



**A comparative analysis of Netball Coach Education and
Development systems from member nations of World Netball,
with a view to enhancing the portability of qualifications globally**

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Abstract

Context and rationale

The World Netball Coaching Advisory Panel identified a need to support the global movement of their coaches, given the recent growth in participation levels and professionalisation of Netball (World Netball, 2021). Judging the equivalence of qualifications globally is a challenge (Lefebvre et al., 2016). This research explored the current netball coach education and development systems within six nations, as representatives of each region of the World Netball landscape, to propose a mechanism to facilitate the judgement of equivalence of qualifications and thus enhance their portability.

Methods

Qualitative analysis was conducted on National Governing Body documentation (N=77), interviews of system managers (N=11) and coaches (N=17) to identify potential benchmarking tools to judge equivalence of qualifications. The International Sports Coaching Framework (2013) and Côté and Gilbert's (2009) identification of professional, inter and intrapersonal knowledge were used to classify content and competences; and Grecic and Collins's (2013) epistemological chain model to reflect on coaching philosophy and behaviours encouraged within the coaching workforce.

Findings

Variability was found across nations in structure, content, assessments and underpinning philosophies and behaviours. The degree of similarities and differences across national systems, at different levels of coaching, were identified in knowledge, skill competences and underpinning philosophies and behaviours. A mapping tool was proposed to enhance the portability of qualifications and questions posed to World Netball for future considerations.

Recommendations

Recommendations were made for developing a matrix of qualifications that are deemed equivalent, utilising World Netball's recently released endorsement process (2023) to support quality assurance. Suggestions were also made for increasing information flow and consideration given to the portability of coaching expertise not just qualifications.

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 academic award. The thesis has not been presented to any other education institution 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 *C.J.Lomax*

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Glossary of abbreviations

AFNA	Americas Federation of Netball Associations
APL	Accreditation of Prior Learning
BASES	British Association of Sports and Exercise Sciences
CAP	Coaching Advisory Panel
CATHSSETA	Culture, Arts, Tourism, Hospitality Sport Education and Training Authority, South Africa
CIMSPA	Chartered Institute for the Management of Sport and Physical Activity
EN	England Netball
ENSSEE	European Network of Sports Science, Education and Employment
GBA	Game Based Approach
ICCE	International Council for Coaching Excellence
ISCF	International Sports Coaching Framework
INF	International Netball Federation
NA	Netball Australia
NGB	National Governing Body of Sport
NNZ	Netball New Zealand
NQF	National Qualifications Framework
NS	Netball Singapore
NSA	National Sports Associations
NSA	Netball South Africa
PBL	Problem Based Learning
SASCOC	South African Sports Confederation and Olympic Committee
SportSG	Sport Singapore
TGfU	Teaching Games for Understanding
UEFA	Union of European Football Associations
UKCC	United Kingdom Coaching certificate
WN	World Netball

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Chapter 1: Introduction & Background to the research

This research was conducted as a professional doctorate programme of study, based at the University of Gloucester, England. The study was developed in discussion with the then Chair of International Netball Federation Coaching Advisory Panel and the current Chair of World Netball Coaching Advisory Panel.

Sport now plays a central role within twenty-first century life, not just in professional elite leagues and competitive events but also as a leisure activity of choice for an increasing number of people across their lifespans (Lara-Bercial & Bales, 2020). As such, sport has become a major driving force in the development of healthy lifestyles and positive attitudes in young and old, in developed and developing countries. Indeed Jackson (2004) identifies the role sport plays in defining a nation's identity. Coaches of sport now find themselves at the heart of such developments, with resultant expectations commensurate with achieving measurable outcomes, be that increased participation and retention Key Performance Indicators or outcomes in the forms of trophies and medals. Jones (2006) identified the changing role of sports coaches to become more of an educator or 'orchestrator' of athlete development whose role extends beyond the sports specific into the more holistic development of the participants and performers they work with. Since then, the impact coaches can have on their participants, at all levels, has been increasingly considered from a socio-emotional and psychological perspective as well as the more traditional physical, technical and tactical perspectives (Lara-Bercial et al., 2022). There is a recognition that, whether coaches work as a volunteer or as a paid professional, there is a need to ensure quality coaching at all levels of participation and performance.

The resultant global growth of coaching as a profession to meet these more diverse needs has stimulated the evolution of theoretical knowledge surrounding the coaching process (Taylor & Garrett, 2013), generated debate on what constitutes 'effective coaching' (Côté & Gilbert, 2009; Gilbert & Côté, 2013) and caused National Governing Bodies (NGBs) of sport to reflect on their coach education and development systems. As knowledge and understanding of underpinning concepts within coaching has grown, Lyle and Cushion (2017) have identified a need to clarify terminology and draw the distinction between 'sport' coaching, to define the application of the coaching process to sport, rather than life, business or other

forms of coaching and distinguish that from the more generic ‘sports’ coaching that has been traditionally referred to in respect of the application of the coaching process to a number of sports. Lyle and Cushion (2017) argue that such a distinction encourages the consideration of a more critical application of coaching skills to meet the needs of the different sports and coaching contexts rather than the more blanket application of the coaching process across several sports.

Taylor and Garrett (2013) suggest the path to professionalisation for any occupation is not without its problems and is neither linear nor uniform. Though we can draw from other professions, the specific historical, cultural and situational nuances of sport coaching need to be kept in mind as national and international policy makers partner with National Governing Bodies of sport to support a global movement of sport coaching towards greater professionalism (Callery et al., 2014, Campbell, 1992). A ‘profession’ is an occupation that generally identifies and adopts ‘standards’ to provide ethically sound underpinning competences and capabilities and provides some uniformity to ensure quality control. Within sport coaching, the International Council for Coaching Excellence (ICCE) adopts a leadership role globally in the development of coaching systems which support and develop expert coaches (Gill, 2021; Lara-Bercial & Bales, 2020), providing guidance to the overall professionalisation of sport coaching. Individual sports, or national sporting organisations, may adopt the ICCE’s suggestions to support their more context specific development of coach education and development systems. Taylor and Garrett’s (2013) reflections on the professionalisation of sport coaching and Lefebvre et al’s (2016) systemic review of a wide range of coach development programmes across different sports remind us of the fragmented nature and individual cultural histories that mould beliefs and practise in sport and coaching. They identify the need to understand and recognise national differences and not assume a ‘one size fits all’ approach to the adoption of frameworks to support the professionalisation process.

Netball coaching is very much part of this journey, with the World Netball (formally the International Netball Federation) leading on developments to expand netball’s worldwide reach and impact, adopting a value-based vision statement to provide an inclusive environment for a “better world through netball” (World Netball, 2021, p.2). The World Netball Coaching Advisory Panel are the driving force behind international developments within the Netball Coaching world and, indeed, are an interested party behind this research project. Netball enjoys a global presence as one of the most popular sports for women, but

MacLean et al. (2022) recognises has received little attention from media, sponsors or academics when compared to other team sports. Maclean et al (2022) and Taylor (2000; 2001) suggests this is due to Netball's historical beginnings as a form of basketball that was felt fit for expectations of the degree of physicality that was deemed 'suitable' for women within the 1890s and, as such, has suffered from gender related biases in opportunities and financial backing. The modern game of netball, though, is very different in its degree of competitiveness and physicality, with an increasing profile globally from both the media and academics. Netball is proudly female led but it's increasing profile globally now includes male players within men's and mixed competitions. Although gender related biases are not the direct focus of this research, the situational contexts of each nation are given consideration to gain an insight into the cultural factors effecting each nation's coach education and development system.

