarify how it would be received. It was / is a relatively quick process. Based on the dossier and information you gave me, I said ... yes, it's true and if you list it, it should be obvious to everyone and we vocational trainers should know it too. But nothing has happened yet. #00:01:50-9#

B: Cristian Moro: Where did you have thanks? You just said that you had concerns when you heard about the project. You were even sceptical. Do you remember that? #00:01:56-7#

I: In-company coach 4: Yes, it almost went to my honour, because compared to the other project members, not so long ago I finished my apprenticeship. I mean, I learned 1:1 like this: demonstrate - participate - imitate. In a craft trade, where I learnt, it is perhaps even more obvious that you have to show the work. I almost felt like I was being attacked in some way, because I learned it the old way, completed the apprenticeship well and then you come and say, I think...it won't last as long. Then one is already like a bit ... not offended, but somehow you also have to start doubting a bit and ask yourself: "Wait a minute, could I have done my apprenticeship and learning years better with this method?". That's what I've come up against as a human being. #00:02:39-8#

B: Cristian Moro: Absolutely understandable In-company coach 4. That's why I asked you about it. #00:02:46-3#

2: How did you specifically start in the Landi shop after you received the information (Kich-off session)? #00:02:59-0#

I: In-company coach 4: I basically did a summary of the information provided by information you received. There were the core titles and one was your first presentation. I took from it what was and is crucial for me. And I have processed this essential content for myself. I function like this: when I write something and process it, it stays with me. If, on the other hand, I only hear something, then the memory value is so ... yes..yes. is quickly gone again. I then presented your information again to the managing director and the deputy managing director. I told them what it was about and carefully observed their reactions. I have to be honest, I tried to sell it somehow. Because for me, even then, after returning from the kick-off, it was already clear that I would like to participate and so my focus was already on getting the information across. #00:03:56-1#

B: Cristian Moro: How did they react? #00:03:58-8#

I: In-company coach 4: First of all, the managing director was and is fully behind the project. And the deputy manager, who is also the shop manager, because we only have one location in the Landi Küssnacht, had more reservations. However, I think it has to do with the fact that he is significantly older. He also used to do the apprentice

training until I came along. He was very successful with the old style. We have had very, very good apprentices up to now. Almost all ... ...with the exception of one person ...we have guided all of them to successful completion. All the learners also had great grades: 5 or above. And so he reacted almost as I did ...in pride ... furthermore, I would think that the basic attitude in the Fenaco Group or Landi AG in general is rather conservative. Thus also his question: "How should we be the first? We could let someone else be the first? Why should we take the lead?". #00:05:13-8#

B: Cristian Moro: Because you are there In-company coach 4. #00:05:14-9#

I: Philppe Werder: Yes, that's the way it is. #00:05:16-3#

B: Cristian Moro: That's exactly why you should be the first. #00:05:28-4#

I: In-company coach 4: That's the way it is with him ... I mean that's my opinion. They didn't communicate that openly to me, which was the problem at the beginning. But that is my feeling ... why he had a problem with the project. We talked about it countless times. Not always so intensively and then suddenly he also signalled ... "Eh, I think it could be something for us". And certainly one argument was your argument, where you told us that the time we invest in the beginning with the learner is higher ... then later it reduces and becomes less than with the traditional method. Because we are working in an economic environment and we should not disregard it in terms of training and training time. #00:05:58-5#

B: Cristian Moro: Yeah sure, absolutely. #00:05:58-5#

I: In-company coach 4: Because the quality of the training is one side, but the bottom line still has to be profitable. There were concerns that were in the room that the supervision would become more intensive in terms of the time demand. #00:06:13-0#

: Cristian Moro: That's why I always tell In-company coach 4 that at the introduction, at the beginning of the teaching - and that's also what we're checking with the project - it's really the case, according to theory, that there's a greater expenditure of time at the beginning. We have already established that, that is a greater effort. #00:06:23-0#

I: In-company coach 4: Yes exactly, that's the case. #00:06:23-1#

B: Crisitan Moro: And then it's really the case that when the learner develops, he becomes more efficient and therefore faster. I have received different feedback up to now, depending on who the learner is. In one shop the learner was downgraded to an "easier" apprenticeship because he was not so strong in school. But this is exactly why there are 5 outlets involved in the project. #00:06:42-5#

I: Philppe Werder: We had a similar situation with the apprentice daughter the year before last. We had to demote her. At that time we also had several conversations with her mother. Because her parents' home is not what it should be. Unfortunately, if only the mother comes to the discussion, it is difficult to exert pressure. Then the mother once said to me ... she would like her daughter to be a bit more independent and to realise what is at stake. That is exactly the approach of the "Discovering Learning" project. So I informed the whole team about it and said, if this still works, then we have the result the project is aiming for. So he was also on board as a sceptic. And now he supports the project with conviction. #00:07:38-5#

B: Cristian Moro: I think it's a good experience also for the parents. #00:07:45-2#

I: In-company coach 4: Yes, the advantage at the moment, with the learner where we use the new method "Discovering Learning", the father is also a vocational trainer and therefore has the responsibility for learners in the municipality. He works in the maintenance yard and is the manager of the maintenance yard. He does exactly the same thing there as I do, i.e. he looks after apprentices. When we talk to each other and exchange ideas, he sometimes says: "Yes, you know, if they would sometimes work more independently ..." or "If the apprentices would also think a bit". We at Landi Küssnacht have played with open cards from the beginning, because the apprentice notices sooner or later when he is in the company that something is different. Especially when he is in the process and compares himself with others. So we told him directly and openly from the beginning that we at Landi Küssnacht would do something different with him. That we will tackle something differently with him, but that he will be supported. From that point of view, I think he has optimal conditions with us and we have optimal conditions for the project. #00:08:29-5#

B: Cristian Moro: Wonderful, Philipp. I am now interested in how it was. I'm always a bit sceptical with these theories, because I'm also a doer. I come from an apprenticeship myself and from the world of apprenticeship. And that's why I'm always curious about your experiences. I always say that the difference between

theory and practice is always greater in practice than in theory. That's why I want to hear from you, from you. #00:08:53-0#3.

A: How did you feel about the proposed/preset structures "IAZPERKA"? #00:09:01-7#

I: In-company coach 4: I have to be honest, I'm not a fan of the forms. Especially not when it comes to the restrictions in the practical application in the shop. Of course it makes sense because the learners fill out something very similar for the learning documentation ... with recap and everything....but it interrupts, in my opinion, the process they should be learning. Speaks ... the idea at the end is that all the phases naturally run into each other and flow ... #00:09:39-8#

B: Cristian Moro: yes, that's right. #00:09:39-8#

I: In-company coach 4: ...and therefore a fluid transition in the different phases and steps. And I feel like with the form we kind of chop it off. So ... I mean ... Than it's far away from the practical work. It might be good and useful for the first time or the second time, but then as a vocational trainer I want to ... yes, I know, that's the perfect world ... that he comes to me, and then says the enzelen steps spontaneously and fresh from the liver. Then I realise he has learned that. Because when he takes out the sheet with the IAZPERKA every time, I have the feeling that his thoughts somehow change and then he is like in another world. I mean, then it's no longer realistic in the sense of practical. It's certainly different from person to person. If he has to solve exclusively the assignments like sheet, because studies partly much too far, than if you give him an assignment, briefly ... during the work, ...hey, could you do me still fast this and that ... then he falls again in the old method. I almost have the feeling that with the paper we are somehow promoting the old method. That's why we should get away from paper as soon as possible and reduce. ... And not write it down step by step. #00:11:01-6#

B: Cristian Moro: You know In-company coach 4 you are free. #00:11:01-6#

I: In-company coach 4: Sure, yeah. #00:11:02-9#

B: Cristian Moro: I don't want to force the form IAZPERKA on you. What for me are the thoughts behind the formullar, so that you see my ulterior motives, I want to simplify for you with the form the reflection and therefore the last step with the

learner. So that when you discuss the questions with him: "How did it go for you? / What would you do differently?". Because I am afraid that if there is nothing in writing, the learner will start to say: "No, I never said or claimed that". But the basic idea behind the form is not that they need half an hour to fill in the sheet, for a piece of work that takes 5 minutes. #00:11:34-2#

I: In-company coach 4: No, no. The time is the one aspect. You have to keep the learning documentation anyway. We also started with the project with works like the point of sale. Work that goes well together in order to implement the project and IAZPERKA well. The learners have to do more or less the same in the learning documentation. I am concerned that they take the information from IAZPERKA and then transfer it to the learning journal. So, the effort is there anyway and at some point...to record what is written down. That's not the big problem either. But it is somehow... I don't know ... we were brought up that way too. In maths lessons you don't learn how to write German, i.e. the maths teacher isn't interested in how you write, but how you calculate and where you make mistakes in vocational school. In German class you should be able to write without making mistakes. The idea, however, should be that legal writing comes into play as a whole, just as the thinking process is always the same in business. But this is so deeply ingrained in young people, I think because of education and school, that they have the feeling that legal writing is only important in German lessons and no one is interested in other subjects. The best thing for me would be a person who always writes correctly all the time. #00:12:40-3#

B: Cristian Moro: Yes, me too In-company coach 4. What is your suggestion then? To have the form gone? Is something you put on the side? #00:12:47-3#

I: In-company coach 4: Yes, we work with the form, but not so much. I want to ...do without the form as soon as possible. If that works ...but at the moment it's like when he does a task he works with the form again. But for me it's always like a played situation. I mean "played" is an exaggeration. It's just like ... #00:13:17-1#

B: Cristian Moro: An intermediate step? #00:13:17-0#

I: In-company coach 4: Yes ... I also behave differently. I notice that. From the pitch of my voice, or how I prepare myself for the form. That's honestly not the idea. That's not the basic idea, in my opinion. Because from my point of view, after the 3-year apprenticeship, it should be seamlessly integrated into the world of work. That's why it's difficult for me to say ... "Eh, now we're back to the leaf, now you're thinking about

it". The idea would be / is that he comes by himself at the end. I give him an order and then he automatically does the steps. #00:13:48-7#

B: Cristian Moro: Absolutely In-company coach 4, I'm with you with these thoughts. #00:13:51-7#

I: In-company coach 4: I have concerns that there is a lack of integration in everyday working life. Yes, of course, it might work for some learners, but not for others. #00:14:03-7#

B: Cristian Moro: It's not In-company coach 4's idea that he has to fill out the form in writing by the end of the third year. As I said, the form should be there to help you trainers to do a thorough and clean reflection and to ask the questions. If you don't have anything in your hands where he has produced, then you as a vocational trainer are stuck with him. #00:14:19-2#

I: In-company coach 4: Yes, that's clear. #00:14:19-2#

B: Cristian Moro: Yes starts and - as I said - he says. Oh no, I didn't say that. No, you misunderstood me there. No, I never thought that. If he uses the form, you can look at the different steps with him in a structured way. That's why the extra time is planned at the beginning of the teaching. But it is not the idea, as we discussed in the last workshop in October 2016, that the learner plans every work throughout the apprenticeship only with the IAZPERKA on the form. #00:14:41-0#

I: In-company coach 4: Yes, that's not possible either. #00:14:44-3#

B: Cristian Moro: It should be like driving. At some point you shift gears without thinking about it. #00:14:51-9#

I: In-company coach 4: Yes, that would be the goal. #00:14:51-9#

B: Cristian Moro: Yes In-company coach 4. That's my goal too. #00:14:51-8#

I: In-company coach 4: Where I see the biggest advantage, they are structured. I have the comparison now. We have just hired someone from Bueri of another LANDI. And there ... so I mean...also from a Landi company, #00:15:18-1#.

B: Cristian Moro: ...I was about to ask ... #00:15:18-1#

I: In-company coach 4: Yes, also from a Landi company. Landi Bueri. And the company is 10 kilometres away from us as the crow flies. Theoretically, the person should be trained. She comes to us and she can do as good as nothing. So... Product knowledge ...sometimes certain people have difficulties there or are hero subjects, others in other subjects or areas. That is not the problem. But independence, self-initiative ...simply zero. And that is horror. #00:15:48-6#

B: Cristian Moro: ...fresh from teaching? #00:15:48-6#

I: In-company coach 4: Two apprenticeships. She had to stop the first apprenticeship because of an allergy. After that she did an apprenticeship in sales. At the age of 21 to 22. Yes, fresh from the apprenticeship. The people we train are much more advanced. We already delegated whole tasks without the knowledge of the new method and the form. I think for this reason our training here in Küssnacht is already very close to the new system. Not so step by step. But the biggest step is ...how do you say it...? Self-reflection, which was not so important or practised to such an extent before the introduction. But the result and the approach is already very close to today's system. #00:16:41-0#

B: Cristian Moro: That's wonderful, In-company coach 4. Do you know for what reason the step "self-reflection" is there? If you comment on his result, you take all the valuable work away from him. Whereas if you confront him with open questions and ask: "What did you do well? What did you do less well?" and then he can discuss with you: "Yes, this and that went well, but this didn't". And afterwards you can continue to confront him with questions: "What could you do differently?" ...and then the learner is always in charge of thinking. I just want to make them self-acting, thinking, proactive units. Excuse the word "units". #00:17:13-3#

I: In-company coach 4: laughs. #00:17:13-3#

B: Cristian Moro: And you realise, In-company coach 4, you have somehow instinctively done right so far. And this fact supports me very much. Now you project

members get a system as a proposal In-company coach 4. We are not in the military here. It is a proposal and Nadine Larsson (Head of Training) has chosen you because you are innovative and proactive trainers. For this reason, I am quite happy that you are also part of it. As you can see, we have different people in the project group: in terms of age, in terms of experience. And you In-company coach 4, you own the world. You are the next generation to take over. That's why I'm also interested in hearing what young adults think about the project. But you realise that a lot of things are already going right for you when you have the experience of having apprentices who are so dependent. By the way, I hear this from many vocational trainers in other sectors. According to the motto: "You Cristian, they have a professional certificate, but you can't use them". #00:18:00-2#

I: In-company coach 4: Yes, that is so. #00:18:01-2#

B: Cristian Moro: ...and you know, not technically, just as a human being... #00:18:07-2#

I: In-company coach 4: Yes exactly. That's also what we noticed in connection with this person. If you tell her very precisely, then you should do that and when you're done with it, then you take out this material and then you put it away there...then it's okay. But that must not be the idea behind basic education. #00:18:20-7#

B: Cristian Moro: No, certainly not In-company coach 4. That's also the idea of discovery learning. We as a humanity are going towards new challenges where we don't know at the moment. To solve these challenges, there are no manuals. There will also be no one who can tell you what to do. And that is exactly why you should know how to help yourself with this method. This is the basic idea of Doctor Professor Brater, where he said, I am now developing a new method. The only thing I brought in is the IAZPERKA steps, so that we have a structure. Because otherwise both the vocational trainers and the learners would be a bit in or on the clouds. I also need structure to be able to work with you. I can't say, just try "discovery learning" and I won't give you any tools. ...and you make your own experiences with it. #00:18:59-3#

B: Cristian Moro: So In-company coach 4, concretely and directly asked, you notice the difference when you train them like this. #00:19:06-9#I: In-company coach 4: Yes, it is like that. You as a vocational trainer also study differently and think differently when you delegate the tasks. I think about it more. I also think about what makes sense to delegate with the new method and what makes less sense. In addition, I think about what information I want to disclose and what I deliberately

withhold. Or where do I leave it ... as dräcking as it sounds ... go full hammer in. But I think the most beautiful thing is that the training is more conscious. That is certainly also a big step in terms of quality in relation to the vocational trainer. It doesn't matter whether he was good or bad, with the new method we make the quality of training more conscious. It adds value to the whole quality of training. #00:19:59-6#

B: Cristian Moro: In-company coach 4, as preliminary information, I spoke with Nadine Larsson (head of training) and in December 2017 we have the vocational trainers' conference in Sursse. We would like to present you there. Yes...and ... #00:20:08-4#

I: In-company coach 4: Yes, that was already mentioned briefly last time. #00:20:08-4#

B: Cristian Moro: ..and statements like "I train more consciously" are great and valuable statements from my point of view. Moreover, statements that come from you ... we will also prepare the conference together ... and what should we tell there. But what is interesting for me at this point in time .... Is the next question. #00:20:27-6#

4. did you notice/see any changes because of the application of the new method compared to the "traditional" method? Has already been answered.