Netball is currently in a dynamic state of growth, moving from a previously amateur status to semi-professional and, in some cases, fully professional status at superleague and national levels. Over the last two decades this has included increasing opportunities for global movement of players, as franchises seek to develop the talent pool of players and developing nations seek to send their talented players overseas to support their overall national development. Since Kuala Lumpur (1998), Netball has enjoyed inclusion in the Commonwealth Games programme and Netball Australia's strategic plan 2022-24 aim to have Netball included within the Olympic Games in Brisbane for 2032. As a result of these developments at the top level of the game, netball is currently enjoying an increasing profile and media exposure, resulting in increased interest to play at all levels of participation and performance. For example, England saw an increase in participation within netball of 300,000 as a direct result of their Commonwealth Games Gold medal performance in 2018 and netball was reported by Sport England (2017) to be the most popular female sport in England at that time. England Netball's recent release of their NSL2.0 Plan (2023) aimed to turn the National Superleague Netball fully professional by 2025, which is a significant move towards greater professionalisation of the sport. Netball has also been expanding its provision across the full range of contexts within participation as well as within the performance and high-performance sectors, for example the introduction by England Netball of Back2Netball, Walking Netball and Bee Netball launched by England Netball in 2008, 2016 & 2019; Australia's NetSetGo programme.

This growth in participation and professionalisation of the sport presents Netball with challenges in developing its coaching workforce to service these developments, not just nationally, but also increasingly so within the global arena. At high performance level the migration of coaches to work in different countries from those they have trained is clearly visible within the social media and thus in the public eye, but there is now also movement of coaches at other levels and contexts of play that needs consideration, for example as a volunteer or sessional earning capacity at the community level. The World Netball Coaching Advisory Panel have identified a need to support and facilitate the global movement of their coaches more effectively, as judging the equivalence of qualifications when a coach moves from one nation and seeks employment in another is a complex process and currently a challenge (Lefebvre et al., 2016). This is particularly true where insurance and visa issues are at stake for employers, who need confidence that qualifications are equitable, or at least have a system that provides guidance on what might constitute appropriate accreditation of prior learning. The officiating element of netball has recently released a system to support the transfer of qualifications at the high-performance level, but coaching has not yet (Europe Netball Officiating, 2024).

Judging the equivalence of qualifications is not a problem unique to netball, or even **sport** coaching more generally. He et al.'s (2018) review of empirical studies relating to Chinese gymnastics and rhythmic gymnastics coaches, for example, recognised that globalisation and advances in technology have created a context where knowledge changes and circulates faster than ever. In High Performance, coaches increasingly move from country to country becoming migrant coaches. As such, He et al. (2018) suggests it is now relevant to find out how coaches learn from different countries as well as considering coaches preferred/ideal sources.

National Qualifications Frameworks have been introduced across many nations to provide a systematic approach to identifying skills sets necessary for different vocations. These NQFs identify standards to assure competence which were intended to be utilised as a benchmarking tool to judge equivalence across vocations, or indeed across nations within a region (NZQA, 2020; SCDF, 2019; SAQA, 2021; SNQF, 2017). This is not, however, without its problems when looking to benchmark across nations as different nations have adopted different numbers of levels to their NQFs, complicating the process of cross-nation benchmarking (NZ & ENQF Joint Technical report, 2016). Within sport, the International Council for Coaching Excellence has provided a lead for **sport** coaching with the

development of their International Sports Coaching Framework (2012; 2013) and the adoption of this by Europe to develop its own European Sports Coaching Framework and Coach Learn mapping tool to assist in exploring cross-national comparability of qualifications within Europe (ESCF, 2017; Lara-Bercial et al., 2016). Stodter & Cushion (2014) stress, though, that the needs of a sport are only part of the picture and highlight the importance of a Nation's history and culture, identifying that different sports have produced different solutions to the problem of portability of qualifications as a result.

Over the last two decades, the growing body of sport coaching literature has aimed to address the changing role of the sport coach as sport embraces the health and wellbeing agenda as well as the performance arena. This wider remit of sport coaching has challenged traditional perceptions of what makes effective or expert coaches and raised debates on the characteristics needed for coaches to meet the demands of both the participation and the performance agendas within sport (Cassidy & Kidman, 2010; Côté & Gilbert, 2009; Sport England, 2017). There is ongoing debate over the training and development needs of sport coaches, what is the most appropriate learning environment to provide at different stages of coach development, how a coach education and development system might balance formal learning with other types of learning to capitalise on coach learning preferences and incorporate trial and error and experiential learning. The next chapter reviews relevant sport coaching related literature, accepting that there is an eclectic mix of ideas, from the more theoretical and conceptual perspective, proposed in efforts to understand the coaching and coach learning process to the more empirical studies that provide evidence to support or test these ideas and theories.

Much of the early research within sport coaching stemmed from a positivist, reductionist approach that sought to unpack coaching as a series of events that could be described in a cyclical manner, or which could be used to identify which elements of coaching behaviour were most important or might provide the most effective intervention if included within a coach development or education package (Cushion et al., 2006; Turnnidge, & Côté, 2016). Cushion (2007) pointed out the shortcomings of such a narrow focus, advocating greater focus on the need to analyse coaching practice in real settings, develop conceptual models for and of coaching to more accurately represent the complexities of sport coaching, with Lyle and Cushion (2017) recognising the importance of the social context of coaching. Bowes and Jones (2006) also highlighted the challenges of unpacking the complex, interpersonal system

that underpins coaching and the problems for coach education as a result highlighting the need to understand the systems currently in place. Cushion et al. (2010) proposed the rigorous examination of content, delivery, assessment and impact of coach education on coaches' professional knowledge and practice, whilst Al-Busafi et al. (2012), Callery et al. (2014) and Lefebvre et al (2016) emphasised the importance of identifying similarities and differences across cultures, structure of systems, their modes of delivery, content and accreditation.

1.1 Research aims

The primary aim of this research was to gain an in-depth understanding of the coach education systems within one sport, netball, focusing on six nations, as representatives of each region of World Netball. A secondary aim was to then use this understanding to conduct a comparative analysis and explore the feasibility of developing a system to support World Netball's desire to assess equivalence of qualifications across nations more effectively.

1.1.1 Purpose of the research

The purpose of the work was to respond to

- Erickson et al.'s (2007) call for further research in different countries and coaching systems;
- Al-Busafi et al. (2008) and Callery (2014) identification of the need to identify similarities and differences across cultures, structures of systems, modes of delivery, content and accreditation and
- Lyle and Cushion (2017) who highlighted the need for rigorous examination of content delivery, assessment, and consideration of the impact on coaches' preferences for knowledge and practice.

As such this research aimed to contribute to the growing knowledge base of coach education and development systems in place within different nations via

- Exploring the structure, content and assessment of each nation's netball coach education and development system

- Exploring the coaching methods and behaviours encouraged within each nation's systems through identifying the degree to which netball has adopted the more recent ideals within the wider sport coaching field of study, such as
 - Athlete centred approaches
 - Game based approaches
 - Awareness of full range leadership styles within the coaching remit
- Examining the contextual and situational constraints each nation, or system managers, works with
- Considering the perceptions of coaches who have worked through the systems
- Conducting a comparative analysis to identify the degree of similarity and differences between national coach education systems within netball, in these six nations.

1.1.2 Significance of research

This research contributes to the wider debate on coach education and development but also offers a unique opportunity to address MacLean et al.'s (2022) suggestion that netball as a sport has been under-represented within the academic literature despite its growing popularity from a participation perspective. Historically, Netball originated as a female dominated sport and is still proudly female led (MacLean et al., 2022; World Netball, 2021) but, to date, there has been little reference within the sport coaching literature research of the extent to which netball coach education and development within netball mirrors developments in other sports. There is a lack of reference to underpinning philosophies and coaching cultures encouraged within netball, methodologies advocated, or even analysis of the structure and content of formal courses at different levels of qualification. The significance of this research lies not just in its opportunity to contribute to the ever-growing body of literature examining coach education and development and conducting comparative analyses, but also in its potential to inform policy and practice adopted by World Netball as they seek to develop a mechanism for easing the portability of their qualifications globally. To that end, a comparative analysis was conducted highlighting the degree of similarity and extent of differences between nations. The implications of these were then used to make suggestions to the World Netball Coaching Advisory Panel with reference to the feasibility of developing a system to support the judgement of qualifications across nations and thus assist increased global mobility of the netball coaching workforce.

1.2 The researcher's position

“It's what you bring that shapes how you make sense of data and what you decide is “what story do I tell?” (Braun & Clarke., 2019, p,12)

As the researcher, it is important to outline the lens through which the research is viewed, particularly as Blaikie (2010) suggests the impact of the researcher's prior experience can never be fully controlled for and Braun & Clarke (2021) recognise the benefits such prior experiences have to the interpretation and understanding of data. Behind this professional doctorate research is a lifetime of work within teaching, sports psychology and coaching. A background in secondary teaching, work in management training within the corporate world, cross sport coach development work for SportsCoachUK and early experiences of sport psychology work led to 30 years of lecturing within the university sector, training Physical Education teachers and sport coaches. Most recently, this involved the role of Head of Sports Coaching at the University of Chichester, UK, leading a team of staff in the planning, delivery and reviewing of both undergraduate and M.Sc. level sport coaching related degree programmes. This leadership role, together with other experiences within governance of British Universities Netball and work on a school governing board, enabled the researcher to approach this research with an understanding and empathy for the decision-making process that NGB and National Sports Organisations are faced with when designing the developing coach learning journeys.

The researcher approached the research with an awareness of the debates surrounding current thinking on the role of formal learning within the overall learning experience of coaches (Moon, 2004; Nelson et al., 2006); the balance of theory to practice that underpin recent developments within coaching methodologies and philosophies; and experience in developing appropriate assessment modes for students at different levels of learning. The researcher thus feels an empathy for the NGBs in their quest to design and implement suitable curricula within their formal coach education programmes, though recognises there are differences between the contexts of university-based learning to vocationally based programmes.

The need to map University based programmes of study against external standards such as Higher Education Qualifications Frameworks and CIMSPA Professional Standards for coaching provided the researcher with an insight into the challenges of working with different

external quality assurance markers and the need to work with outside agencies. Experience working within England Netball's World Class performance programme and their High Performance Advisory Group, from a sports psychology perspective and their Coaching Advisory Group, from a coach education and development perspective, have enabled the researcher to understand the impact of multi-agency approaches to supporting coach development and be aware of the differing needs within different coaching contexts.

Further experiences of the researcher within Netball specific coach education and development include work as an England Netball tutor, assessor and internal verifier within their formal coach education programmes, as a coach developer through the delivery of a range of webinars and masterclasses and as a mentor within non-formal coach development activities. More recently, the researcher has extended this experience to work within Europe Netball's programme of formal and non-formal learning too, gaining an insight into the needs of coaches working across different cultures and languages where netball, as a sport, is at different stages of development. These experiences helped facilitate the dialogue with coaches during interviews particularly, though care was taken not to project personal experiences onto interviewees, ensuring that active listening skills were employed to check meaning from the interviewees' perspective, to limit any assumptions made from the researcher's point of view.

Personal coaching experiences within netball included the researcher working within both participation contexts, having worked with children, adolescents and adults, and within the performance environment, including emerging athletes, performance development and high-performance environments. Together with experience in coaching tennis and skiing at participation levels, this enables an underpinning insight into the learning journey of coaches at different stages in their development, the challenges of developing effective coaching knowledge and skills and the ongoing need to develop professionally with a lifelong learning approach. These personal experiences enable empathy for the challenges coaches face in developing the full range of leadership skills and updating their coaching methodologies beyond their habitus, i.e. what they have done for years without question (Cushion et al., 2023) as well as providing an insight into the support that coaches might appreciate in this learning journey.

These experiences facilitated the following:

- An ability to interpret both theoretical and practical aspects of the research
- understanding of the bigger picture of issue surrounding the education and development of coaches
- empathy and understanding of both system managers and coaches which supported the effective flow of dialogue within the interview process
- use of underpinning knowledge and experience to interpret and analyse information gathered within different phases of the research

However, it needs to be recognised that these very experiences that facilitate the research, could also become barriers if allowed to cloud the research and interpretative process as it would be all too easy to make assumptions about others' experiences being the same as our own, which could lead to confirmation bias on the part of the researcher (Bartlett & Winslade, 2017). Reflective, self-check processes have been included within both the methods and the analysis of findings to overcome these potential barriers, along with the use of a critical friend to probe the researcher and enhance the trustworthiness of the research (Nowell et al., 2017). Another potential barrier is the difference in the degree of familiarity some participants had with the researcher that might set a different tone to contact and interviews with some participants as compared to others. Again, self-check processes were utilised within the method and findings to minimise this impact.

Chapter 2: Review of Literature

Introduction

Sport coaching knowledge and research has developed rapidly over the last 40-50 years and has been grounded in psychology, sociology, education and sports sciences, whilst progressively developing into a discipline in its own right (North et al., 2021). There have been studies on the coaching process (planning), relationship development (leadership, coach-athlete relationships), coaching practices (effectiveness, efficacy, behaviours) and coach education and development (learning, expertise, coach developers) as authors struggle to understand and adequately represent the complexities of the coaching process (Cushion et al., 2016; Hughes, 2022; Lyle, 2002, 2018,; Lyle & Cushion, 2017, North et al., 2021; Partington & Cushion, 2024). Evidence from empirical work within the sports physiology and psychology emanated largely from a positivist approach where the impact of interventions has been examined (Hughes, 2022) and results made available to coaches, though Hughes (2022) recognises that psychology has experienced trickier conceptual questions about processes and states than physiology. Much work has focused on exploring behavioural aspects of coaching, often adopting a quantitative perspective and a reductionist approach where cause and effect relationships are the focus, aiming to identify which is the most important element of the coaching process (Cushion et al., 2006). Though these approaches have facilitated coaches to access enhanced theory to practice knowledge and skills, the adoption of such a reductionist approach has provided challenges for interpreting the complexities of sport coaching in a more holistic manner. Research from a more interpretive and constructionist paradigm has identified the messy, dynamic, nature of sport coaching and highlight the importance of contextual factors that need consideration within the conceptualisations of the coaching process (Cushion et al., 2006; Jarrett & Harvey, 2014; 2016).