5. how did the learner react to the method where you started? #00:20:29-8#

I: In-company coach 4: The learner didn't react much to it, because he doesn't know anything different. We implemented it like that from the beginning (the new method). We told him: "Hey, don't be scared, there is a form. You can't ask the other learners because they don't know the method" ... because they talk to each other anyway, sometimes exclusively about free time, but often also about work. Not that the learner has the feeling ... he wants to take the piss out of me now ... or something. I told him it was a project, so we don't have any secrets from him, he knows that something is different with him, he also knows that he is challenged a bit more by the new project, that we are nevertheless available to him in exactly the same way if there is something. He knows that when he goes to the final exams, there will be no disadvantages ... he also knows that. The parents know that too, by the way. But otherwise no big trouble. It was difficult at the beginning... He didn't dare to invest so much time in planning and filling out the IAZPERKA sheet. He was also not supported by the other staff members. It took a few conversations with the other staff

to explain why he was sitting somewhere in the camp and somehow filling out a paper. Because we didn't inform everyone at the beginning. We didn't want it to be a topic of conversation. Because not so many employees involved in the apprentices' training have been interested in it until now. And suddenly it starts ... and the employees have the feeling that he is sitting somewhere ...and for us in sales the feeling immediately comes up ...sitting means he is not working. He's just sitting ...(and laughs). That just gives with us. #00:22:10-5#

B: Cristian Moro: Yes...that's a buralist. #00:22:10-5#

I: In-company coach 4: That is still so firmly anchored in our minds. It took quite a bit of convincing, and it still needs convincing now, especially with regard to his staff or ours. But with him, since he knows that he can take his time, that he can also take his time this week, when we had a lot of stress, I simply told him: "Look, you have to have the work done by the end of the week". The deadline is set for him ...how much time he wants to invest in it, that he can write down himself, that you can also take during working hours in the company. And please take your time and if there are problems with the time allocation, that someone says something and doesn't agree with it, then he should come and discuss it directly with me. But I want you to be aware: You may take the time you need ...even if it is two days. This understanding simply has to be there. Only when everyone knows, then it works. With himself, actually, the understanding and acceptance was there the quickest. #00:23:14-7#

B: Cristian Moro: And with the rest of the staff, In-company coach 4, you need to convince them. #00:23:17-0#

I: In-company coach 4: Yes, exactly. There are certain employees...who said: one of them will retire in a month...and he said: "That's not possible...we used to do it differently... 50 years ago, as an apprentice, you had to mop the room all day". But that's the claim that he also understands all of that, because he hasn't had much else to do with the training either. Even if they don't have much else to do with the training. It's not meant to be judgmental or in a negative sense, he's like that as a person...otherwise we actually have it great together.... but he has learned that he doesn't always have to give his opinion. He has also learned that he shouldn't give a slanted view to other people. Otherwise, it is also accepted as a method by all the other staff members. It's clear that when it's so stressful and I take out the learner in this situation of all situations, hey ...you can't care what stress the other staff members have, look for yourself ...in this situation there's certainly always someone who talks about it ..but I think that's also normal. #00:24:15-8#

B: Cristian Moro: I am also looking forward to the workshop in August 2017. We will then look at the whole thing together. You will receive the invitation at the appropriate time. We will do the DISG model for the learners, what are the learners' learning types. There is an additional test for this. You will also fill out the test yourself and may also do this text in the companies to see what type they are. From this we can deduce what information our learners need in order to learn well. I would like to give you more information about this. But for me, the best thing is to hear, as thoughtful as you are with the new method. #00:24:51-4#

6. thinking about your introduction in Wangen bei Olten, where did you feel, there I feel safe? #00:24:54-5#

I: In-company coach 4: In principle, there was no situation where I had the feeling ...I feel insecure. It was more like ... a certain uncertainty about how it would be received. But ... or how do we put it into practice, especially if there are employees who say ... "Eh, what you're doing, don't ruin it". But the information about what it's all about has been clear to me in principle. #00:25:29-6#

B: Cristian Moro: Wonderful. It's just about what I should improve from my side. Because my point is, if you are satisfied and enthusiastic about the project, then we can roll it out to the whole Landi AG. #00:25:50-9#

I: In-company coach 4: I can imagine ... there is a lot of need to talk about this project, because Nadine Larsson (Head of Training) has chosen the people for the project where she has the feeling that they are open to new things. However, in the Landi world there are also very different vocational trainers. I mean I can see when I want to change something. What I said before ... the conservative attitude, that is already enormously widespread in the Landi. #00:26:23-0#

B: Cristian Moro: In-company coach 4, may I reassure you? In Switzerland we have a very conservative attitude to some extent. We also see it in different behaviours. For this reason, I am always happy, first of all, that I am allowed to work with you, because at no time did I feel or get the feeling that you 5 were not there. Secondly, you are the pioneers and you know how it is. If you are pioneers ... in all aspects ...you always have to expect resistance. #00:26:42-3#

I: In-company coach 4: Yes, that's clear. #00:26:45-4#

B: Cristian Moro: Yes...and because of that I say Nadine Larsson (Head of Training) wants to roll out the project to the whole Landi, but also not militarily, where she says: "From now on there is nothing else". #00:26:50-2#

I: In-company coach 4: Yes of course, I don't think that works for us at the Landi either. #00:26:54-4#

B: Cristian Moro: I think it's more of an offer. That everybody can go along. And you know how it is mostly in the end. In the end everybody moves up. #00:27:03-5#

I: In-company coach 4: So I was at school with one person. She now works at Landi Pilatus and she has just been appointed as a vocational trainer. She is also very enthusiastic about the new method. She has also already asked if she can be part of it. I told her that we are a closed group at the moment. #00:27:17-7#

B: Cristian Moro: Have you reported the interest of this vocational trainer back to Nadine Larsson (head of training)? #00:27:20-3#

I: In-company coach 4: I think she contacted Nadine Larsson herself. She is also doing the training at the moment. #00:27:24-8#

B: Cristian Moro: Ok In-company coach 4. Otherwise you say it. I could pass it on to Nadine Larsson. Because now Coop has also gone to Nadine Larsson, because they want to turn the whole training around and I once had the head of the whole training of Coop in a training and she then asked me what was going on with "discovery learning". She then asked why you didn't do it with Coop? I replied that I wanted to do it with the Landi. She was a bit offended, because Coop is much bigger. I feel much better with Landi. We are the same kind of people. I'm a doer and a simple person. ...the following is a description of the Coop. #00:28:17-4#

7. when you think back to your introduction in Wangen bei Olten, where did you feel, do I feel less safe or even unsafe? #00:28:17-4# This question was already answered in question 6. #00:28:17-3#

8) What opportunities do you see in the method "discovery learning"? For Landi, for the trainers, for the learners #00:28:34-5#

I: In-company coach 4: Well..primarily for us ..at our location or so...that when we employ other people, I mean from other Landi, that we take on people who can be used immediately. Because we notice how it is. We have one person in the department, she is 50 and she didn't do her apprenticeship with us. So self-initiative, not judging, but self-initiative is not her strong point. So one chance is that the apprentices who leave our companies, they are reliable and show self-initiative. So they are valuable employees, not only for our company, but also for the others. Moreover, I think the apprentices will stay with us after their apprenticeship. The value of the apprentices themselves will increase. Furthermore, what I hope but am not sure if it will happen, is the reputation of the detail trade in general. Because there are certain people, it's just the way it is, I've already experienced it with colleagues, if you weren't good at school, if you're no good as a craftsman (otherwise you'd do bricklaying or painting), if all that is nothing, then you go into the retail trade. If you had been a bit better ... you would have done a commercial apprenticeship. I know, Cristian, you did a commercial apprenticeship. I don't want to attack you. #00:30:07-5#

B: Cristian Moro: I have to laugh. Because I've always heard, "If you don't become a businessman, you become an innkeeper". That's why I think ..it's also very exciting that there is something like that in retail. #00:30:13-6# #00:30:13-6#

I: In-company coach 4: This is followed by a conversation about the position of the retail trade in Switzerland. #00:31:22-5#

B: I: In-company coach 4: Another chance is that the learner is worth more. That he also has this added value in his private life. But also that the whole education is upgraded. This is where I see the big opportunity. #00:31:42-6#

I: Cristian Moro: My basic idea with "Discovery Learning" is that you could be in front, not me. I want to appear as little as possible anyway. You have experienced me as a coach, of course, but I am otherwise more of a person who likes to be and stay in the rear and give support from behind. You 5 are the most credible ambassadors. I also want a change. And I firmly believe in this method and that's why I want to show that it will be the future, across all sectors. If I start with the retail sector now, it is because it is the closest to me. I have the feeling that I know it pretty well. Secondly, I also see the multiplier effect. No one can then come and say ...that doesn't work for us. If it works here in the retail trade, where we have so many interfaces, it can also work in a hospital, in a workshop, etc. where I have less expertise. And you can also speak of your experiences, as a sceptic. There are always those. #00:32:41-4#

B: In-company coach 4: Yes exactly. There is also another chance. If the job would have a better reputation, if we are already there, I think ...we can also inspire the more capable young people for an apprenticeship. #00:32:58-9#

I: Cristian Moro: that's the idea. That you can put them on and be talking to each other like, "You know what, you have to come to the Landi. Because it's cool." So also your learner can become a multiplier. #00:33:07-2#

B: In-company coach 4: definitely, yes. #00:33:07-2#

Have you noticed or been able to observe changes in relation to the learners? #00:33:22-8#

B: In-company coach 4: no, I don't see anything yet, because he doesn't know anything different either. So we have the problem with him that he has internalised the school red. Sometimes you would like to take him and shake him because you just come in the morning and you see the lack of body tension ...because of his body size the whole thing multiplies. Sometimes you feel that he is not so enthusiastic about something, but you do it ...not badly, but you don't do it very well either ..... It is fulfilled ...but you still see the potential. That's what I still see as potential for improvement. But we can't compare it because we don't know him any differently. The two to three days sniff each person is excited. What will be interesting is that we will get a learner in summer 2017. He is rather worse at school than the current one, which would give us the opportunity to compare, then we would see better if he is more independent. But I'm never a fan of comparisons, because at the Landi we always have to have a lot of conversations. Somehow I have the feeling that this is not fair. Nor should it be the starting point to compare people. What you can compare is expertise, you should even compare that and say: "The other person can do more, you should make an effort". Otherwise, however, behaviour or appearance, that is always difficult to compare. That's why I can't say at all whether a person has made progress and if so, what kind of progress. He started at a more advanced level in terms of appearance compared to those we trained before, but the students we had before were somehow still schoolgirls. But even with the apprentice daughter who has just been demoted, I have seen enormous progress in terms of behaviour. I don't know if you can improve that even more with the new method, in terms of character and appearance. I mean, if everyone would make the same progress, then I would be happy. Then I wouldn't have to have anything positive from the project, then we would be at a good level. That the whole thing would become superfluous. However, it is a bit premature to talk about success already today.

10) Do you see any risks in using the new method of "discovery learning"? What to do for or against it? #00:36:44-8#

I: In-company coach 4: Yes, I see risks depending on the learner. Depending on how good he is or how he can cope with being left "alone". So ..I mean in theory we don't leave him alone, but we let him do it. It's a huge break with what he's been through at school so far. They've had everything chewed out for 9 years. In foreign language classes, even every word is recited and you have to repeat them...You have certain formula books and you hear from the teacher which 5 formula you have to learn by heart. That what do with him now, that's a huge break with the traditional school system. #00:37:27-4#

B Cristian Moro: Yes, it is like that. #00:37:27-4#

I: In-company coach 4: And if a learner then finds the change between school and work life stressful, I have the feeling that if you use the new method too much, it could lead to a problem and he will completely hang out. I don't know if it's only a negative thing that he's off, but I prefer him to be off right away. I prefer that he hangs out right at the beginning, neither after two years and says ...hey...that can't be for me. But the risk is perhaps there that you can overtax someone. It certainly needs more feeling, also from the trainer. Maybe also a bit more closeness ...that can already happen, I have the feeling. #00:38:13-2#

11. what else would you like to say? #00:38:21-9#

I: In-company coach 4: I am proud that we can participate. I also think it's great that Nadine Larsson recognises all that we have done in VET so far. I think it's great that we can build on what we have achieved. I think it's great that we can be pioneers, because all we ever do is "complain" and say "we have bad employees in the detail trade" or wherever, in the Landi world or I don't know what ... can't be honest either. You make it far too easy for yourself. If you try at least one thing and then at the end you can say, "Oh, that didn't work out".... , then it looks different again. But at the moment we demand so much that people are willing to invest something. For myself, the whole training process has become more conscious. I no longer say ...yes, yes, that's how it's been for the last 3 to 4 years and we'll keep doing it. You always think about which assignments are given and how ... and you also do them as professional images and play them through in your head. I have to admit that. What I did before, I didn't mean any harm. I just did it that way and it kind of worked out. But I have become more conscious in my training and in my role. What I find cool ..is that with

the IAZPERKA ..which we learned in detail. Because the whole training in all subjects is based on it, except accounting. If the learners already have this down pat, then it works. They already know what they are dealing with. I didn't know it when I did my basic training. But I am also sure that very few people are aware of the meaning of this abbreviation and its importance for later life. #00:40:40-7#

B: Cristian Moro: That was also my basic idea In-company coach 4. That I come with a well-known abbreviation: IAZPERKA. #00:40:53-7#

B: Cristian Moro: and the collaboration with me? Are you satisfied In-company coach 4? Are you getting the support? #00:40:55-1#

I: In-company coach 4: I'm more the type who likes to come when he has questions. When you say, "You have a big database of information on stuff, be it Dropbox ... it doesn't really matter" ... where I can access it if I want to. That would be more of a hindrance in my case. Thank God that's not the case with us, with you in this project. Because it would extremely hinder the day-to-day business ... and somehow also reduce the motivation. I think it's good the way we have it at the moment. We have something, we can access it when we need something. But you're not forced ... you can look at it again in a free minute if you need it. But I think it's good that you're not constantly bombarded with information, because you get way too much information already. #00:42:11-0#

B: Cristian Moro: I can imagine it In-company coach 4. That's why I also wanted to ask in terms of intensity. #00:42:24-3#

I: In-company coach 4: I would like it every month or maximum 6 weeks interval. So the whole project becomes even more conscious. So that it doesn't get forgotten in all the stress. When the newsletter comes, even if it always says the same thing, then for me it means ...Hello ..remember. #00:42:46-4#

B: Cristian Moro: Perfect. I'll have a look at it.

1.   How did you feel when you started the project "Active Learning"? #00:00:27-1#

I: In-company coach 3: At first, when I didn't know what it was about, I thought to myself: "That's a hell of a risk". Then, however, as I learned more about it, I got more and more the feeling: "No, that's not such a huge thing, it will be easy to incorporate into everyday life". I mean easy to implement and easy enough to incorporate into

everyday life. I am very positive and excited, because I would like to pass it on to the learners in this way, and that is that they have to think for themselves.

#00:00:56-9#

2.   How did you start in the Landi shop after you received the information (Kich-off session)? Do you remember how you started?   #00:01:13-5#

I: In-company coach 3: Well, first I studied the documents carefully. I got the whole team together and informed them so that they all knew what was involved. Then I started to work with your documents, looked carefully at what was on them and what was in them. On top of that, I also made an example with the learner and then we started the project here at the site. I mean...step by step. Every now and then I had the feeling that it could be done even faster, but it always takes time for everyone to really "get going". In addition, I had to make sure that the person in charge (who supervises the learners) was also ready. Yes, I still remember that very well. Yes, exactly. I informed everyone about it and then we started. We showed the learner what he had to do.

#00:02:15-1#

3.   How did you feel about the proposed/preset structures "IAZPERKA"?   I mean, the given structure was printed by me. How do you find this structure? #00:02:24-5#

I: Hhhm, somehow the points were not so new to me. It's more like a logical process for me, where I think - somehow - you always do it. Maybe not so consciously and not so completely. Also not that one passed on the orders like that. I think when you used to pass on the orders, you gave far too much information. It would have been helpful if one had "kept one's mouth shut" and not always had the feeling: "I want to give them some good advice". But otherwise I found my way around very quickly. So ... yes...

#00:03:19-2#

4.   You have just taken over the position as "responsible for the learners", but you have been in sales for a long time. Have you noticed/seen any changes because of the application of the new method compared to the "traditional" method? #00:03:33-1#

I: In-company coach 3: Hhmm, that's difficult to say now. I don't think it's quite so strikingly different. But when you talk more and more with the students in this way, you notice that they know the structure and the processes. But it doesn't seem as if anything is totally different. #00:04:01-3#

B: Cristian Moro: Neither positive nor negative, dear in-company coach 3? #00:04:01-3#

I: In-company coach 3: Schon im Positiv ja. Ich denke, es kommt auch immer auf den Lerndenden darauf. Der jetzige Lernende bei uns ist sicherlich einen, den man

noch besser folgen muss. Wenn man nichts sagt ..dann ist er eher ruhig. Aber die Tatsache, dass keine Veränderungen sichtbar sind, ist für mich im positiven Sinn gemeint. #00:04:27-9#

B: Cristian Moro: My question is simply to find out how the new method is received. Because for the learner, the method is new either way. But because he doesn't know any other method, he can't compare. This is exactly why I depend on people who can give me input from the other sides. #00:04:46-5#

5.   How did the learner react to the method where you started? #00:04:54-8#

I: In-company coach 3: It was ok for him. In any case, he had no idea what we usually do in the shop. It was new to him, but I think he didn't care in the sense that he went along with it. He also had no preconceptions about how we "should" do it or how we interact with the other learners or how we usually do it. He was positive in any case and for him it didn't matter.. #00:05:22-7#

B: Cristian Moro: Nothing in that case. You didn't feel there were moments where he said, "What is this?" or "What is this chicanery?" #00:05:26-8#

I: In-company coach 3: No, not at all. He accepted it as quite natural. He was positive and he also said: "Yeah, sure, no problem". #00:05:30-1#

B: Cristian Moro: great. #00:05:35-6#

I: In-company coach 3: He was even pleased at the time that so much trust was placed in him. That was the positive effect for me. Somehow being allowed to watch the reaction: "Aha ... yes...I have to think about it myself, but I am allowed to think about it myself". That is the positive effect that I felt and observed with him. #00:05:58-5#

B: Cristian Moro: Perfect, dear in-company coach 3. And did you tell him back in the same way? That it is a joy to see him and to observe him like this. Does he know that? #00:06:05-5#

I: In-company coach 3: yes, if he thinks like that ... yes...we have geared a lot of work specifically to IAZPERKA. Then we have already given him the feedback: "You, yes, that's super ..." or "Eh great, you can do that yourself". In that sense, yes. #00:06:23-0#

6.   When you think about your introduction in Wangen bei Olten, where did you feel safe? #00:06:34-2#

B: In-company coach 3: so from the IAZPERKA steps or what do you mean? #00:06:36-9#

I: Cristian Moro: in general. In the whole project, including IAZPERKA, new role that comes to you, the behaviour. #00:06:49-1#

B: In-company coach 3: At the beginning I felt rather insecure. #00:06:56-0#

I: Cristian Moro: You can put all your impressions in your answer. #00:06:56-0#

B: Kahtrin Wieldhaber: I was unsure, because I didn't know how I wanted to implement it. And at the same time, I had the feeling that it wasn't so new. So, I felt very confident in this area. And somehow I was inspired by a feeling that ... Yes, I can implement that. I didn't know how the reactions would turn out in practical implementation. But the idea of your project didn't make me insecure at all. It was more the practical part: how should I start? I have always felt very comfortable with it. #00:07:30-4#

I: Cristian Moro: And also from me, did you get good support? Was it the amount you wanted, or would less information have been better, or even more?

B: In-company coach 3: No, not at all. The way you put it across was and is good. And anyway, every time we (from the team) didn't feel safe, we could ask you and you repeated and explained. You always supported and helped us - if necessary. Your support was always there ... is still there (laughs). If you needed something ... you were there. The amount was and is also good. As I said ...at the beginning I was unsure how to "pack it" and there I might have wished for a bit more information. But you may not have been able to say more at that point. However, I function like this ... I have to start somehow, then the questions come to me. But as I said before, you could be contacted at any time. And you were and are there. #00:08:20-1#

I: Cristian Moro: That's wonderful, dear in-company coach 3. My only concern is that I don't overwhelm you with paper. Sure, we are in a project - for the whole Landi Group, by the way - but you get enough paper every day. So for me, it's just about making a minimal intrusion into everyday life, even if I don't like that expression. On the other hand, I want to provide you with enough information to make you feel comfortable. And also with the newsletter, which I send you every 8 to 10 weeks and not more often, because in my opinion, otherwise I would overwhelm you with paper, it is only about supporting you at regular intervals and reminding you of the project and saying: "I am there...if you need me". #00:09:02-0#

B: In-company coach 3 : Yes, exactly. Because of the newsletters, it just occurred to me that this was a very good thing. I get such a kick out of ... ahh yes exactly, that's what I'm supposed to do. It's kind of like a refresher. You always get an input in between. It gives me a kick so that I can carry on full of verve. It always gives me the energy to try something out. #00:09:27-2#

I: Cristian Moro: The next newsletter is already ready, dear in-company coach 3. You will receive it in the near future. As you have certainly noticed, we are going through each letter in terms of structure. In doing so, my wish is to support you. The next ones will be in the area of "roles" and "feedback" ...as well as in the area of "benefits". My wish is to support you because you will be the ambassadors throughout the group. Nadine Larsson (Head of Training in the Landi Group) would like to use you at the national conference in December 2017, where you should use your experience to motivate new vocational trainers to take the step. This is exactly

why Nadine Larsson and I want to find out what support is needed. And in terms of questions, I am very positively surprised at how you ask specific questions in the project team. I am not at all surprised how you are independent and support the project. That's how I got to know you. ... But you should come up with more questions, shouldn't you, dear in-company coach 3? That you know I am there for you. I don't want you to get the feeling... I am not allowed to ask ... because what you experience during the implementation also supports me extremely in my work ... in the sense of, ok, I haven't thought it through to the end, etc. At the end of the project we should have a pattern. So ...5 different patterns in 5 different branches. And we can say ...yes...now we have a good cross-section. That is still important to me. #00:10:54-4#

7.   When you think back to your introduction in Wangen bei Olten, where did you feel, do I feel less safe or even unsafe? This question was already answered in question 6. #00:10:59-0#

8.   What opportunities do you see in the "discovery learning" method? For Landi, for the vocational trainers, for the learners. You can use the three levels separately or together. Normally, however, there are three different levels: Landi Group, for you in your role as vocational trainers and for the learner. #00:11:15-8#

B: In-company coach 3: Opportunities are ...if of course we can continue with it ...is certainly a long process until it is "through", but if of course all employees would think and work this way, it will simplify everyday work. People would become much more confident. We could perhaps even avoid the fact that learners are sometimes treated too "sweetly"...I mean.... too motherly...that we should let them do it themselves. And if we put this into practice, the positive effect in a few years could be that all Landi shops have such employees with such a mindset, which would theoretically simplify the work. If every employee could think and work on the basis of an assignment, it would be great. Delegate and let it run. #00:12:07-8#
 #00:12:07-8#

I: Cristian Moro: Do you notice a difference between the "new" learners and the existing learners (who are not guided by the new methods)? #00:12:07-7#

B: In-company coach 3: No, I don't notice any difference here. They also exchange extremely little (1st and 3rd year apprentices). I notice that less here. Because the 3rd year apprentice is already in the 3rd year and relatively independent. Let's put it this way ... we have made him independent to the extent that he can work quite independently. It has always been important for us that they can work independently until the 3rd year. The apprentice here now has too little contact with learners from the third year. #00:12:57-7#

9.   Have you noticed or been able to observe changes in the team? #00:13:02-7#

I: In-company coach 3: No, not at all. The employees have accepted the project very well. It was never a problem for them. Of course, for the employees, the whole project is somehow forgotten because they are not confronted with it on a daily basis.

It's a pity ... we should somehow manage to make it remembered on a daily basis and give it a kind of "inoculation". It will be very difficult if only one or two people work with the method. But for this location there is no problem. That he is treated differently...no wait a minute...he is not treated differently. Except that certain assignments are brought over differently. But it is not a problem here. #00:13:42-3#

10.   Do you see risks in using the new method of "discovery learning"? What to do for or against it?   #00:13:55-7#

I: In-company coach 3: No, I don't see any risks. If I notice how we succeed with it here, then no. Yes, of course, we have to say something in between ... but we also had to use the old method (show - do - follow). I think it's normal that you have to steer certain things in the right direction from time to time. I think the fact that we are relatively free in the project is positive. We don't have to follow a strict path and you allow us to bring our own influences and opinions into the project. #00:14:31-1#

B: Cristian Moro: Yes, and I want to be able to maintain this freedom. #00:14:31-1#

I: In-company coach 3: Yes, because it also doesn't make me feel restricted and somehow have the feeling: "Crap, I'd rather do it this way or that"...because it might not come out "right". I can't think of a specific risk here. #00:14:48-4#

B: Cristian Moro: ..and don't put the young people at risk by saying: "Hey Cristian, watch out here...if we don't take this or that into account, they can't make it". Young people are always a bit of foxes and pilot their possibilities. They pick and choose in the sense that suits them. You don't see any risks here? #00:14:58-4#

I: In-company coach 3: No...and anyway...you always have this phenomenon, regardless of the project, and it is not related to the new method. Moreover, I think that each person is individual. No, you still have to lead. #00:15:18-4#

B: Cristian Moro: I share your opinion, dear in-company coach 3, . With this question, I am merely trying to verify a theoretical model. It is still a theoretical model that has never been put into practice. You know how it is sometimes with these theoretical models and with theory: in the books they sound nice and plausible, but when you suddenly put them into practice, it often means: "You know, Cristian, you know what, it's really only theory...because in practice this and that happens". For this reason, I would like to find out what risks might be involved. #00:15:44-6#

I: Kahtrin Wildhaber: No, not in the sense of risks. Sometimes, however, it is the case that you cannot carry out every step exactly as it was discussed in theory. But then you have to take yourself by the nose again, and then report this back in the feedback (evaluation). For me, the goal is that in the feedback the individual points are dealt with intensively or even more intensively. But that's not a risk. You have to be kind to yourself again. #00:16:09-1#

B: Cristian Moro: Yes, I know that it is not easy to put theory into practice. Even in the daily stress of work. You are all productive employees, and then a new project comes along. It will be fascinating for me to observe whether the new method leads to

automatism. For me, the basic idea is not that a form is filled out until the last year of apprenticeship. The basic idea of IAZPERKA is that an automatism is created, a habit and then in the end only the greatest effort is required for the feedback. You only have to ask the questions: "What did you do well? / What did you do less well? / What would you do differently? etc.". #00:16:40-2#

I: In-company coach 3: Yes, exactly. #00:16:44-9#

B: Cristian Moro: But that, too, in a normal effort as far as time is concerned. I don't want you to spend 20 minutes per task pondering with incense sticks. It can be short and sweet. #00:16:55-1#

I: In-company coach 3: Yes, exactly. I think I have to put more emphasis on that at the moment. The reflection and the form are going well. The learner doesn't need a sheet any more. He has already internalised the steps after 6 months. #00:17:04-0#

B: Cristian Moro: Wonderful, I'm glad. #00:17:04-0#

I: In-company coach 3: Maybe he has to think more than before. He has to take a step back in between ... because he doesn't have all the elements yet. The reflections and the processes are going well. For me, the focus now has to be on the feedbacks. That is difficult now ... for them in the team. It's not easy for the learners either. It is important, as you said, that they should speak first and give information on how they felt, what they did well, what they perhaps did less well. As a vocational trainer you are too quick to say: "But you know, it should be this way or that way". That is the difficulty for us in the team. We still have to learn that. #00:17:42-9#

B: Cristian Moro: That will be the topic of the central workshop in August 2017. We will look at that together. Because this point was also reported back by the other team members. It is a new role for us as vocational trainers. It is also a new role for the staff members who have contact with the learners. They should learn to take a step back as a person and let the learners think. He/she has thought about something, experienced success or failure himself/herself, and during the evaluation and the questioning: "What did you do well? / What did you do less well? / What would you have wished as support from us if you could have wished for support?" and then we can support him in this reflection phase. But in doing so, we as vocational trainers don't have to be too quick to give him ready-made concepts and opinions....yes even "solutions". That is what is a problem of today's youth: the consumerism. I want to fight against that. One day we will no longer be there as a generation and today's youth will then have to generate ideas and solutions proactively. They can no longer say: I don't know. #00:18:30-3#

I: In-company coach 3: That is exactly how it is. We have it like that as human beings as in upbringing...we don't mean any harm either. #00:18:36-8#

B: Cristian Moro: No, no. It's what's crazy. Is always well-intentioned. #00:18:36-8#

I: In-company coach 3: Yes, exactly. I want to give him the tip. But the idea with the new method is that he comes to a solution. I think we have to create in this area, all

of us vocational trainers. Keep them working ... #00:18:46-8#

B: Cristian Moro: I think, dear in-company coach 3, that it very often has to do with our upbringing. In most families, even not all, the way is cleared for the children, all obstacles are removed, according to the motto: "Yes, no problems for the child, yes, no obstacles and no resistance". The young people will most likely forget how to deal constructively with problems and resistance. When they fail in their professional life, they are devastated. They can no longer deal with defeats constructively and always expect external help. With this method I want to show the young people: "Eh, wait a minute you young people, you have it largely in your own hands". It is a task ... and it has to be solved. Because in life, when you are faced with tasks, you are not free to say: "Do I want to give an answer or not? However, you have the freedom, if you have the necessary abilities, to say: "How do I want to react and respond to the problem? But, as I said, for you to be able to do that, you need a method. And IAZPERKA is one of those methods. A method that challenges and encourages independent thinking. #00:19:38-2#

I: In-company coach 3: With the children I already find myself ...using it at home with the children. #00:19:41-7#

B: Cristian Moro: What do you mean? Are you already trying it out with the children? #00:19:41-7#

I: In-company coach 3: Yes, ...because even as a private person I am not the person who feels I have to do everything. Through the project I have become much more aware. Through IAZPERKA I have become more aware that sometimes I say ... "What do you feel? How would you solve this and that right now? #00:19:52-2#