Similarly, there have been a range of approaches taken to examine the learning needs of coaches and how best NGBs have aimed to service those needs, ranging from large scale national and international enquiries (e.g. Al-Busafi et al., 2012), down to single subject design (Oldridge et al., 2016), some utilising a critical realist approach (North, 2016) whilst others adopt a more interpretive and even immersive approach (e.g. Cushion, 2014, Cushion et al., 2017; Leduc et al., 2013). This eclectically sourced empirical evidence has been used to underpin evidence informed policy and practice (North et al., 2021), including International

and National Sport Governing Body strategy and organisational operational documentation and theoretical position papers, though Cushion (2007) suggested a healthy scepticism be adopted when interpreting theory-practice ideas to ensure that note is taken of the degree of empirical support for theories proposed. To reflect this range of literature and research paradigms, this chapter adopts a narrative approach (Machi and McEvoy, 2016) to reviewing literature drawn from a mix of vocational sources, theoretical and positional papers, as well as empirical work (Baumeister and Leary, 1997).

This chapter contextualises the research by exploring increased professionalisation in sport coaching and the challenges this presents both the education and the development of coaches. The implications of this for portability of qualifications and global mobility of the coaching workforce is considered within this increased professionalism of the coaching workforce. The review then examines the current understanding of what sport coaching is and how the role of the sports coach has changed over recent years, with respect to the health and wellbeing agenda as well as the more traditional sport performance one (Duffy et al., 2010). What constitutes expertise in coaching is then examined along with evidence concerning the characteristics of expert coaches. Differences in understanding that has been reported across countries, cultures and contexts are explored. The challenges to underpinning coaching philosophies and behaviours advocated as a result are discussed and consideration is given to the systems that different countries adopt to underpin the development of their coaching workforce. Formal coach education systems are later examined to identify and unpack potential comparative mechanisms to determine the equivalence of qualifications. Consideration is also given to the integration of coach development activities within and around the formal coach education qualifications and the degree of variation between each country in the philosophy driving the different learning experiences provided. Finally, given the challenges facing any vocation wishing to judge equivalence of qualifications and increase global mobility of their workforce, consideration is given to how other professions and sports manage the same, or similar, issues in their contexts.

2.1 Sport coaching as an emerging profession

The last two decades have seen significant global activity to increase the recognition of sport coaching as a profession rather than merely an occupation, or an amateur activity (Abercombie, 2015). As early as 1986, Chelladurai pointed out that to become a profession

required a number of attributes, including an organised body of knowledge, professional authority, sanction of the community and a code of ethics, stressing the need for a direct link to university education to underpin a profession. To professionalise an occupation requires, therefore, the formation of associations and engagement in political activity to gain professional status as well as seeking to improve the knowledge base, quality of training programmes and commitment to the service ideal, without reference to the status and power associated with a profession.

Historically, Lara-Bercial et al. (2017) suggest the traditions within different countries have resulted in sport coaches within some countries enjoying a higher profile and fully professional status, bringing with it expectations of being fully qualified, often with graduate status. Within former Eastern European socialist countries, for example, coaching followed a similar pattern to other professions with the employment of sport coaches as professionals being well established, requiring coaches to be trained and qualified to work (Duffy et al., 2010). In contrast, within other countries, sport coaching has its roots in an amateur status, with the majority of coaches working in voluntary roles and only a minority in paid or full-time roles (Duffy et al., 2010). This draws attention to the structure underpinning these countries' systems of coach education and development which are qualitatively different, reflecting the variability in the role that sport coaching plays within different societies and the status sport coaching enjoys (Chelladurai, 1986).

In many countries sport coaching can be considered as being on a journey towards professionalisation with a move away from voluntary roles to a fully professionalised structure. Kerr and Stirling (2015) and Berliner's (2001) **position papers** suggest teaching went through a similar journey from voluntary roles to fully professionalised structure, which resulted in increased education of teachers and the development of standards and quality control measures being put into place. Though Kerr and Stirling (2015) recognise coaching is not the same as teaching, which is essentially mandatory, they stress the benefit that professionalisation has had in changing teaching behaviours and the culture of what are deemed acceptable methods within teaching. These developments have done much to rid teaching of poor practice and move away from methods that adopted punitive or even physically and emotionally abusive practices to our young people. Kerr and Stirling (2015) therefore advocate these developments for sport coaching.

Both Chelladurai (1986) and Duffy et al.'s (2011) position papers identified that sport coaching was unlikely to become a fully-fledged profession, as it demonstrates a weaker profile when compared to other more traditional professional fields such as law, medicine or teaching. North et al (2016) suggests this is due to sport coaching dealing with what is essentially a leisure activity, concerned with winning and losing and employing a number of volunteers, some without training. As a result, Duffy et al. (2011) proposed creating a strong professional identity within a Blended Model, i.e. be committed to professionalisation; target the further development of purpose, knowledge, organisation and ethics and use the criteria associated with traditional professions as a point of reference yet recognise the co-existence of voluntary and part time workforce alongside paid coaches. Since then, Lyle and Cushion (2017) advocated the professionalisation agenda should be moved towards professionalism rather than profession status and North et al. (2016) point out the ongoing policy developments that support such a move. As a result of this self-improvement process, sport coaching has embraced the expansive growth of systematic, scientific approaches to coaching and sport performance, and the increasing use of sports science knowledge to underpin the training of sport coaches reported by Kubayi et al. (2021) and Woodman (1991) with Kubayi et al.'s (2019) questionnaire-based research of 202 South African sport coaches an example of supporting empirical evidence. However, the degree of variation in the stage each nation has reached within this growing professionalisation process presents sport coaching with a challenge to establish a global system that can accurately assess the equivalence of qualifications from one nation to another, or indeed from one sport to another. This is particularly true when taking into consideration the contextual factors and socio-historical forces at work within sport and sport education (North et al, 2019).

From an international perspective the trend to focus on sport coaching as a profession prompted the creation of the International Council for Coaching Excellence (ICCE) in 1997, with the development of coaching as a profession at the core of its mission (ICCE, 2010). The ICCE adopted the Magglingen Declaration (2003) which emphasised the challenges facing coach education and development in gaining governmental recognition. The need for clarity in the identification of coaching competences was highlighted as well as a need to promote standards of ethical behaviour within a more inclusive approach to sports coaching that would engage all sectors of the community (Duffy et al., 2011; Lara-Bercial et al., 2017). These standards are then used to generate the coach education systems that provide the opportunity for coaches to acquire the underpinning knowledge and demonstrate

competences, for example the American Professional Coaches Education Programme and the Canadian National Coaching Certification Programme (Al-Busafi et al., 2012; Gould & Mallet, 2021).

The European Network of Sport Science, Education and Employment Review of the recognition of the EU 5-level structure for the recognition of coaching qualifications (ENSS, 2007) advocated the development of coaching licences as a step towards the status of a regulated profession and that this should be the primary recognition of the coaches' mastery of the practical demands and competencies of **sport** coaching. Licences are aimed at assuring competence at different levels of participation and performance and provide legal and insurance benefits for coaches. Completing coach education was advocated as an essential component of a coaching licence, though these could be delivered by federations, national authorities, universities or a combination of the three, so there may be variation in content and delivery depending on the balance of providers. This may affect portability of qualifications. Other key elements of the coaching licence that might also impact portability include the degree of inclusion of coaching practice within the licence, the extent of accreditation of prior learning available and the degree of access to ongoing lifelong learning opportunities for coaches. The degree of buy-in to licencing and what is included within that licencing does provides an indicator of the stages of system development each country has reached (North et al, 2016) and ENSS (2007) suggest these licences should be comparable at Masters' level.

From a national perspective, all countries find the most suitable way to develop their coaches and athletes, working within local constraints and enablers (Lara-Bercial et al., 2017). Project Coach Learn (Lara-Bercial et al., 2016) suggests this does not happen in isolation, but as a result of interactions of constituent parts of the coaching system: the people, organisation, structures and processes that play a part in the recruitment, education, development, employment and recognition of coaches in a particular context. Figure 1 conceptualises the relationships involved. The systems may differ in size, structure and number of components, depending on available resources and are likely to reflect the socio-cultural and institutional reality and objectives in which they are embedded. For example, qualification frameworks, national legislation, funding streams and the overall structure of the sport system play an important role in defining the coaching system (Lara-Bercial, et al., 2017). Lara-Bercial et al., 2017) suggest analysing and articulating the impact of these different relationships on the

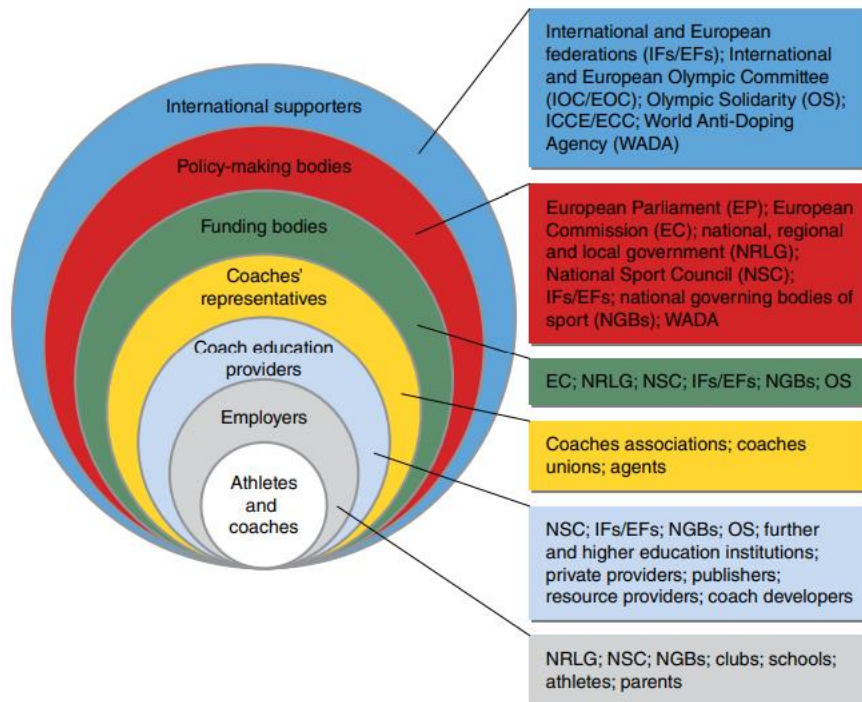


Figure 1 The People, functions and organisations that make up the coaching system (ESCF, 2017)

existing coach education and development system within each country, even if it has not been formalised, can be helpful to understand the drivers behind the current systems and identify strengths and areas for improvement

From an International, or global, perspective an integral part of the continued development to a more professionalised status for sport coaching has required countries to reflect on some of their traditions around the social, employment and qualification status of their coaching workforce and look to increase the profile sport coaching has within governmental policies (Lara-Bercial et al., 2017). New Zealand, Australia, Singapore and South Africa have all recognised the importance of sport coaching and having a world class coaching system (Gill, 2021; Koh & Chew, 2015; Segwaba et al., 2014; Sport New Zealand, 2016). National sporting organisations have updated their coaching strategy and implemented Coach Development Frameworks, or pathways. In New Zealand, Singapore and South Africa these provide guidance to national sports organisations to produce coach development programmes and within Australia, a National Coaching Accreditation System (Gill, 2021; Lara-Bercial et al., 2020; SNZ, 2016). These developments suggest a trend towards more organised and systematic support for coaches throughout their development across nations with an

engrained quality assurance mechanism in place (Gill, 2021). Titles of these programmes infer differences in the degree of focus on coach development activities versus formal, accreditation ones, so these will need exploring, as will the theoretical and practical interface for trainee coaches. Differences are evident, for example, in the degree to which NGBs work with their National Sports Organisations. Singapore shares the delivery of content between Sports Singapore, who deliver the theoretical content, and the NGB that delivers the technical or tactical components, providing a different model from those nations that deliver all content through their NGB. Differences are also evident in the learning activities coaches are encouraged, or expected, to participate in throughout their learning journey including the use of structured mentoring programmes to support a coach through their formal qualifications and the promotion of a long-term coach developer model to create a suitable workforce (Koh & Chew, 2015). Licencing is also well developed within some countries, such as Singapore and South Africa (Segwaba et al., 2014) with South Africa reporting that hundreds of coaches and coach developers have achieved professional status since 2019 after licencing was introduced in 2018 (Lara-Bercial et al., 2020). These differences present another challenge to portability of qualifications – whether it is the system, the qualification or the individual coach’s journey through that system that provides the best indicator of equivalence across countries.

Lara-Bercial et al’s. (2020) position paper highlighted the need to focus on the quality of education and coach development systems and identify material changes in the global coaching landscape that have prompted awareness of the key phenomenon requiring attention within the coaching community:

- The increased worldwide demand for coaching
- The number of coaches gaining full or part time paid positions
- The need to promote and yet manage the increased mobility of the coaching workforce.
- The increased accountability and expectations placed on coaches, and
- The disparity between coach education and development systems across the world

In order to address Lara-Bercial’s (2020) third point here, the promotion and management of increased mobility of the coaching workforce, this review now explores how the professionalisation of sport coaching has impacted the understanding of the role that sport

coaches now play within society, the knowledge and skill set changes that underpin current coaching practice, and the increased accountability and expectations placed on coaches as a result. Lara-Bercial's et al. (2020) final point above highlights the degree of disparity in coach education and development systems globally though there have not, yet, been any efforts to explore this within the context of netball so this research aims to address this dearth of academic study within the sport of netball

2.2 The changing role of the sport coach

Central to any analysis of coach education and development systems to assess the potential portability of qualifications, is an understanding of the degree to which each nation has adopted the changing role of the sport coach, given the desire for increased professionalism of sport coaching. Developments have seen the recognition of the role sport now plays in economic activity, in the provision of services to spectators, participants, communities, athletes, coaches, administrators and the corporate sector (Duffy et al., 2011; Gill, 2021; Nash et al., 2008). Since the 1960s and 1970s sport has variously been utilised as a tool of the welfare state, as an international selling point and as a tool for developing a National Identity, both internally as well as externally (Abercombie, 2015; Jackson, 2004; Taylor & Garrett, 2010b). Within South Africa, for example, sport has played a meaningful role as part of their reunification programme by SA Government post-apartheid (Whitley et al., 2018). The ICCE's adoption of the Magglingen Declaration (2003) encouraged coaching to join with other sport related organisations to recognise the role of sport in creating a better world, though highlighted the challenges facing coach education and development in gaining governmental recognition (Sport and Development International Conference, 2003). As a result, the need for clarity in the identification of coaching competences was emphasised along with the need to promote standards of ethical behaviour with a more inclusive approach to coaching, engaging all sectors of the community.

The importance of the sport coach within the wider remit of the health and wellbeing agenda is now recognised within a variety of position papers, for example Abercombie(2015) and SDIC (2003) and World Netball (2021) embraces this challenge, adopting the vision of creating a better world through sport within its strategic plan, supported by a mission to expand the worldwide reach and impact of netball. Abercombie (2015) highlighted the need

to analyse current governmental strategies, their policies and how these impact on sport and physical activity at grassroots but also understand the reasoning as to why governments strive to achieve international sporting success. Within the UK for example, there was a clear policy shift in 2008 off the back of the Olympic Games being awarded to London that magnified the focus on the elite level competitors. South Africa, at a similar time, undertook a review of their high-performance sport, including their coach education provision, following a poor performance in the Beijing Games, 2008. Though winning medals is worth striving for, Abercombie's (2015) position paper and Nash and Sproule's (2011) empirical evidence from interviewing expert and novice coaches suggest systems need to be mindful of alienating those working at grassroots level and provide a system that treats all coaches with respect and allows them to be treated as professionals in the field. How each nation manages these potentially conflicting roles of sport coaching could have implications for the portability of qualifications.