B: Cristian Moro: You make me very happy dear in-company coach 3, , because although we have roles ...and we will address them in August 2017... "when am I in which role?", because "behaviour" is always role dependent, when you are on the road as a sister, when you are on the road as a daughter, when you are on the road as a partner, when you are a mother, when you supervise learners, when you are a manager, there are always other roles, which require other competences and require other behaviours. I mean, when you are with your best colleague, you have a different behaviour, a different way of behaving than when you are with the learners. And yet, my experience after all these years is that when you learn new things, like now "discovery learning", that these new skills also have an impact in the other roles. These new skills and abilities spill over into the other roles. So you also start in the other roles, also at home, with the children ... where you say, "Oh dear, what happens ...?" #00:20:41-2#

I: Kahtrin Wildhaber: Yes ...laughs ...but they don't have to fill in a form. But exactly ...sometimes I catch myself ... afterwards.   #00:20:49-8#

B: Cristian Moro: You are, as I have come to know you, very traditionalist when it comes to raising children ... #00:20:55-6#

I: In-company coach 3: I always try in education that they have to come up with

suggestions themselves. But I also find myself saying: "Ok, I'll do it for them myself ... so that it goes faster". But I notice ...somewhere I have the IAZPERKA in my head ...and I consciously or unconsciously deal with them like that. Because my children already look at me kind of funny .... I mean, funny... but of course I have to be careful that I don't overburden the children ... when they have to decide something for themselves. But it can work ... even with the children. Afterwards, they can't say to me: "Yes, Mummy, but you said ...". I can answer: "You had a choice....". #00:21:51-0#

B: Cristian Moro: Yes, exactly, in-company coach 3. That is the central point for me. You know, at the moment I'm reading and writing a lot. I am reflecting a lot. One point is ..and will be ... and you will hear that in August 2017: "Giving responsibility back to the learners". I would be careful with the children, because they don't have all the competences yet and they are - from my point of view - not yet mature persons, in the sense that they can decide everything themselves. But I think ... at the age of 16 and 17, when they start teaching, that's the threshold where I think they should give back as much responsibility as possible, both for their way of thinking and for their own actions. In doing so, they should also realise that every action has a reaction, or simply put ... has consequences. For this reason, I think if you do this purposefully, even with the children, it can have positive effects. You make me very happy (laugh). #00:22:39-1#

11.	What else do you want to say? Free or fresh from the liver ... about the project in general, how you feel about it ... or have the feeling ... oh, I would have liked to say that too ... and by the way, you can also deliver these points later ... #00:22:58-0#

I: In-company coach 3: Yes exactly, sometimes I function like that. It occurs to me later. I still have a lot of fun with the project. However, sometimes I can't implement it as 100% as I would like to...because I still have other things to do. But I still think it's a very good thing .... and I'm happy to be part of it. And as guided by you and by Landi, without constraints...that is very positive for me. I don't have the feeling that I'm now under pressure, time-wise or otherwise, that I absolutely have to do this or that by then and then. So it's very positive. #00:23:36-0#

B: Cristian Moro: And the cooperation with me together in-company coach 3? Does my behaviour correspond to your wishes? Or do you have additional and special wishes for me? #00:23:41-5#

I: In-company coach 3: Working with you is just great. As I said ... you are always there when you are needed. You can also hold yourself back very well. I find that very quick. As I said ... I could perhaps come to you more ... #00:23:56-7#

B: Cristian Moro: We will discuss and look at this in August 2017. Because from August 2017, we will enter the second year of the implementation of the project. We still plan to meet once or twice a year, but to build in the fact that I will visit two or three times. #00:24:15-2#

I: In-company coach 3: Oh yes, I think that's a good idea. Because each person in the project may have different concerns / problems. #00:24:25-8#

B: Cristian Moro: I would also like to prevent you from driving every time. Even if Wangen bei Olten is central for you. But I think in the second year we can organise it in such a way that I say: "I'll be there for you for half a day ... If you have any questions, feel free to come by". And if you need something ... I'm there for you. #00:24:39-1#

I: In-company coach 3: great. #00:24:45-7#

B: Cristian Moro: For me, active learning is a great project. My wish is to be able to continue like this. With the same openness ... and again at this point ... many thanks and when I send you small gifts and attentions, it comes exclusively from the heart. Because I think it's great how you support me in this. It is my way of saying thank you. It is joy ... joy that I can work with you. For this reason I also wanted to have great pictures for the website and by the way also in England, we are also very happy with how the whole project was handled. Thank you very much again. #00:25:33-0#

I: In-company coach 3: Thank you dear Cristian. I look forward to further cooperation. #00:25:33-0#

Second round of questions

1. What positive insights do you draw from the 'active learning' method in your role as an "in-company coach? #00:00:29-4#

In-company coach 1: Well, I received weak criticism before, I don't do the training completely according to the system and today I know that I was already on the way and unconsciously trained in the direction of "discovery learning". For me it is wonderful to see that what I have tried to train exists as a system (of course better, of course developed, of course well-founded) but that is a path I want to take ... knowing that the boys will join in. knowing that the boys will join in. And if the boys want to, they will reach the goal themselves. I only have to help now and then. I don't have to push them and I don't want to push them. I want to coach and accompany them. That's the best thing for me: to realise that it really works. Walk with them, run with them, let them think, let them make mistakes, let them get better. Not being afraid that a young person will be better than me and that I will slow them down. But to take pleasure in it, then he can also overtake me. #00:01:36-8#

2. What personal and interpersonal difficulties did you experience with the "active learning" method? #00:01:51-7#

In-company coach 1: What is difficult in the day-to-day business is to implement the paper template faithfully, and not because I don't think it is right, but because with the paper a system is broken that is not inside us. In the school system, we have been told we must take the paper ... and I have to remember, now I take the paper and I do it consciously. I think the leaf is something I need from time to time ... not all the

time... but it's good to have the leaf. I realise I also have to get over myself. Then I take a step back and I think it's very good as a cornerstone, even if it doesn't always conform to the day. It's not always realisable in everyday life, but you need that from time to time to say, "Aha, that's right," the path is right. #00:02:52-6#

3. Have you noticed any personal changes in your attitude towards apprentices in your role as an in-company coach? If yes, please specify. #00:03:15-4#

In-company coach 1: I have become more generous in letting them think. I let them try and we find a solution together. I've also become more generous when it doesn't work out and say, "Come on, we'll try it again, we'll take a step back here" or leave it out completely for today, we'll do it "another time". Knowing that when it's done consciously, it's long-lasting and sustainable. #00:03:51-9#

4. Have you developed your own qualities/skills as an in-company coach thanks to the new methods? If yes, please specify. #00:03:56-5#

In-company coach 1: Yes, of course. The new method only works when I want it to. So I'm sure the new method is difficult if I don't want it myself. I have to want it, knowing that not only does it benefit the learner, but it also benefits me. #00:04:13-4#

5. In your opinion, what are the essential personal, social, and methodological skills you need to be able to work with the new method as an in-company-coach? #00:04:42-5#

In-company coach 1: For me there are two points that are crucial. I have to want it, to understand it, I have to want to implement the method and I must not be afraid of it, of the result. Because I might be afraid of the result being better than the current version. Not all people enjoy it when something is better than the present version. They just pretend. I really want it to be better...hhhmmm...that was also a process for me, noticing ....es a person could become better than me. Allowing that to happen...even taking pleasure in it. Even taking pleasure in it being one of my boys or ladies. It makes you proud... but you just have to let it happen. And stand up front and say... nobody can cycle faster than I can cycle ... then I have a problem as a human being. I think those are the two main competences. I have to allow someone to overtake me and I have to want to. I have to want to go the distance. #00:05:56-5#

6. Do you feel that in-company coaches who want to work with the new method require external support? If yes, please specify. #00:06:33-8#

In-company coach 1: I think ... there are two points. I think ...it gets certain information, certain pre-education in advance and also here, he wants to absorb this information. So it goes away from the information session and says .... yeah cool...I want to try that now, or says "I just have to do that". The one who has to, has to be guided and coached. And the one who wants to, has the advantage that he comes and says to himself, now I have to ask someone who has already implemented the method, along the lines of "Can I call you? Can I ask you something, how did you do

it? How do you deal with it?". But in the project group we didn't have that resistance. We said we all wanted it and we didn't have the option of being closely accompanied, we had the option of asking where I could go if I got stuck. But I think it's good if there is the option, if someone has stopped, to support them if they don't know any more. #00:07:48-5#

Cristian Moro: Thank you very much 'in-company coach 1'. This question is important to me, because with a huge motivation you can do a lot, but I am concerned that also the vocational trainers who come in later, who are very motivated ... we will also find them in other companies ... they are properly supported. The kind of support you have received will not be the same in the future. #00:08:13-4#

7. Have the apprentices developed in terms of personal, social and methodological skills over the last 18 months? If yes, please specify. #00:08:43-8#

In-company coach 1: what I notice, you could also base it on the year, but I don't want to do it on purpose, is that they pass on the knowledge more consciously than before (before the introduction of the method). They try things together, they look for solutions together when they are in a team and develop things together. And things and work that I had to consciously hand over before, nowadays just run automatically. So the first-year learner, he knows things in the first year that I had to consciously explain before, according to the motto: "Come on, let's go and look at the topic now" and today I notice ...oops, he's already doing that. When I then ask him why ... he says ...you know, we just went, I had time and we just looked at it. They ask if it's right for them to do it or if I had a better idea. The process becomes a bit of a no-brainer ...it almost scares you...and I quite simply enjoy it. #00:09:38-9#

Cristian Moro: 'In-company coach 4' told me, ... "you almost have to slow them down". That's why I told him: "Yes, don't brake!". I think it's joyful, because that's a point in theory. In theory, if you look for the merits of the methods, that people get into a kind of self-running. In theory there is also the concept of "lifelong learning". And for me, in German, a self-run is where I keep at it every day in self-responsibility. #00:10:11-0#

8. How are apprentices reacting to the new method 18 months after its introduction? #00:10:30-5#

In-company coach 1: well...the young ones are also in the process. Because they come to us after school where they learned according to the "old" school. Then they come to us and ...hhhmmm. it's just normal. But I think it is important that we inform them and say ... we just do it a little bit different than other companies, but you will be successful. All the learners think it's normal and good. #00:10:59-4#

Cristian Moro: So no changes. And they work with it ...so they responded well to it. #00:11:05-3#

In-company coach 1: They respond well to it and there is no resistance, no "why" or anything ... but they work with it and if you are satisfied, you are better off anyway.

They also have a cross-comparison in the vocational school on top of that and when I hear that, well I mean, I don't want to boast, but we do it very well in terms of the processes. #00:11:31-6#

Cristian Moro: The cross comparison do you mean, 'in-company coach 1', that they talk to other learners as it happens with them? #00:11:34-6#

In-company coach 1: yeah sure, they talk in the vocational school, what happens with you. One or the other passes on his frustration. And then here at the table is called ... You ... I heard ... or did you know that ... is it normal? because we don't do it like that. Then I ask. "Yes, what does normal mean?" ...and then "Do you want it too?" .then I get the answer: "No, never!". #00:11:54-4#

Cristian Moro: Cool. I think it's nice when they talk among themselves and realise that there are others who may not. But I think it's cool when they realise that it's a privilege just to be with you and to be allowed to work together with a new method and to grow up. I think it's great. #00:12:14-6#

In-company coach 1: so also in the team. I mean, the worst person in my team - almost the worst - is my job representative. #00:12:19-4#

Cristian Moro: Yes 'in-company coach 1'. We'll get to that question right now. #00:12:19-4#

9. Have you observed or been aware of changes in the team? #00:12:22-9#

In-company coach 1: Yes, I have seen some. I mean, my job representative is the worst at implementing the method. So ...run, knowing that they work well with it. She wants to put pressure, tariff and command through. And when she is on holiday, the learners come to me and say ...it is so quiet and we can work well. We have no stress with you. Then when I'm on holiday and come back, they say: "We've had a week of stress". Then I ask: "Why?" ... then they say: "Your job representative has really stepped on the gas". And I asked: "Didn't you fight back?" and they answer: "No, we had to ..." and I notice ...wait ... they realise it's different and they go through the process. And then I say ...you have to learn to deal with it because clearly ..when I'm there I try to go my way and lead my version, that's our operating philosophy, but you always have to adapt to the operation and deal with it. However, if you can choose, take the path that is right for you. But you can't always choose. However, if you can ... make the way for you. #00:13:21-8#

Cristian Moro: It would be interesting to find out for what reason she acts like that. It could be that she acts like that because she is afraid that a learner is better than her, as you said before...and because she realises it. #00:13:37-0#

In-company coach 1: yes, that is a basic fear with her...you don't need me then. #00:13:40-7#

Cristian Moro: on the other hand, if I may say it to you, it is wise advice to say to the learners: "Listen, there are other possibilities in life". My wish, of course, is that after

they have experienced three years of "discovery learning", they will look for a place of work with a healthy self-confidence, where they will be allowed / able to continue working in this way and also take up management positions later on. Until it is really "inside" and we have "soaked it up", we need 100 years until it is definitely implemented. #00:14:08-9#

Cristian Moro: So...from what I've heard, you've already noticed changes in the team from the actions / reactions? #00:14:13-0#

In-company coach 1: Yes, there are some staff members who can understand the process and "leave it" like that and other staff members who come from the "old" school and cannot and do not want to understand that the new way is good, even better than the old one. #00:14:33-2#

Cristian Moro: Find it exciting. I will search in the literature all possible fears and. But we humans are already creatures of habit ...like crazy. It's incredible. You give me confirmation with your statement that we humans who have been in the process for a long time are like "resistant to change." #00:14:55-4#

10. Do you see risks in applying the new 'active learning' method now? If yes, what can be done to combat these? #00:15:20-2#

In-company coach 1: I was thinking ...where are the critical points. There is a risk that I as a vocational trainer will slack off and "fall off the wagon". #00:15:36-2#

Cristian Moro: So the first risk is with you, in the role as a vocational trainer. #00:15:36-3#

In-company coach 1: So ..I keep thinking ..to me as a team. If I no longer stick to it and say: Well, I want us as a team to think in exactly the same way. I want the learners to have the time and the capacity to think like that. To let them make experiences, to be able to implement the projects and then look at the whole thing at the end. I don't want to go back to the method: "I go and say ...look, this is how you have to do it. Here you have the template ...this is top, everything else is flop". There is a risk in terms of recidivism. If I give in to that ...then I fall behind. And that is not what I want. Rather, I want to feel the joy ...I'm allowed too. For me, one of the risks is. #00:16:20-2#

Cristian Moro: Do you see other risks? On what levels? #00:16:22-7#

In-company coach 1: Hhhmmm Fear, as I hear and see that they can't handle the new method, I see like zero. It's a much smaller risk than what we want to admit. I don't even think parents can be a risk factor. I think as long as I as a vocational trainer do my job well and it goes well, then parents are not a risk either, that they say what are they doing here, instead of demonstrating just giving orders. Maybe other people see it differently. But it can be a risk, but it is in my nature, it starts with me again. I'm sure if I always keep at it ..then the risk doesn't grow. I see myself in the role of vocational trainer as the decisive factor in whether things go well or not. The other students are eager to see how it goes ...when it comes in summer, how it

comes. He has learning disabilities ... How he deals with the new method. #00:17:29-5#

I: Cristian Moro: Yeah, me too. #00:17:29-5#

In-company coach 1: I find it exciting whether it even works with learners with learning disabilities. I assume that it will also work with him. Maybe even better than with a person who thinks he already knows everything. I'm looking forward to it. #00:17:50-1#

Cristian Moro: I'm also curious insofar as 'in-company coach 1', that I always say it's a method for action competence, so for psychomotor tasks and not cognitive tasks. I always want to emphasise it like that. I think, moreover, that we also have practical intelligence. I know many people who are very good craftsmen and have really good practical intelligence...for that they are not students, but I always say...if I order a carpenter, I don't want him to tell me something in French, I want him to tell me something in Swiss German...however, for that he can work well. Because of that, it will be very exciting. In the case of your apprentice, I find it very exciting and we stay in touch, even if it's no longer part of the project. But I want to observe it, because for me it would be another proof that if you want it and if the learner wants it, that the method in the same structure will also work with other audiences. #00:18:53-8#

In-company coach 1: Because, what we do with it is a way that doesn't work on paper at all. It doesn't work from paper and it doesn't work from the industry. Because in sales we are looked at as spinners and is looked at as the most difficult industry: so broad and wide. It becomes all the more interesting because today we just say ...yes, with that person it goes either way. We just have the broadest and fastest moving industry ...and it can still work. #00:19:32-7#

Cristian Moro: I think 'in-company coach 1' as well. I'm just very excited. #00:19:39-6#

11. Do you have any other comments relating to the new 'active learning' method? #00:19:52-8#

In-company coach 1: I am a person who likes to have a meeting and then go into implementation and then look at the next meeting: Where do we stand? Where do I stand? I don't like to have a lot of paperwork in everyday life to implement something. Instead, I want to implement immediately what I have heard and seen ... and then report on it. I want to be able to work and implement. From that point of view, our meetings are just top. #00:20:39-3#

Cristian Moro: I'm glad to hear that, dear 'in-company coach 1'. That means that also the applicability, what the method offers, is simply what is immediate, where one can make good use of it. #00:20:49-9#

In-company coach 1: yes exactly. That will also be the point. The more someone has to, but doesn't want to, you will have to guide him with paper and control him constantly...and I think the more we will have a moderate success. #00:21:02-4#

Cristian Moro: We will see. I'm very excited....I find your decisiveness very refreshing and also from Head of Education. We will see when it is implemented on a spot basis from 1.8.2019. But I am very excited about it. We will certainly be close to the vocational trainers and watch what happens when a person really has to. Because 'in-company coach ' also told me that in the interview and you also confirmed it, if I understood you correctly, if a person / a vocational trainer doesn't want to..then he doesn't want to. 'in-company coach 4' said it aptly in the interview: "You know Cristian, if you don't want something in life, you always find a reason to make it fail". I think like everything in life dear 'in-company coach 1', you are a few years ahead of me, but it is always the person who is in front, where something has to "carry", where serves as an example. If I want it, you want it ..then it can work. However, if there is someone who says, no...I don't want it, then it causes it to fail. That in any case. #00:22:06-1#

In-company coach 1: Yes and that's exactly why I said to myself ...in the new system we have to involve...take the board on board. They have to say ...yeah cool, let's start, go!, that brings something, we have to look ahead, ..if it's approved internally, then it runs and they have to, so to speak, clean up internally, and others say: "It's rubbish anyway", ...then you shouldn't even give the company an apprentice anymore. #00:22:36-4#

Cristian Moro: we will see. And also in November we will report on it. It's important that we keep in touch in the core team. There will be some convincing to do. I'm under no illusion here. #00:23:01-1#

In-company coach 1: Yeah sure. #00:23:04-6#

Cristian Moro: I also thought it was great that you told me in the feedback, ...I was always very realistic with you that there could be resistance. Because I am already a person who is very motivated and also very positive. But I feel that I have a certain grounding and I say ... every method you bring has it's potential for resistance. And the more innovative, the more resistance potential you have. #00:23:31-8#

In-company coach 1: Yes, and the more you move away from the familiar, the more question marks come up. And the more I am fear-driven, the more I have question marks. #00:23:37-4#

Cristian Moro: Yes, that's how it is. And in the end you're blocked like with your job rep. #00:23:40-1# #00:23:42-5#

Cristian Moro: Anything else 'in-company coach 1'? #00:23:42-5#

In-company coach 1: Thank you very much for your motivation. It's just very refreshing for me. Your Feu Sacré definitely comes across. To notice from you that you know: "Yes, I also know that it will be a challenge" ...but also to notice, compared to what we get back, what comes back to my heart, what my learner gives back to me, ...the fear is peanuts. #00:24:18-0#

Cristian Moro: I find it like yesterday ...I asked, "Fix your car like 40 years ago fix, paint, spray? ...and then they looked at me and said: "No?". I then asked, "Like 20 years ago?" ...and they answered: "No". Then I asked, "And for what reason should we teach like 20 years ago?" I try to show it plausibly. I realise 'in-company coach 1', we need multipliers who are positive. Critically positive and with a lot of resilience, resistance. Is something important when changes come. I have to thank you that I have been able to work with you and with the rest of the group. I'm already looking forward to the sequel. #00:25:11-6#

In-company coach 1: just in the area of "taking the young along" ...I was once in class at the Junior "French Hour". It's clear, it's the most difficult lesson. The school doesn't do that well at all, even if it's a young teacher. I sat in the lesson ...and then quietly and watched. After 5 minutes I felt like I had faded out. The 6 boys were making more noise than the 14 girls .... And I got up and went to them and said, "Listen to me for a minute guys, I guarantee if I listen you will take more and you will have half a grade better." #00:26:26-3#

Cristian Moro: You have to have courage ... we were talking about parents yesterday. To have courage ...to invite them ...I always think: "The fish always starts to stink at the head". You can be unlucky ..but most of the time the result of the child is the work that was done at home ... or not. #00:27:10-7#

In-company coach 1: Thank you very much!

1. What positive insights do you draw from the 'active learning' method in your role as an "in-company coach? #00:00:24-2#

In-company coach 2: Finally, I get to do something new. It motivates me to be allowed to implement something new. Something that has never existed before. It's certainly something positive. Let's see how the development has come about with the learner. I am certainly very curious about the new learner, how we will implement it with her, whether it will be immediately successful, whether the current learner is an exception. I am curious about that, yes. #00:01:01-8#

Cristian Moro: On what triggered with the learner, we'll come with a separate question. #00:01:09-0#

2. What personal and interpersonal difficulties did you experience with the "active learning" method? #00:01:27-9#

In-company coach 2: Well, mainly personal difficulties with myself. That I A), always implement the new method, or that I briefly "stop" and say: "Now I have to take out the form", that I implement it correctly and check it correctly at the end. Those were the challenges. But otherwise with the learner, because he didn't know any other method, it was never an issue and we had no difficulties. There was never anything negative from the staff either. I introduced it once, but otherwise it was never an issue. #00:02:06-2#

3. Have you noticed any personal changes in your attitude towards apprentices in your role as an in-company coach? If yes, please specify. #00:02:25-0#

In-company coach 2: I think it is the same. It's still difficult to say, but I don't think anything has changed. I was already before the person who never pretended everything. I always looked at him developing himself and studying himself. From that point of view, it's like I'm doing something even more consciously. But otherwise I don't think...no. #00:02:51-2#

4. Have you developed your own qualities/skills as an in-company coach thanks to the new methods? If yes, please specify. #00:03:14-7#

In-company coach 2: No, I don't think so. As I said, I find it very exciting when the second learner comes and I can compare, because I will be able to draw my conclusions. Now I have a good learner who responds very well to the method, or maybe is an "exceptional talent" to work with, because he does it very well. #00:03:35-8#

Cristian Moro: Are you happy with him 'in-company coach 2'? #00:03:35-8#

In-company coach 2: Yes, work-wise we are very happy with him. That's why I don't think it's changed anything. #00:03:47-4#

5. In your opinion, what are the essential personal, social, and methodological skills you need to be able to work with the new method as an in-company-coach? #00:04:08-1#

In-company coach 2: In the start-up phase, it is extremely important to be inspiring. A new learner is always so motivated at the beginning to work here and work and it's all new and he has a huge joy. And if you as a vocational trainer can't reciprocate that, can't inspire, then the whole relationship goes down the drain. That is one of the most important things for me. #00:04:34-5#

Cristian Moro: Tip top. Other competences where you say .... so inspiring is one, has to be a good role model. Because what else should he be able to do, as a professional teacher, so that he can work with the new methods? Are there other competences? #00:04:48-4#

In-company coach 2: Yes, convincing is important. So to be able to stand behind the thing, finally. As I said, to be able to represent something new. Not to report negatively about it. That is the most important thing. Also towards the learner. #00:05:08-0#

6. Do you feel that in-company coaches who want to work with the new method require external support? If yes, please specify. #00:05:23-7#

In-company coach 2:. So you mean in connection with the new methods "Active Learning?" #00:05:29-7#

Cristian Moro: Yes exactly. So, if you think of a in-company coach who comes to you and says, "I want to implement the new method in my company". As a in-company coach, do they need any kind of support and if so, what kind? #00:05:41-0#

In-company coach 2: Yes, the will itself is extremely important. He must really want to do it himself. If he has to start with the new method, then it becomes difficult and it doesn't work somehow. Because it happens internally, and then you resist it. Or you don't want to have time for it. For this very reason it is important that you want it. That you want to consciously look at the steps and keep to them, that you know what you are supposed to do and that it "clicks". For this reason it is difficult with the "support". As I said, it is important to delegate some simple tasks in the beginning. In the beginning it was difficult for me to find work that made sense with 'Active Learning'. That was the most difficult thing in the beginning. The other side is a form, and it works yes. #00:06:46-3#

Cristian Moro: That means 'in-company coach 2', that you are in good spirits, 'in-company coach 2', that with the vocational trainers' own motivation and a positive basic attitude, basically, that it is feasible and this without support. #00:06:55-5#

In-company coach 2: Yeah right. Yes. The most important thing is the starting phase, that you can practise. After that the learner, the vocational trainer also notices, it works ... and the learner is motivated. It works ...and it helps me. ...and when it "clicks", it works by itself. #00:07:14-6#

7. Have the apprentices developed in terms of personal, social and methodological skills over the last 18 months? If yes, please specify. #00:07:36-6#

In-company coach 2: Starting phase, which I mentioned before. He was even more enthusiastic than others. I always notice the difference between a trial apprenticeship and the beginning of an apprenticeship. With him, on the other hand, the enthusiasm is continuous...is still there. He is still enthusiastic and motivated to learn something new. The question here is whether it is human or a natural talent. Hence the comparison. But he has not experienced a low like the other learners because he is always motivated to learn something new. From my point of view, it's already related to "Active Learning" because he has to find his own way. #00:08:31-2#

8. How are apprentices reacting to the new method 18 months after its introduction? #00:08:52-7#

In-company coach 2: Yes, I always think it's great when they have to assess the time themselves. Partly they say: "I have half an hour for this" ... and then you need a whole day. Then they come to me and say: "I took longer ...sorry. Next time they plan more carefully and give themselves more time for the task. I have noticed this development process quite well and they use it more consciously. And now you can pretend everything is great and it's all right. #00:09:25-9#

Cristian Moro: That means he has a more realistic assessment of what he's doing? #00:09:27-7#

In-company coach 2: Yes exactly. #00:09:28-3#

9. Have you observed or been aware of changes in the team? #00:09:44-7#

In-company coach 2: No, no. I don't use it with the team or with other employees. From that point of view, I can't say anything. #00:09:56-6#

10. Do you see risks in applying the new 'active learning' method now? If yes, what can be done to combat these? #00:10:17-0#

In-company coach 2: Well, it's important to me, but we already said that at the beginning, the start phase. If it runs smoothly, it runs on its own. After half a year, or a year like now, everything runs automatically. Here it is important for both sides. The trainee and the vocational trainer see that something is happening, that there is a development. It benefits everyone. And then it is also implemented, it is taught. That's why the key here is to think about what work can be delegated with the new method. That is the key and therefore also the main risk. That you don't have to look for yourself which work can be delegated at all with the new methods and don't give up "oh no, that didn't help much" or something. Here it can be that he then hangs off (the learner) ... depending on the learner. #00:11:15-2#

Cristian Moro: We'll look at it on 16/02/2018. Because you were also in charge of the stations to see what all came together. #00:11:23-0#

In-company coach 2: yeah. .yeah. You're addressing that exactly right. At the conference in December, they didn't understand ... what it's all about. It didn't get through to everyone. We started with simple work and clearly said: "Eh, no, the cash register systems are not suitable for this". #00:11:47-8#

Cristian Moro: to be honest, I am also a bit desperate. And exactly for this reason "step by step", so that we can create a good basis, with success and so that the vocational trainers "study". But it's the same in Switzerland: we have different kinds, if I may say so, of vocational trainers. There are those who want it, then I am happy for the apprentice, and then there are those, I ask myself for what reason they have become vocational trainers, because they have no positive images towards young people. They don't want the role and then they are a very bad role model, also for the young people. And we have to address that and look at it and ask: What do we do with them? #00:12:27-3#

In-company coach 2: Yes, that's right. #00:12:30-0#

11. Do you have any other comments relating to the new 'active learning' method? #00:12:42-3#

In-company coach 2: I find it fascinating what can emerge. As I said earlier. The development of the learner. It's exciting how it works. At the beginning of the project we 4 were all afraid of ... "Hhmm, it might be difficult and a bit heavy and dangerous". And then it so happened that the first two months there was more work and then it

ran on its own. #00:13:17-5#

Cristian Moro: So you noticed that - as we discussed in the first workshop - there is more work in the beginning, and afterwards, when it has settled down, that you vocational trainers are rewarded with "time savings". This has happened to you? #00:13:22-7#

In-company coach 2: Yes, definitely yes! #00:13:25-1#

Cristian Moro: And you notice that it's still motivated today, and doesn't have a low, if I understood you correctly? And it has a higher level in terms of independence? #00:13:40-5#

'in-company coach 2' Greter: Yes, definitely. He is already a person who is relatively independent, the doer type. That's why the reference to the new person, the new learner. Will it be the same? ...by nature, he's more the doer than the order taker. #00:13:58-3#

Cristian Moro: Perfect 'in-company coach 2'. Because they say he likes the method. #00:14:00-4#

'in-company coach 2' Greter: Yes, definitely. #00:14:03-8#

Cristian Moro: Then it's perfect 'in-company coach 2'. Any more points? #00:14:09-6#

'in-company coach 2' Greter: No, otherwise it's all good. Thanks for letting me take part in the project. #00:14:14-4#

Cristian Moro: Thank you very much, dear 'in-company coach 2', for making yourself available ... for the project voluntarily.

1. What positive insights do you draw from the 'active learning' method in your role as an "in-company coach? #00:00:32-8#

In-company coach 3: that you see progress, and you see how the employees become open to other things. That the employees also begin to "study" themselves. Yes I think ... you have to be open to the whole thing. And that is also positive when you can talk about things. And when I talk about it with the other staff members, there are always new ideas. We could do it like this or like that. That is also a positive effect. #00:01:08-7#

Cristian Moro: Do you also use the method with the staff? Or is it more the staff who deal with the learner in this way? #00:01:14-1#

In-company coach 3: Well, I talk to the staff about it from time to time. When I am selecting new learners, also for other locations, then we also talk about it. With regard to "discovery learning" if we want to do it that way. They always become aware. And at the new location with the new learner we started with the new method.