Defining the role of a sport coach has thus received much attention over the years. Many authors have looked to define roles and responsibilities (Crisfield et al., 2003; Gould & Mallett, 2021; Lynne, 2010) and identify what makes a good sport coach compared to one that exhibits poor practice. Gearity and Murray's (2011) adoption of an existential phenomenological approach to understand the lived experiences of athletes clearly identified the extent of disruption that poor coaching had on athletes and stressed the need to explore the degree of positivity existing in any coach-athlete communication, though recognised each nation's perspective might be different on what is considered 'good' coaching. The range of roles and responsibilities a sport coach undertakes have been highlighted within Crisfield et al.'s (2003) position paper and the uni-dimensional analysis of sport coaching has been challenged by Jones et al. (2002) in their position paper, suggesting that efforts to understand the coaching process should consider the connection between the social, cultural and personal experiences and our philosophies and professional practice. Nash et al.'s (2012) efforts to clarify what expertise is in coaching and literature search of empirical work claiming to use expert coaches highlight that coaching, just like teaching, is a complex process so establishing an all-encompassing definition and conceptual framework to inform coach education and development from a deeper level of understanding is challenging. Jones's (2006) book was instrumental in challenging the traditional understanding of a sport coach role as more of a trainer of performance by encouraging sport coaching to be considered as an educational endeavour rather than just a sport specific, results orientated one. Here the coach

becomes an orchestrator rather than a director of learning, with the resultant recognition of the opportunity to share the learning journey with the participant. Coaches are encouraged to utilise a wider range of approaches and interactions to empower the learners, work from a more holistic approach and value the importance of learning beyond just the sport. How far each nation has moved in this underpinning philosophy shift will impact the understanding of what each nation considers examples of good and poor practice within sport coaching. The degree of similarity or potential clashes within this understanding of coaching culture needs consideration when assessing transferability of coaching skill sets across nations.

Cushion et al.'s (2006) critical analysis of current conceptualisations of the coaching process highlighted the historical nature of identifying components of coaching (instructing, feedback, communication) and the degree of importance attached to each as unhelpful in the deeper understanding of coaching as a process. They emphasised the social and cultural complexities of the process and advocated the need to consider the contextual purpose, particularities and subjectivities of coaching in any efforts to generate guidelines for good practice. Lyle's (2002) efforts to conceptualise sport coaching were influential at the time, though the model presented at that stage provided an overly complex picture to digest and apply. His reflections on this process and attempts to propose a more holistic approach to understanding effective coaching (Lyle, 2018) allude to the challenges he faced in bringing together the multitude of roles sport coaches adopt, in an era when concepts were less well defined and interdependencies of different aspects of a sport coach's life less well researched and understood. However, the trail of Lyle's work over time, and the re-conceptualisation of his own model (Lyle & Cushion, 2017), highlights the dynamic and contested nature of the knowledge base surrounding what sport coaching is and therefore what knowledge and skill set needs to be included within any coach education and development system.

Cushion's (2011) chapter, Cushion et al.'s (2012a & b) empirical work within coaching behaviour assessment of soccer coaches and Cushion's (2013) theoretical analysis of the challenges impacting applying game centred approaches to coaching suggest coaching is not something that is delivered but a dynamic social activity that engages coach and athlete. Interviewing of masters swim coaches and critical analysis of their coaching practice fit with the andragogy practice model (Callery et al., 2017) also identified the need to build functional relationships to help facilitate learning as a result. The implications being that any coach education and development system needs to equip their coaching workforce with the ability

to adapt and improvise and be aware of the impact of explicit and implicit learning opportunities rather than just identifying generic rules and processes. The European Coaching Council's (2008; 2017) definition of sport coaching as "a process of guided improvement, led by a coach, in a single sport at identifiable stages of participant development" (ISCF, 2013, p.14) also emphasises that dynamic engagement between athlete and coach through its reference to guided improvement and infers that the nature of this guidance process may vary depending on the stage of participant development. Lynne (2010), ICCE (2010) and ISCF (2012, 2013) also suggest differing forms of coaching may be needed to work successfully at participation, development and performance domains, or when working with children, adolescence or adults. Recognising the range of ideas and developments within coaching pedagogy, Lyle 's (2019) critical discussion of ethical theories and principles relating to coaching identified a mind shift to a more pragmatic approach to meet the diverse needs of different coaching domains and an ability for coaches to be able to adapt their practice to suit those they are coaching. Both Navin and Vinson's (2020) adoption of a Delphi technique to gain a consensus from experienced practitioners and coaches within netball and Allen et al.'s (2012) interviews of hockey coaches and players, reinforced the need to recognise the differing skill sets required to work within different coaching domains, though questioned how well-prepared coaches are to meet these demands from their formal coach education. The range of skill sets developed within formal education needs examining, together with different nations' understanding of what constitutes effective or good versus poor coaching practice and how this might change within different contexts. This is an important debate within the increased professionalism of sport coaching, as is the capacity of national formal coach education systems to equip coaches with that diversity of coaching pedagogy skills.

2.3 What constitutes effective and expert coaching.

Changes in understanding of the role of the coach within the increased professionalisation process have challenged beliefs that the coach imparts knowledge and is at the centre of a knowledge transfer process. In its place coaches are being encouraged to be open-minded and try out ideas rather than accepting that knowledge is passed through the generations. The use of critical reflection skills has been instrumental in encouraging coaches to inform their developing practice and Gibbs' (1988) model has been widely adopted to support the learning of a cyclical reflective process. The modern-day coach is encouraged to develop a greater

awareness of the need to share that performance and participation journey with their athletes (Adams et al., 2016; Kidman, 2005; Kidman et al., 2010; Lee et al., 2015). Kidman's (2005) groundbreaking text suggested athletes should be at the centre of the coaching process and despite Kidman's proposals being largely conceptual rather than empirically based, there is a growing recognition of the value of empowering and motivating athletes rather than directing them. Conroy & Coathsworth's (2007) evidence from a self-report measurement tool within youth sport coaches highlighted the benefits of developing a supportive-autonomous environment; theory to practice texts from Kidman et al. (2010) highlighted the benefits of questioning and empowerment to develop decision makers, providing practical guidance to help and Light (2017) emphasised the benefits of incorporating psychology into coaching pedagogy. These were indicative of a marked difference in approach from the more traditional directive methods. To achieve the aim of coaches sharing the learning journey with their athletes, ICCE recommendations adopted Bales et al.'s (2021) report, supported by Lara-Bercial and Bales (2020) case studies of different national systems, to encourage coaches to adopt a long term developmental philosophical approach to underpin their work at all levels of participation and performance. As a result, sport coaching has moved away from a purely ego-orientated approach where winning was the only focus, with short term goals at the fore, to a greater emphasis on task-orientated behaviours and a longer-term developmental focus, adopting more of a growth mind set and providing more autonomous and supportive learning environments (Bayli et al., 2013; Conroy & Coatsworth, 2007; Dweck, 1986). However, empirical evidence from McMahon and Zehnter's (2014) qualitative interviews of swim coach and athlete, Morbée et al.'s (2020) larger scale cross sport quantitative, self-report questionnaire based enquiry of 585 sport coaches and Whitley et al.'s (2018) interviews of coaches and sports organisations within South Africa all highlight the pressure to produce results is still very evident and coaches now find themselves needing to balance these pressures to achieve that more task orientated focus, particularly at high performance and elite sport, Whitley et al. (2018) particularly emphasising the challenges identified of adopting a holistic approach to coaching in a win-at-all costs environment.

The expanding role of the sport coach to meet the needs of the health and wellbeing agenda, as well as the performance sport one, has asked further questions of the beliefs and values underpinning what sport coaches do. The training methods and behaviours coaches should adopt, or are considered appropriate, within the different coaching contexts have come under scrutiny. Much of the early debate over what makes coaching 'effective' was based in

behavioural analysis research (Cushion et al., 2012b; Douge & Hastie, 1993; Gilbert & Trudel, 2004), with the adoption of a number of coach behaviour analysis systems, surveys and content analysis of typical coaching behaviours which were then used to base behavioural interventions around, to develop the effectiveness of coaching (Cushion et al., 2012b; Smith & Smoll, 1977 & 1997). An understanding of the meaning of ‘effective coaching’ was therefore addressed through a behavioural approach, predominantly guided by quantitative and single method approaches (Gilbert and Trudel, 2004) and tended to focus on pedagogical skills within the delivery of coaching sessions.

Smith & Smoll’s (1997) work utilising the Coach Behaviour Assessment System within little league baseball coaches identified from an early stage the benefits of adopting a more positive, encouraging approach, rather than a punitive one, to build confidence and a sense of belonging and connection to sport. The impact of coaching behaviours on the participants grew increasing focus from research (Adams et al., 2016; Deci & Ryan, 1985; 2000; Gearity & Murray, 2011; Vallerand, 1997) with Gearity and Murray’s (2011) qualitative exploration of the impact of poor coaching on collegiate, professional and semi-professional athletes providing further support for the need to develop communication skills within coaching to support a positive coach-athlete relationship and facilitate mental skill development. The powerful negative impacts of poor coaching behaviour on athletes, their motivation and cohesion levels were highlighted, and it was noted these negative behaviours often resulted in athletes leaving their sport. As a result, more recent empirical evidence proposes approaches to coaching shift from error detection and correction to a greater focus on positive pedagogy and strength-based coaching (Conroy & Coatsworth, 2007; Cope et al., 2016; Dixon et al., 2015; Gordon, 2012; Harvey & Light, 2015; Light, 2017). D’Arripe-Logueville et al.’s (1998) qualitative analysis of coach and athlete interactions within French Judo, though, remain one of the few exceptions to the trend, advocating an environment that actively encourages rivalry and humiliation of athletes in attempts to build the mental toughness perceived necessary to perform at World number 1 status within Judo. Different sports therefore report differences in desired coaching behaviours and within the same sport different countries report differences too (Sujarwao, 2023; Whitley et al., 2018). Assumptions cannot therefore be made of the degree to which netball, as a sport, has embraced this shift towards a more positive pedagogical approach, or indeed whether there is any consistency across different nations in their underpinning philosophies.

Armstrong's (2001) position paper on whether coaches are transformational suggests a successful coach skilfully uses their sport to help athletes learn lessons about life and appreciate their increased knowledge whereas un-successful coaches show little interest in guiding pupils further than the finish line on a track, thus reinforcing the people-centredness of successful coaching. UKCoaching identified principles for Great Coaching which focused around the acronym P-E-O-P-L-E: Person-centred; empowering; organised; positive; learning and engaging (UKCoaching, 2019). This guidance not only emphasises the need for sophisticated interpersonal skill sets but also the capacity to interact, reflect, have empathy and be open to learning, so provides support for Côté & Gilbert's (2009) definition of effective coaching which includes reference to both interpersonal and intrapersonal skills. Côté & Gilbert's (2009) article integrated multiple theoretical and practical perspectives to provide a clear, integrative definition of sport coaching effectiveness as

“the consistent application of integrated professional, interpersonal and intrapersonal knowledge to improve athletes' competence, confidence, connection and character in specific coaching contexts” (p.316).

Côté & Gilbert's (2009) definition has been widely adopted by the International Council for Coaching Excellence within their International Sports Coaching Framework (2013) and within Europe's Project CoachLearn (Lara-Bercial et al., 2017), designed to enhance coaches learning mobility and employability within the European Union (ESCF, 2017). The classification adopted here of underpinning knowledge and skills that effective coaches use into professional, inter-personal and intra-personal recognises how coaches need to be equipped with knowledge that takes them beyond just the first and last whistle of the session and incorporates the importance of critical reflection skills for transformational growth in sport coach development highlighted in Jacobs et al.'s (2016) qualitative analysis of Dutch soccer coaches. Nash and Sproule's (2012) larger scale (N=621) more quantitative questionnaire-based analysis of Australian coaches from a range of sports also suggests key features of sports coaching expertise include the capacity to produce innovative solutions and adopt a lifelong learning approach through engagement in self-reflection. Nash & Sproule (2012) thus support Côté and Gilbert (2009) in the value of developing intra-personal skills, so consideration needs to be given for how to assess transferability of these softer inter and intrapersonal skills.

Côté and Gilbert's (2009) definition also considered that for coaching to be effective the impact of coaching methods on the participants needed consideration. They identified as desirable outcomes of coaching: Competence, gained through performance developments, as a result of healthy training; Confidence development and positive self-worth; Connection, where positive bonds and social relationships are established; and Character reflecting respect, integrity, morals and empathy (the 4Cs). However, Côté & Gilbert (2009) do suggest that to be truly effective, coaches need to be able to adapt their skill set appropriately to meet the needs of different age groups and contexts i.e. participation or performance, highlighting the differences that might be expected in professional sport where the focus is on winning and entertainment as well as raising the issues of meeting the particular needs of children especially in sports like gymnastics where high performance comes within that age remit.

Côté and Gilbert (2009) defined professional knowledge as sport specific knowledge, i.e. technical and tactical, but also the physical, psychological, and pedagogical elements, including Codes of Conduct and ethical issues. Within the pedagogical elements of professional knowledge, the degree to which netball has embraced changes in methodological approaches to coaching can be explored, particularly the extent each nation encourages their coaches to share the journey of performance enhancement with their participants and adopt practice structures that empower participants rather than just instructing and directing them. Within team sports, the importance of developing thinking players that are not reliant on their coaches for solutions to problems they face on the court/pitch has been recognised and coaches are now encouraged to move towards a greater emphasis on game based, decision training structures for practice (Williams & Hodges, 2005; Vickers, 2003 & 2007). Williams & Hodges's (2005) seminal paper was pivotal in presenting evidence to challenge many of the traditional ideas surrounding the use of practice structures, instruction and demonstration within football and advocated more reliance on small sided and modified games rather than drill based, coach centred methods. Challenges to the underpinning beliefs of effective use of practice structures are also evident in the historical development of Teaching Games for Understanding (Jones, et al., 2010; Bunker & Thorpe, 1982), Game Sense and Game Intelligence approaches (Harvey et al., 2010; Jarret et al, 2014; Jarrett & Harvey, 2016). The development of such game-based ideas has also seen the adoption of constraint-led practice within theoretical position papers from Davids et al. (2005) and Passos et al. (2008), and the use of decision training approaches (Navin, 2011; Stratton et al., 2004; Vickers, 2007) with

Jones and Turner (2006) advocating problem solving and more holistic approaches to coaching.