Quite gently. Yes. That gives a positive effect. #00:01:43-9#

Cristian Moro: wonderful. #00:01:46-9#

2. What personal and interpersonal difficulties did you experience with the "active learning" method? #00:01:58-6#

In-company coach 3: Do you mean between trainers and learners? #00:02:04-2#

Cristian Moro: Between vocational trainers and learners - between employees and learners. Are there any interpersonal difficulties that you have noticed and think: that's where I am / where we are? #00:02:13-7#

In-company coach 3: certainly. When I think about it, for example, that the method is not received equally well by all MAs and because they can't imagine how the methods are supposed to work. Some people have trouble with that and are dismissive and say: "That certainly won't work". In these cases, I simply have to be patient and let them be. But in these cases it is a bit more difficult. I think they need more time. It's just like that. Now I let them do it like that. But they also see with time that it has positive effects. And that's what I mean. That with time they start to change their thoughts consciously or unconsciously. But that's certainly a thing to say to some of the staff in the beginning. Or you just let them finish and you still follow through with your own opinion. #00:03:18-7#

Cristian Moro: It is not part of the project dear 'in-company coach 3'. It's not the first time I've heard this point and you're not the first person from the project to say something like that. But for me it is interesting in the sense of the thesis: is it more fear of it? #00:03:31-3#

In-company coach 3: Yes, absolutely. I think it's fear of it. I think ... "slice, now I have to do something different". I can't show them that directly anymore, but it goes much faster when I show them this or that. It's just the rejection. Yes...the fear somehow. But when they see afterwards that it works, when they have it "by hearth", then it's a bit different again. But it's somehow like that ... like in all matters. #00:03:55-2#

3. Have you noticed any personal changes in your attitude towards apprentices in your role as an in-company coach? If yes, please specify. #00:04:16-0#

In-company coach 3: Yes, definitely. For me, too. You catch yourself right away ... because you want to be so nice and "say" the possible mistakes in advance. Gäll, please make sure that ... and look at this and that. So, I still have to pull myself together. #00:04:31-6#

Cristian Moro: disciplining himself. #00:04:31-6#

In-company coach 3: yes exactly. Because out of sheer love you kind of .... stop. #00:04:37-3#

Cristian Moro: As they always say: "It is well meant, but it is not always good...even if

it is well meant". However, it is very honourable. That's also the difficulty with the method: we just mean well to say and warn against mistakes in advance. But the theory is that if they make their own mistakes, they can learn better. Than just hearing in advance ... what could go wrong. #00:04:57-9#

In-company coach 3: Exactly ...that's also what I tell the other staff. I tell the other trainers ...you shouldn't say so much. But then I notice that with myself...I have to hold back extremely. That's certainly something that happens. #00:05:12-6#

Cristian Moro: It's a bit like the cooker top as a child. You have to touch it yourself to know if it's hot or not.... #00:05:16-3#

In-company coach 3: Yes exactly. #00:05:21-6#

4. Have you developed your own qualities/skills as an in-company coach thanks to the new methods? If yes, please specify. #00:05:30-7#

In-company coach 3: Well, I don't think completely differently. I think ...I already had this basic attitude. But now I deal with it much more consciously. Now I'm more aware and say to myself: "Stop, don't say anything now". Just everything much more consciously, that's how I perceive it. I study and think about it much more intensely. I become more and more conscious(er) of many things. I do it more consciously. I kind of tried that before too. #00:06:02-5#

Cristian Moro: But now you kind of have like a common thread. #00:06:04-0#

In-company coach 3: Yes. Exactly #00:06:09-3#

5. In your opinion, what are the essential personal, social, and methodological skills you need to be able to work with the new method as an in-company-coach? #00:06:38-8#

In-company coach 3: Well, he has to be open to letting someone do it. That you hand over the responsibility. Yes, I think he must also be able to trust. And also leave things as they are, i.e. if he has the feeling that it's not the way I thought it would be. He has to be accommodating and say yes... #00:07:10-2#

Cristian Moro: I think it's such a nice word "accommodating". #00:07:12-8#

In-company coach 3: You know, when I hand over an assignment, I also have my ideas. But the learner, the other person may have a different idea. And I have to be able to deal with that. And not immediately say, no, it goes like this and like that. #00:07:32-4#

Cristian Moro: I find exactly that difficult. How we line up, because we have different images. But I think ... "many roads lead to Rome". And as long as they lead to Rome and not Barcelona, because for me it doesn't matter. #00:07:47-6#

In-company coach 3: Exactly. But that's exactly what I think with many people is the

main difficulty. That they can let it go. Someone has to be able to do that, I feel. So I mean, if the learner solves the tasks wrong, then wrong. But otherwise you can also say: "Eh, that's a good idea". The person must have that for sure and well it's clear, also that the learner and the persons are not indifferent to him. #00:08:22-9#

Cristian Moro: I always think, a positive basic attitude. Also towards today's youth. #00:08:26-4#

In-company coach 3: yes exactly. #00:08:26-4#

Cristian Moro: Either way, we have no choice. #00:08:29-0#

6. Have you developed your own qualities/skills as an in-company coach thanks to the new methods? If yes, please specify.

In-company coach 3: Yes, exactly. But you also have to be able to say ... yes go ahead, it's like this and that's it. It just has to be in line, but you have generous guardrails within which he can move. #00:08:45-1#

Cristian Moro: Thank you very much 'in-company coach 3'. It's always important for me to pick up individual opinions. #00:08:52-2#

7. Do you feel that in-company coaches who want to work with the new method require external support? If yes, please specify. #00:09:10-2#

In-company coach 3: Yes, I think somehow, he needs some kind of support if he wants to implement the method for the first time. It certainly always depends on the person. I, for example, am always happy when I know: "I have someone I can ask" or I get feedback or a newsletter in between, which somehow provides a line and tips. Opportunities to exchange and ask the other questions: "Am I on the right track?". It doesn't have to be every week, but it has to be a possibility to exchange ideas on a regular basis. It does. For me it has always been good so far. That I somehow get a sense of security, or I hear those things are going well with others. In that direction somehow. I can't tell you exactly how often. But for sure you have a contact point where you can get in touch at any time. #00:10:06-9#

Cristian Moro: I can only take off my hat dear in-company coach 3, how you carry the whole thing. Of course, I'm thrilled, because of course it's my project. Of course, I realize that you are behind it. But I don't want to give you the feeling that you can't do it without me. On the contrary, I would also be happy if you said: "This is so sensibly constructed and clear that we need very little or no support". It is more to find out what you think and what you need. #00:10:34-3#

In-company coach 3: Yes, because it just goes. I think in the beginning it's important to give a kind of introduction and in between like a checkpoint where you hear certain inputs again. If it's not so "by hearth", that's where you get ahead again, or maybe back on the right track. Certain things may be forgotten again ... Yes, I think the newsletter is already a good thing, but the exchange among each other was also very good. Or if you can ask someone: "You how do you see it?" / "What should I do

now?" #00:11:19-9#

Cristian Moro: Thank you very much, dear in-company coach 3. It's about me also getting a feeling for the future, what can we do when the next volunteers come. ... and then later the next volunteers, some of them involuntary, will come from 1.8.2019. #00:11:35-6#

In-company coach 3: Yes, I think delegating the task is not so difficult yet. But the reflection phase is difficult. The beginning is always there ...you just do it, but finishing with the reflection is not so easy. For me, that is somehow always the danger ... that you don't really finish it. That you don't reflect so well together. I still see that as a danger. #00:11:59-2#

8. How are apprentices reacting to the new method 18 months after its introduction? #00:12:42-5#

In-company coach 3: the question has already been answered

9. Have you observed or been aware of changes in the team? #00:12:42-5#

In-company coach 3: Not specifically, actually: #00:12:42-5#

Cristian Moro: Well, they continue to work normally without being irritated. It's perfectly like that. As I mentioned at the beginning of the project, I wanted to try out a method that wouldn't cause a big fuss in the team. Scientifically speaking, "minimally invasive" work. But I can't hear that word anymore.

In-company coach 3: Yes, you know, we are in the Landi, and there are always things that change. Not only in the Landi, but in all places when things change. Some people find it easier to cope with change, others have more difficulties with it. #00:13:05-9#

Cristian Moro: yes, it is like that. And it's also fine like that. I would also leave it in the room like that. #00:13:10-7#

In-company coach 3: Yes, and maybe it also needs people like that. Then we think: "Yes, maybe it's not like that either". #00:13:20-5#

Cristian Moro: "Yes, maybe we also need people who think like that, who go forward according to the principle: "haste with haste". #00:13:34-2#

10. Do you see risks in applying the new 'active learning' method now? If yes, what can be done to combat these? #00:13:42-7#

In-company coach 3: No, not. I can't imagine any risks. I mean ...the staff management is still there, so I don't believe that there are risks, because we do it relatively much with the learners, but there are other places that do it less, or do nothing at all and there it doesn't happen. So ... I don't see any risk. Because if I saw a risk, I would say ...let's do it the traditional way, or let's do it somehow. For many

learners the degree is just important. But I don't see any risk for the learner here. #00:14:37-4#

11. Do you have any other comments relating to the new 'active learning' method? #00:14:59-2#

In-company coach 3: Free? I still find it difficult. I still think it's a good project. But I'm certainly not finished with it yet, you still need a certain amount of time until it's really "inside". But I think we are on a super good path. And I think ... I have a strong feeling that it is spreading to the other staff members. That she is becoming more open. That will definitely help in the future. I am glad that I can be there and that I can broaden my horizon. Yes...and that I've made myself aware of the whole thing. No, I still think it's a very good thing. #00:15:42-8#

Cristian Moro: Perfect. #00:15:42-8#

In-company coach 3: Yes, we continue to pursue it ... And continue with it. #00:15:44-5#

Cristan Moro: Thank you very much also for the trust. Head of Training said we start then ...and end then. But I think it's wonderful how we can maintain the exchange.

Dear 'in-company coach 4', welcome to the second round of interviews. The aim here is to hear what you have experienced and what you think now. #00:00:18-7#

1. What positive insights do you draw from the 'active learning' method in your role as an "in-company coach? #00:00:25-2#

'In-company coach 4': Well, what is positive for us is that the learner thinks further. So he has in mind ....(pause) ... I don't know how to express it .... so he is aware of what he triggers when he does something that is better for him, or what is easier for us. He thus has the thoughts of what effects his actions have or can have. Here he is aware. For us internally, the methods have caused us to distribute the tasks more consciously, because before we handed something over to the learner, the work that just came up ... so more or less distributed. Now we think internally about whether he is already ready, can he already handle it and is it useful if we give him the task now? I think the whole distribution of tasks to the learner is now done more consciously through the project and how it will be in the end, and personally the learner has developed better through the project than if we had taught him according to the old method, it is difficult to say, because we never have the comparison, would really have been different ... if we had not done it that way. But basically I want to say that it works - for us now - even with a learner who is not easy. That's certainly the advantage. #00:01:48-9#

2. What personal and interpersonal difficulties did you experience with the "active learning" method? #00:02:05-9#

'In-company coach 4': What difficulties we have had ... (thinks about it) ... convincing the people around us, especially in the beginning, to participate at all. So ... that we

have everyone in the "boat", so to speak, that everyone can stand behind it ... and the people who can't get behind it, I can say "let yourself be surprised" and not have to start with extreme bad thoughts. But that was more the case with the people who were a bit more affected by it ... and not the people who were centrally affected by it. The latter were all convinced of it. Just like that ... as we just said before, with an older employee who felt ... "Is it completely wrong what we have done so far?" So, that we can get exactly such employees off their deadlocked path, that was the sticking point maybe. But surprisingly, also the learners, where we said that the new thing would be a bit different, you didn't notice anything about it. So ... the people who were directly affected by it dealt with the new methods quite openly. #00:03:10-4#

B: Cristian Moro: Perfect. #00:03:10-4#

3. Have you noticed any personal changes in your attitude towards apprentices in your role as an in-company coach? If yes, please specify. #00:03:27-4#

'In-company coach 4': I distribute tasks more consciously. Lately I've also been distributing them with the possible thoughts...maybe something will go wrong (off track)....or there will be problems. I have learned here to take a step back. Especially in the beginning - when the new methods were introduced - I had problems holding back. At the beginning it was hard to say ...I'll let him do it, I'll allow mistakes. Now it works relatively well. It also depends on how much stress there is in the business. If the stress level is high and the tongues are relatively short, because may probably not "dislike" as much mistakes as actually should ... that it is optimal and in the sense of the method ... but here I let myself safe ...so I am more distant than before. I would assess myself that way here in this area. So ...let him do it and - if we have enough time - let him have the experience. This is the point where I have changed the most. So these two points: that in the beginning I think more about what work I can give him and plan over leaders. #00:04:40-1#

4. Have you developed your own qualities/skills as an in-company coach thanks to the new methods? If yes, please specify. #00:04:55-6#

'In-company coach 4': Yes, several competences have been added. They were also caused by the new training plan, which was prescribed for us, which we have to make and adhere to. We never had such a plan in paper form before. Sure, we always had learning objectives and so on. This plan also played a role in it. So the distribution of tasks that we have to do for the learner over the whole three years has also become much more structured. Partly through the project "Discovering Learning" and partly through the new training plan we have to work with. I can't say it was just the project or the new plan. It was certainly both factors that led me to new competences. #00:05:36-5#

5. In your opinion, what are the essential personal, social, and methodological skills you need to be able to work with the new method as an in-company-coach? #00:05:59-4#

'In-company coach 4': What he should certainly take with him is to be "frustration

resistant", because there are points and moments where you think: "Eh, if I had simply shown him this, he would be ready faster, could then carry out the work better". How it will be with the others in the future, we need the thought ...to think in advance and to be able to weigh: "What will the new method bring me in the future". Someone in the role of a trainer who is only thinking about the next few weeks, the next few months...or whatever is in front of his eyes, for such a person is most likely the wrong approach. So he must be able to think in large spaces and also admit mistakes, be it in himself, because he does not yet know the method, or in the learner. Be tolerant that the learner also makes mistakes. #00:06:54-0#

B: Cristian Moro: I think ...you have been chosen for the project. If you could wish now, ...do you think ...and we come to the next question...?

5. Do you feel that in-company coaches who want to work with the new method require external support? If yes, please specify. #00:07:13-5#

'In-company coach 4': Well, it depends on the company. If we look at the organisational chart, depending on where the job descriptions are located, it is certainly "problematic" in certain companies. Where it is simpler, like in our project, where some of the vocational trainers are shop managers at the same time...or even managing directors like Andreas... well he is not there anymore, but ... to implement something new, if you have such a position, it is easier than where I am in the organisational chart. I'm one of the long-serving staff here and with a relatively high standing, but purely organisationally I'm subordinate to the manager and the shop manager. And that can make it more difficult ... to change the whole process. For the trainers who are also the manager or the shop manager, it is certainly easier if there is external support, because then it gives more weight to the project. If, on the other hand, you already have the position you need so that you can decide on everything yourself and change the processes, then "in principle" you don't need it. But as I observed in Sursee last December - I don't want to be disrespectful - but not yet longstanding employees, even those who have just come out of apprenticeship, so still "wet behind the ears" if I may say so, for these people it will be enormously difficult. If they can't "stand in front" and already don't seem competent because of their lack of personal appearance...even though it sounds so big.... so ...you need a certain position so that you can implement the new method. Otherwise the other employees in the shop won't believe you either. #00:08:56-2#

B: Cristian Moro: we will discuss it in depth on 16 February 2018. #00:09:03-1#

In-company coach 4: There are actually some (vocational trainers), ...where is that ...I think in Landi Pilatus, where my colleague works as a vocational trainer. She has just come out of her apprenticeship ... She worked there for a year, and shortly afterwards she became a vocational trainer, but she has absolutely nothing to say in the organisation of the shop. Of course, for such a person, with such an environment, it is enormously difficult to promote the necessary rethinking. And if the supervisor is sceptical about the new method... then you as a vocational trainer have no possibility to... #00:09:29-3#

B: Cristian Moro: I don't think it's fair, 'in-company coach 4', if you get a function and

not the necessary competences. #00:09:33-8#

In-company coach 4: Yes ... but with us there is quite a lot. (laughs) #00:09:37-8#

B: Cristian Moro: Not only with you not. #00:09:39-5#

In-company coach 4: Yes, I don't know that of course. #00:09:40-7#

B: Cristian Moro: I just wanted to reassure you ...or worry you. #00:09:45-0#

In-company coach 4 ..laughs ...yes, but it shouldn't be like that. #00:09:47-7#

B: Cristian Moro: Yes, but with a new function, the competences should also come with it. #00:09:50-5#

In-company coach 4: Yes, it should also be like that. #00:09:51-1#

7. Have the apprentices developed in terms of personal, social and methodological skills over the last 18 months? If yes, please specify. #00:10:13-6# Cristian Moro ... Especially in the area: "social and personal competences" and "methodological competences". #00:10:23-0#

'In-company coach 4': I would say social skills ... it probably hasn't changed that much. I can't imagine that he would have developed totally differently. But what is, he is much much more independent than with the old method...and if you would have looked at this 2 years ago, where the last learners were in the second year of the apprenticeship, they surely didn't have so much confidence in themselves. Sometimes this can be negative because he "kind of does something" because he has the feeling: "I already know how this works then. I know in something how to do it". But at least he is doing something. Because it's easier to slow someone down than to give someone else confidence, and say, "Hey ... try it, do something". I think in that point he's further ahead than others who are the same age, who had experience at the same point in terms of time. But it's like this ... in his free time he's a youth or a scout, or something like that ... in any case he's a leader, he needs that there too ... It's difficult to say what it would have been like without the project, whether these activities would have made a difference. But in principle he is more independent and self-confident, I already have the feeling that he is. #00:11:41-8#

B: Cristian Moro: ...and how does he react himself (question 8)? #00:11:41-0#

'In-company coach 4': I think for him it's basically kind of "normal". It is also because we stopped relatively quickly with the paper, with the bow, ... He doesn't know any different. But what is still the sticking point is when you say to him: "...how would you judge yourself if you looked at it yourself? That is still a difficult point. But I think it's not so easy nowadays, with the mentality of today's youth. They are not so reflective...they don't know that enough. That's the point on which I always have to put pressure, because even if it's worked three times in a row, the fourth time - if you don't say anything - it's sure to be forgotten again. So the point of reflection is the most difficult point, also to implement. But I think, also what I can observe from my

people in the team, that is still difficult even with adults. ...the evaluation. #00:12:42-3#

B: Cristian Moro: Yes...the evaluation and can reflect on it. #00:12:44-4#

9. Have you observed or been aware of changes in the team? #00:12:47-6#

'In-company coach 4': Yes ...actually no. No it's the scepticism or the spectators, which there were...either they don't say anything anymore, or they are not sceptical anymore. But I don't know. Praise..sure ..I would never have noticed it so directly either, but if you don't speak to them directly, they wouldn't know that there is something "different" now than there would have been before. They have simply noticed for themselves that it is not such a huge difference from before. Otherwise ...what happens from time to time ...is when I have the evaluation meetings and there's a lot going on, like in the season, then people don't understand. Because with us, the attitude is still: "If it's talked about, it means it's not worked on". What or what is being talked about, on the other hand, is of no interest to them. It is simply like that. There is room for improvement on this point. Otherwise I think ...in the team ...I don't think it has changed much. On the other hand, from time to time the team still tries to help the learner "with good tips". Sometimes that's the case, I almost can't get rid of that, with certain employees I never get rid of it. But I don't try to do that at all, because they've been doing it that way for 40 years. It's not meant "badly" either, and for them it is - if they also like the learner as a person - because they like to help him and they have the feeling that if you don't tell him anything, then you're somehow leaving him in the "lurch". So it's not meant in a bad way, but it's not really conducive to the task. That's the difficulty. I wish it were different. But that doesn't seem possible at the moment. We have to let that be the way it is at the moment. #00:14:32-2#

B: Cristian Moro: It's like that with change. It takes a lot of time. #00:14:35-3#

'In-company coach 4': Yes, and you can change certain things in our company culture, but somewhere something is stuck, ..then it only changes with the next employee. Yes, we can change that from one day to the next. #00:14:49-4#

B: Cristian Moro: I think it is also well meant. #00:14:51-1#

'In-company coach 4': Exactly, it's also nothing negative. If there was something "negative", I would address it directly with the person concerned. But it's hard for me to say, "Don't be helpful," because otherwise I have a problem. #00:15:00-0#

B: Cristian Moro: Yes, I would say that too. #00:15:00-4#

10. Do you see risks in applying the new 'active learning' method now? If yes, what can be done to combat these? #00:15:11-1#

'In-company coach 4': I don't think there are any. ...hhhmm. What I think it could be is if the vocational trainers concerned resist it and they have to implement it. Head of Training was so euphoric on this point, I think she wants to force everyone to implement it as soon as possible, starting in 2019. But if a vocational trainer doesn't

want to, then that person can make it not work...I think most people are that "clever". And that's what happens to a learner. But forcing a person to implement it is not possible from my point of view, because the apprentice's years are too valuable for that. He can't do anything about it either, especially. And maybe someone where ... I don't know... not scholastically, ...how do you put it to the ... intellectually perhaps has a bit of trouble. There are also such learners. I have a very good vocational school learner who will never be allowed to take on more responsibility, but he's great at work. So purely in terms of craftsmanship, that's not the problem. It can happen from time to time that such learners, who are not so intellectually strong, would be faced with a hurdle that is too big. But if there are still such learners who have intellectual difficulties ... it can be 1 out of 100 that we heat up with the new method. That may be. #00:16:38-2#

B: Cristian Moro: Ok, #00:16:39-1#

'In-company coach 4': I could still imagine it. #00:16:39-1#

B: Cristian Moro: Do you have any suggestions what we could do about it? #00:16:41-6#

'In-company coach 4': In principle not, because it's - it sounds stupid - but it's also a bit further... we train the learners longer, but we also learn a lot about them. If they don't pass the final exams, they are people who chose the wrong profession, or didn't learn. The final exams are such a hurdle, because it is supposed to be that not everyone should pass the exams. Those who don't deserve it, for whatever reason, are supposed to notice it or "come into the world". The new method would perhaps be an additional hurdle that would contribute to a sorting out, although from the way of working and work attitude it would be well applicable. At least for "lower" work ...even if it sounds "stupid". But it is. Not everyone can have a career. We also need people who work. Here we might lose a good worker because he doesn't make the hurdle, but yes...it's just the way it is everywhere. I mean it's like the spelling of the law. #00:18:00-2#

B: Cristian Moro: Absolutely. #00:18:07-1#

11: Do you have any other comments relating to the new 'active learning' method? #00:18:13-4#

In-company coach 4: Yes, I have already said a lot. What amazes me is to realise that here in the company we were already unconsciously very far along in terms of the method. We did it unconsciously. But the thoughts were always there, because we always wanted to train people who think along. We can't have it any other way, because the shop ... is 2000 m2 and I can't run after everyone, even after the apprenticeship and observe ...does it right. I want people to study so far. Because of that desire, we trained people that way too. Our training wasn't that difficult...it can't be called difficult...even before that. We also noticed it when we employed new people who were never ready. That made us a bit more proud, but also gave us the confirmation that we were on the right track. Otherwise yes...I was still sceptical at the very beginning. But that went away relatively quickly. No, I think ... We have to do

something somehow. We have a shop conversion in the house at the moment and the people used are 7 to 8 years younger than me...and I have to say: "Oh no, think on". I mean, I'm not an expert at all in terms of frame building or planning or anything. But at least the "thinking ahead" ...completely independent of the profession is to have the attitude of, "Now what happens if I do something? What is the chain that pulls along?" You notice that in people. You notice that with others, too, when you talk to someone outside the job. It makes you wonder if it only affects the young. I mean, when I was young ... I mean ... I hope I'm still half my age ... I always heard: "The young don't study anything". But now it really seems to me that they are enormously dependent, or just ...they don't think any further. #00:20:27-1#

B: Cristian Moro: That's why I came up with the idea of the project. As you observed, with today's society, also with the parents of course (as part of the socialisation) one notices that today's youth is extremely dependent, because they also get everything served. #00:20:45-0#

'In-company coach 4': Exactly, you think ahead for them. #00:20:46-0#

B: Cristian Moro: Far too much, in my eyes. With all the possibilities when they get bored or are bored. When the children are at school, the parents then come and talk directly to the teachers. With the method, the idea is that when they enter the world of work, they have to learn to think for themselves, with all the consequences, with all the advantages and disadvantages. If we don't manage to make this change at this age, in my opinion, the young person is lost. #00:21:20-0#

'In-company coach 4': Yes, because they become adults. But it would be nice if they were ready before. There is a new learner coming in the summer now. She is already enormously far along. I already paid attention to that during the selection and asked myself: "Who are you selecting?" There were five young people. In the end, you decide on someone's future, of course it's not that pleasant for me either, but you have to turn down the remaining 4. How do you justify the decision? Do you look at the school grades? It's a huge joke, because you can almost only "burn yourself out" on that. In the end, you hire the person who you feel is the most advanced in independent thinking, because there's almost nothing you can teach them. And everything else ...I mean, if she doesn't know what's a rope, or whatever, you can learn that. #00:22:13-8#

B: Cristian Moro: That's how I see it too, 'in-company coach 4'. For me, it is important to keep at it. To give back the responsibility for the learning process and for thinking, so that the young people become independent, thinking units. Because that's what's lacking today. #00:22:29-4#

'In-company coach 4': Exactly. I hope I was different at that age. But that's exactly the advantage when the young people come from farms. Because ...the person we have employed now also comes from such an environment. They already learn it at home. #00:22:44-0#

B: Cristian Moro: I can confirm it. A large part comes from education. With the young people on farms they are allowed to / have to help. They are definitely further along

than others. #00:22:56-5#

'In-company coach 4' Yes, I also have that feeling. I also notice with assertiveness or having to do something unpleasant ... they do it without hesitation. However, they are aware ...it has to be done. That is the advantage. I imagine what it would be like if we had young people who had none of that understanding at all. Then it would be even more extreme. So ...I mean such wimps who have been brought up in a town where they have been "pampered" and "babied". If you have to train them...it's certainly not that easy. #00:23:28-2#

B: Cristian Moro: Thank you very much, dear 'in-company coach 4'.

Appendix 05 – Preliminary task

Dear all

In two months we are going to have our kick-off workshop related to our journey with our project "discovery learning".

In order to give the opportunity to everyone to get the main idea of constructivism hereby you can find a list of books and youtube links to prepare yourself:

> Lernzentrierte Pädagogik in Schule und Erwachsenenbildung von Hors
>
> Siebert;
>
> Konstruktivismus und Pädagogik - Grundlagen, Modelle, Wege zur Praxis von
>
> Holger Lindemann;
>
>
> On Youtube: Konstruktivismus - die konstruktivistische Lerntheorie einfach
>
> erklärt
>
> Lerntheorien 2.0 - Folge 4 - Konstruktivismus

-

Please write down on moderation cards (one idea per card), what is relevant to your, whenever you think about constructivism and apprenticeship scheme in Switzerland.

Do not hesitate to contact me, if you need further information.

I look forward to meeting you.

Best regards

Cristian Moro

Appendix 06 – Statements' list - first round

Constructivism and Instructional Design

- Learning activities are meaningful
- Learning activities are authentic and require reflection
- Learning activities requires feedback
- Learning activities allows individual choices / paths
- Learning activities are challenging
- Learning activities allows to have success
- Structure is proposed but it needs to be flexible

Constructivism Learning / activities

- Involvement in real activities like in outlets
- Encourages / values the individual development of personal understanding / knowledge construction by apprentices
- Fosters active / higher-level of individual thinking and self-reflection
- Motivating tasks to be solved
- Respects individual level of apprentices

Constructivism and Learning Environment

- Learning happens in a positive environment
- Everyone learns from everyone
- Motivational, interesting, and engaging
- An understanding that there are different ways to learn
- Apprentices are encouraged to speak
- Everyone encourages and values apprentices' development
- Everyone trusts everyone

Constructivism and the apprentice

- Apprentice rather than in-company coach cantered
- Apprentices are encouraged to seek knowledge and experience from different types of sources and perspectives.
- Builds skills and abilities while working on authentic tasks and problems

- Foster self-reflection

- Allow time for apprentices to learn

- Different motivation and maturity from apprentice to apprentice

Constructivism and Social/Community

- Meaning is constructed by engagement and interaction with the issue

- We learn easily in social context and supportive context

- A safe environment is important for everyone

- Knowledge is constructed by individuals actively

- Everyone in the team is open to mistakes, as they are part of the learning process

- Everyone helps everyone

Constructivism and the in-company coach

- Encouraging risk-taking and authentic dialogue

- Becomes a in-company coach for learners able of critical awareness of one's thinking and learning and oneself as a thinker and learner.

- Provide opportunities, but not always answers

- Not primarily a transmitter of information

- Avoid direct instruction

- Learning strategies that allow learning and new experiences

- Help the apprentice to become more independent and successful

- Allows sufficient time

- Aware of different roles

- Being a positive role model

Constructivism and assessment

- Let apprentice to assess itself

- Flexible in judging success of learning

- Develop skills to self-reflect and assess

- Aware, that one learns also from mistakes

- Different type of assessments, not only the results but also engagement

Constructivism and Theory

- Builds on prior learning (knowledge) of individuals.

- Difficult to assess the results

- The process and the result are equal important for the learning process

- Asks for prior knowledges not only for in-company coaches, but also for apprentices

- Discussions and reflections are important

- Difficulty to find activities all the time activities in real life (outlets) , that suits to constructivism approach

Appendix 07 - Statements' list – second round

1. Encourages/values the development of personal understanding/knowledge construction by apprentices.
2. Fosters active/higher-level thinking and reflection.
3. Apprentices are encouraged to seek knowledge and experience from different types of sources and perspectives.
4. Provides opportunities, but not always answers.
5. Builds skills and abilities while working on authentic tasks and problems.
6. Becomes an in-company coach for learners able of critical awareness of one's thinking and learning and oneself as a thinker and learner.
7. Builds on prior learning (knowledge) of individuals.
8. Learning activities are authentic and required reflection.
9. Knowledge does not exist independent of the learner.
10. Provides a safe environment, encouraging risk-taking and authentic dialogue.

Appendix 08 – competencies

Empathy,
Independence,
Self-reflection;
Communication skills;
Resilience;
Conflict management;
Active listening;
The ability to train young people;
Initiative.
Decisiveness.
Flexibility.
Self-discipline.
Ability to work in a team.
Emotional intelligence.
Leadership skills.

Appendix 09 – Exercise – what elements, conditions, prerequisites are necessary for learning to take place at all?

- Apprentices self-motivation is important;
- Focus is on practice and meaning making for the apprentices;
- Mutual trust between apprentices and in-company coaches is relevant;
- Avoid specific terminology, as apprentices are not accustomed to it;
- Enhance positivity and educate apprentices to discover their own path to learn;
- Takes time;
- In-company coaches need to be open towards mistakes, are they are important in apprentices' learning process;
- Success is assessed at the end of the task and the feedback is given on apprentices' behaviour and performance;
- Learning must be challenging and meaningful;
- Apprentices interest in topic;
- Activity and practice is supported by theory;
- Mutual respect and openness;
-

Appendix 10 – Values

Recognition

Attention

Balance

Sensitivity

Honesty

Kindness

Patience

Interest

Openness

Tolerance

Reliability

Appreciation

Tact

Loyalty

Flexibility

Naturalness

Positivity

Exemplary

Responsibility

Appendix 11 – Self-perception

Subjective self-perception

low pronounced ⟵⟶ very pronounced						
	1	2	3	4	5	6
Objective, sober						
self-confident						
energetic, active						
determined						
spirited						
adaptable						
self-controlled						
reliable						
open-minded						
quick-witted						
creative						
enthusiastic						
versatile						
ambitious						
egocentric						
egotistical						
impulsive						
sociable						
tolerant						
empathetic						
balanced						
willing to compromise						
optimistic						
friendly						
sympathetic						
impatient						
impressionable						
helpful						
able to influence others						
authoritarian						
warm-hearted						
dominant (controlling)						
insecure						
aggressive						

Third-party image

	low pronounced ⟷ very pronounced					
	1	2	3	4	5	6
Objective, sober						
self-confident						
energetic, active						
determined						
spirited						
adaptable						
self-controlled						
reliable						
open-minded						
quick-witted						
creative						
enthusiastic						
versatile						
ambitious						
egocentric						
egotistical						
impulsive						
sociable						
tolerant						
empathetic						
balanced						
willing to compromise						
optimistic						
friendly						
sympathetic						
impatient						
impressionable						
helpful						
able to influence others						
authoritarian						
warm-hearted						
dominant (controlling)						
insecure						
aggressive						

Discovery Learning with IAZPERKA – the 8 step-method

…to deal successfully with assignments, projects and new challenges in professional and private life, and to broaden and strengthen one's own competencies.

Tasks that you undertake in the company involve several steps. Completing an assignment is certainly the highlight. Collecting information, planning and decision-making prior to completion, as well as checking the results, are also part of this.

> **IAZPERKA** is the method that enables a structured approach. Your experience expands with every task you perform according to this method. The competencies you need to solve further tasks are broadened.

IAZPERKA is the abbreviation for 8 different steps:

Letters	Step
I	Informing
A	Analysing
Z	Ziel setzen (Goal setting)
P	Planning
E	Entscheiden (Decision-making)
R	Realisieren (Implementing)
K	Kontrollieren (Checking)
A	Auswerten (Evaluating)

Note: the term "eight-step method" gives the impression that these are precisely delimited steps, which must be followed one after the other. However, from the letter "R"(realisieren (implementing)) they cannot always be clearly defined and may not only overlap in practice, but also in terms of time.

Now enjoy a lesson and be trained in-house. According to the IAZPERKA method, the learning process is a partnership, which means that the process requires will, motivation and investment of time from both sides.

Responsibility in this partnership is envisaged as follows:

Legend: PT = Professional Trainer / LN = Learner

Step	BB	LN	Description
I = Informing	X		The assignment/task is issued in brief by the PT. The LN should take brief notes. There is intentionally no time limit.
A = Analysis		X	The LN should be able to make his own deliberations at this stage and deduce what information he requires. Questions are noted.
Z = Ziel (Goal)		X	Here, the LN deals with each of the following questions: what do I want to achieve/what can I achieve/what must I have achieved by when? He thereby sets himself a time limit.
P = Planning		X	Planning by the LN is done individually and is recorded briefly in writing. There may be various options for this.
E = Entscheiden (Decision-making)	X	X	The planning is discussed. Questions are asked (if there are any gaps in knowledge). The LN discloses how much time is spent on this.
R = Realisieren (Implementing)	(X)	X	The LN carries out the planning according to the decision taken. The PT can be there in "dangerous" situations (agreed in the decision-making).
K = Kontrollieren (Checking)		X	The LN is responsible for checking the results. He is supported by the checklists, etc. The LN also decides whether the assignment was "fulfilled / not fulfilled".
A = Auswerten (Evaluating)	X	X	The meeting will take place under the guidance of the PT. He/she asks questions, the LN answers them

			upon reflection, and notes the most important points in writing.

Note: this graphical representation only shows the division of responsibility in the learning process. The short description is a summary of the more detailed information contained in the following pages.

Undertaking assignments / tasks using the eight-step-method

Informing

The first step is to communicate the assignment/task verbally, briefly and succinctly. This task is the responsibility of the PT. Special attention should be paid to the choice of verb, so that the result is "visible/tangible or audible".

Abbreviation	Stage	Possible Questions
I	Informing	• *What is the task or assignment?* • *What result is expected?*

Analysis

The second step is to understand and envisage the assignment. The central question for the LN is: what does the PT want from me?

Abbreviation	Stage	Possible Questions
A	Analysis	• *What information do I have?* • *What else do I need to know or "have"?* • *etc.*

Objective / Goal

This step is about making the goal clear to the LN. It's also about focussing oneself, and all the actions, on a specific goal. The LN should plan how much time can be allocated realistically. For this reason, the PT should make no indication about time limitation (by when).

Abbreviation	Stage	Possible Questions
Z	Ziel (Goal)	• *What exactly is the goal?* • *When must the goal be achieved by?* • *etc.*

Planning

Depending on the assignment, the various solutions possible and the approach will now be worked out. The systematic procurement of information is particularly important. Create a workflow whereby you plan the individual steps. In the workflow, resources and tools are identified, and the time required for the steps is estimated.

When working in a team, the individual steps shall be allocated sensibly. In addition, criteria for checking shall be compiled.

Abbreviation	Stage	Possible Questions
P	Planning	• *What information or knowledge is still missing and where can I obtain or acquire it?* • *What similar tasks have I already performed and how did I go about them?* • *How do the scheduling and prioritisation of the assignment look?* • *Which solution possibilities should be tested?* • *Which sub-operations should be carried out by what time?* • *Who is working on which sub-task?* • *What resources, machines and tools are needed?* • *etc.*

Decision-making

After planning, a solution option must be selected. This process will be discussed collaboratively with the PT at the start of training. After a certain time, it will be decided by the LN independently. Sometimes constraints arise (due to timing provisions, material, etc), which limit the decision options. Decisions in the team should, whenever possible, be made with everyone's consent. Workflow or worklogs shall be displayed visibly at the work place.

Abbreviation	Stage	Possible Questions
E	Entscheiden (Decision-making)	• *Which solution option is chosen?* • *What criteria are decisive for the decision, and why?* • *How are the various solutions evaluated? (intuitively, based on a decision table, etc)* • *Who is ultimately responsible for the decision?* • *To whom must the basis of decision-making be submitted?* • *etc.*

Realisation / (Implementing)

Implementation or execution often takes up the bulk of time for an assignment. Carry out the individual steps as planned. The workflow created must be adhered to and should not be changed without compelling reasons. Creating sketches and photos for learning documentation is also included.

Abbreviation	Stage	Possible Questions
R	Realisieren (Implementing)	• *What occupational safety regulations need to be observed?* • *Are additional resources needed?* • *Are you checking the steps carried out, or are you working according to the workflow?* • *Are you consulting the PT when dealing with dangerous situations, according to the agreement?*

Kontrollieren / Checking/Monitoring

Every job carried out must be checked before it is handed over; checking means, for example, reading through the implementation description again, reading the construction manual, comparing against specifications, etc. Check whether the result of your work meets the specifications set out in the planning stage and keep a written note of the result.

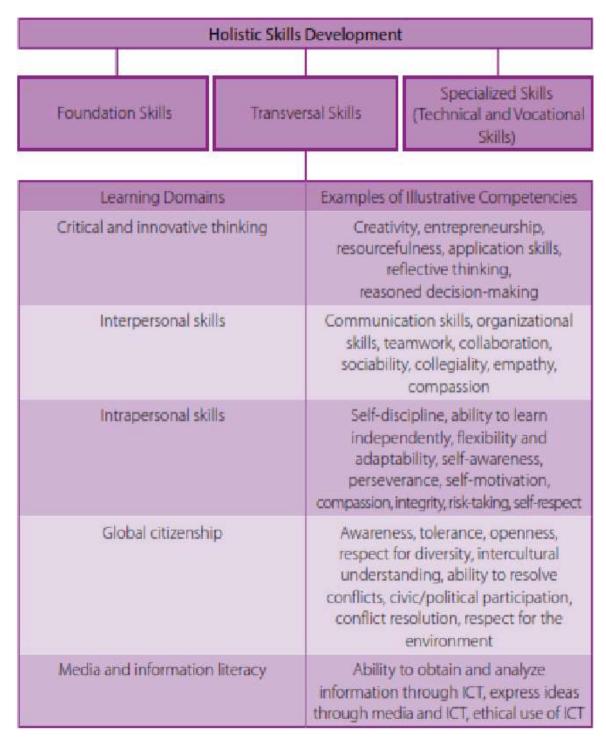| Abbreviation	Stage	Possible Questions
K	Kontrollieren (Checking)	• *Are the test criteria, as defined in the planning, proving to be correct and complete?* • *Were you able to adhere to the schedule?* • *Does the job carried out comply with the planning specifications?* • *Who should be informed about work completion?* • *Is the task fulfilled? Not fulfilled?* • *etc.*

Auswerten (Evaluating)

Now run through the whole the assignment processing once again, from informing to checking, and assess your individual steps. It's not about awarding yourself a grade, but assessing yourself and reviewing jointly with the PT which activities you have already performed properly and what you still need to improve. In addition, consider what you have learned through doing the task, what you can improve, and where in future you can apply what you have learned.

Note: this stage is the most important stage in the process, because only through their own deliberations (so-called reflection) can people develop in a sustainable and continuous way. It is also important to always record these deliberations in writing and build on them. Please remember: you learn the most from your own mistakes!

Abbreviation	Stage	Possible Questions
A	Auswerten (Evaluating)	• *What did I enjoy doing? For what reason?* • *What did I least enjoy doing? For what reason?* • *What did I do well, not so well? What are the reasons?* • *What difficulties / problems arose and what were the causes? What knowledge can I draw from this?* • *If I was unable to adhere to the schedule, where did I go wrong?* • *Why am I satisfied or not satisfied with my performance / my result etc.?* • *What can I do even better on the next assignment?* • *How can I ensure that the experience I have gained by identifying deficiencies will be considered in further work?* • *Are there any improvement measures to be taken due to mistakes?* • *What could I implement from my earlier intentions?* • *What have I learned?* • *etc.*

Note: forming this stage is actively helped with questions from the PT. The LN answers them and notes down in his learning journal the most important findings. It is also important not to appear "school masterly" or "judgemental" in the sense of "You didn't do that very well" / "I would have expected more", etc, but more like a discussion partner, who helps to provoke thought about the method and the result, as well as the LN's own actions.

Appendix 13 – Transferable Skills

Holistic Skills Development		
Foundation Skills	Transversal Skills	Specialized Skills (Technical and Vocational Skills)

Learning Domains	Examples of Illustrative Competencies
Critical and innovative thinking	Creativity, entrepreneurship, resourcefulness, application skills, reflective thinking, reasoned decision-making
Interpersonal skills	Communication skills, organizational skills, teamwork, collaboration, sociability, collegiality, empathy, compassion
Intrapersonal skills	Self-discipline, ability to learn independently, flexibility and adaptability, self-awareness, perseverance, self-motivation, compassion, integrity, risk-taking, self-respect
Global citizenship	Awareness, tolerance, openness, respect for diversity, intercultural understanding, ability to resolve conflicts, civic/political participation, conflict resolution, respect for the environment
Media and information literacy	Ability to obtain and analyze information through ICT, express ideas through media and ICT, ethical use of ICT

Conceptual framework of transversal skills developed by eri-net

Published in 2017

The Urgency of Transferable Skills Development for Vocational Teachers: A literature review study in Indonesia

Appendix 14 – SFSO

Dear Mr Moro

Unfortunately, the Federal Statistical Office does not yet have figures on apprenticeship terminations. At the end of August we will publish the first results on apprenticeship contract terminations with and without re-entry, but only for the two-year VET programmes with Federal Certificate (FVET). We expect to publish a longitudinal analysis of apprenticeship progression at upper secondary level, which will also include the three- and four-year VET programmes with Federal Certificate of Proficiency (FVC), at the end of 2017.

Kind regards

Original in German

Sehr geehrter Herr Moro

Leider verfügt das Bundesamt für Statistik zur Zeit noch nicht über Zahlen zum Thema Lehrabbrüche. Ende August werden wir erste Resultate zu den Lehrvertragsauflösungen mit und ohne Wiedereinstieg publizieren, allerdings erst für die zweijährigen beruflichen Grundbildungen mit Eidgenössischem Attest (EBA). Eine Längsschnittanalyse zum Ausbildungsverlauf auf Sekundarstufe II, welche auch die drei- und vierjährigen beruflichen Berufsausbildungen mit Eidgenössischem Fähigkeitszeugnis (EFZ) einschliesst, werden wir voraussichtlich Ende 2017 publizieren.

Freundliche Grüsse

Agreement

between

Landi Schweiz AG,

Schulriederstr. 5, 3293 Dotzigen

and

Cristian Moro,

Dorfstr. 60, 8835 Feusisberg

in regard to the project

Implementation of the "entdeckendes Lernen" ® method

1. Subject

As part of his doctoral dissertation, Cristian Moro is developing the "entdeckendes Lernen"® scientific method. To this end he is entering into a cooperation with Landi Schweiz AG, in order to implement this method in the Landi shop, develop the necessary tools, and provide support to the persons involved (vocational trainers and apprentices in the Landi shop) in the implementation of the method.

2. Rights and duties of the parties

Landi Schweiz AG, together with Cristian Moro, will define three Landi operations in which the vocational trainers and apprentices will cooperate in the project. In particular, Landi Schweiz AG will recruit vocational trainers with whom the project can be reflected on and supported. Landi Schweiz AG will also provide the necessary documents and information for the development and implementation of the project.

Cristian Moro will support the project and be present on site for a maximum of one day a month for each Landi operation. In addition he will execute two workshops a year with the "LANDI FORUM" department of Landi Schweiz AG, so that the necessary tools can be further developed.

The tools developed for Landi Schweiz AG are the property of Landi Schweiz AG and may be used exclusively by Landi Schweiz AG for an unlimited period. When using the tools, Landi Schweiz AG must refer to Cristian Moro as the creator of the tools. Cristian Moro will inform Landi Schweiz AG in writing concerning the date from which each instrument can be fully or partially used.

Cristian Moro has the right to continue to use the developed tools without restriction for the purposes of further training with other customers, without any reference to Landi Schweiz AG or any use of its logo. He has the right to publish these tools, for example in a specialist book. He can use the company name of Landi Schweiz AG including its logo without restriction on the following websites:

- www.imparare-scoprendo.ch
- www.apprendreendecouvrant.ch
- www.discovery-learning.ch
- www.entdeckendes-lernen.ch

The trademark "entdeckendes Lernen"® with the corresponding logo is a protected trademark of Cristian Moro. He has the exclusive right to use the trademark in the marking of goods and services, and to dispose of the trademark.

3. Duration of the agreement

The project starts on 1 June 2016 and ends without notice of termination on 31 July 2019. With regard to organisational matters, the parties can undertake preliminary works before the start of the project.

4. Costs

For both parties, the project will not give rise to any compensation, payment of a fee or reimbursement of outlays.

Furthermore no financial compensation claims arise on either side from the usage rights referred to in section 2.

5. Applicable law

In other respects the provisions of the Swiss Law of Obligations [Obligationenrecht] apply.

Place, date   Place, date

Landi Schweiz AG   Cristian Moro

_____

Signature of Simon Gfeller

Member of Management, Head of Marketing

_____

Signature of Nadine Larsson

Head of Education and Further Training

Personal commitment

- *Enthusiastic and motivated;*
- *Happy, I like new things;*
- *Open even, if It's a hell of risk, positive and excited*
- *Sceptical, the boss enthusiastic;*

Question 1 – Round 1

 «How did you feel when you started the 'active learning' project?

Current attitudes towards learning

- *I have already tried on my own / own initiative as I believe, there is more than a cookbook teaching;*
- *I like it, as I do not like to dictate what to do. Somehow I did it already;*
- *I apply 'demonstrate-participate-imitate'*
- *The new method is easy to incorporate in daily-business;*

Fear/reticence – Round 1

- *Apprentices' results are good;*
- *No fear at all;*
- *It's a hell of risk;*
- *Sceptic.*