Within netball, Miller et al. (2017) incorporated a game-centred approach (GCA) via a Professional Learning for Understanding Games Education into Sport (PLUNGE into Sport) coach education intervention programme with community coaches in Australia. Findings supported Williams & Hodge's (2005) work within football, indicating the benefit of adopting playing form practice structures for the development of player decision making and support play. Similarly, Jani et al. (2017) reported the benefits of a coaching module on TGfU for the development of player decision making, choosing and using attack and defence strategy at the right time and place during netball game situations within Malaysian school players. The degree to which countries have adopted such a game sense approach rather than the more traditional drill-based skill development approach to their pedagogy provides an indication of their underpinning philosophies and, where there is a mismatch, could highlight potential difficulties in transferability of coaching practice across nations.

Côté and Gilbert's (2009) inclusion of inter-personal knowledge and skills acknowledges the importance of communication skills to establish the all-important coach-athlete interaction that Jowett's (2017) position paper highlighted as being at the core of effective coaching, based on extensive exploration of the coach-athlete interaction through qualitatively based empirical studies,. Leadership is recognised as an important element of the interpersonal skill set, as is the ability to adapt communication skills to different contexts as well as to parents and partnership organisations (Armstrong, 2001). Adopting a more athlete-centred approach presented coaching with a need to move beyond the more traditional approaches of transactional leadership with coaches generally adopting autocratic, directive behaviours towards a more shared journey than a directed one (Kidman 2005; Kidman et al.,2010).

Vella et al. (2010) and Jowett's (2017) theoretical position papers suggest leadership should be seen as the facilitator of coach-athlete relationships with the capability to bring about the competence, confidence, connection and character building that Côté and Gilbert (2009) identify as inherent in being an effective coach. Whilst the teaching profession adopted Mosston and Ashworth's (1990) continuum of teaching styles to facilitate a pupil-centred approach, supporting teachers to be flexible and adaptable in their teaching style to respond

to their groups' needs, coaching advocated closer attention should be paid to the full spectrum of leadership intentions and behaviours as well as the professional judgement and decision making that underpins successful practice (Cruikshank & Collins, 2016; Nash et al., 2017). Arthur et al. (2010), Bass (1990), Bass and Riggio (2006) and Turnnidge and Côté (2019) advocated the development of transformational and charismatic leadership skills to facilitate coaches working across the full range of leadership style, with Vella et al. (2010; 2013a & b), Price & Weiss (2013) and Turnnidge & Côté (2016) all reporting through their empirically based evidence the positive impact of including transformational leadership training within coach education. Coaches demonstrating more frequent transformational leadership behaviours lead to more positive outcomes for performers both at youth level (Vella et al., 2013 a & b) and elite sport (Smith et al, 2017). Navin et al.'s (2018 & 2020) also reported the use of transformational leadership components within a UK Netball Superleague franchise enhanced prosocial behaviour, sociocultural connections across the club as well as perceptions of autonomy relating to a number of personnel. Armstrong (2001) suggests that effective coaches are skilled at choosing the best leadership styles for their sport and their individual athletes and such transformational leadership behaviours often lead to improvements in athlete performance, team cohesion and coach morale.

Grecic and Collins (2013) incorporated coach use of different leadership styles including both transactional and transformational styles within their epistemological chain model (see Figure 2). Grecic and Collins (2013) based their model on interviews with golf coaches and suggested that the behaviours coaches are likely to adopt are dependent on their underpinning philosophies and beliefs of where knowledge comes from, establishing an epistemological chain. Adopting Schon;s (1983) nomenclature, Grecic & Collins (2013) suggested that a naïve approach is likened to more traditional ideas surrounding coaching where coaches are seen as the font of all knowledge, generally adopting more directive, transactional, drill based and coach-centred approaches to coaching. At the other end of their continuum, identified as a sophisticated approach, Grecic and Collins (2013) suggest coaches see the complexity and dynamic nature of knowledge relating to coaching, can move from instructional strategies to more constructivist teaching strategies to adopt the belief that acquiring knowledge is a constant journey of discovery. Coaches operating at the sophisticated end of the spectrum are more likely to seek knowledge from a wider perspective, be more prepared to try out ideas as knowledge evolves and reflect on those ideas to inform their practice. Within invasion games

Naïve coach	Epistemological Chain	Sophisticated coach
Coaching knowledge is passed down from coach to coach and from coaching 'experts'. Knowledge resides with the coach.	Epistemology	Coaching knowledge can be discovered in many places. Constant journey of discovery. Experimentation and reflection to create new knowledge. Aim that knowledge is created and owned by the player.
Guru and disciple, Rules to follow, autocratic, disciplined, power relationship, dominating coach, compliant athlete, failure to perform is highlighted.	Environment created	Learning environment created, where athlete can experiment safely without fear of ridicule. Two way discussions and flow of ideas.
Transactional, Power roles, dictating behaviours.	Relationships built	Trusting, caring, nurturing, autonomy-supportive behaviours demonstrated
Coach prescribed, subjective to coach's beliefs, constant reliance on the coach	Goal setting	Athlete led in discussion with coach
Learn – drill- do, follow set practice regime	Methods	Challenges set for athlete, creating learning episodes
Success or failure determined by tangible markers or results e.g. changes in technique, improvement in coach's measure / statistics	Judgements made	Dependent on how the player develops as an athlete and person with life skills, whilst working towards the athlete led targets. Decisions based on "Is the athlete now an autonomous decision maker confident in their own ability?"
Constant coach's revision of targets, technique, results. Coach led modifications to be practiced, re-learned, and embedded	Future Direction	Future path determined by how self-reliant the player feels. Possibilities include requests for future guidance/ mentoring, or removal from the coaching process if it is no longer needed

Figure 2. Representation of Epistemological chain in naive and sophisticated sports coaches (Grecis & Collins, 2013)

this would be commensurate with coaches having the capability to use more random practice structures that engage athletes cognitively in their decision making; use constraint-led practice and game sense activities to explore solutions to on-court challenges (Light et al., 2018) as well as providing an autonomous-supportive environment. Coaches tend to utilise transformational leadership skills to facilitate implicit learning rather than rely on explicit,

coach-centred learning, offer delayed feedback and probing questions to support the participant's learning journey.

Grecic and Collins (2013) suggest this model could provide a framework to benchmark coaching behaviours against, assist coach self-reflections, support the identification of training needs for coaches and even provide a tool to select coaches. Further support for the debate on epistemological chain has been provided by Collins et al.'s (2015) interpretative phenomenological analysis approach with adventure sport coaches, suggesting the epistemological chain provides the criteria utilised by advanced adventure sports coaches when compared to more traditional sport coaches. However, Partington and Cushion's (2024) interviews and observations of football coaches have led them to question the coach understanding of philosophy and its relation to coaching practice, suggesting the philosophy is more likely to be related to technical and tactical aspects of coaching rather than any overt link between underpinning philosophies and behaviours adopted. Partington and Cushion (2024) also criticise Grecic and Collins' (2013) lack of appreciation for the historical, cultural and situational influences on coaching philosophies and behaviours, suggesting that insufficient notice is taken of habitus and power relationships.

Despite the intuitive appeal of Grecic & Collins's (2013) attempt to bring together skill acquisition, pedagogical, leadership and communication elements of the coaching process, the use of naïve versus sophisticated approaches is somewhat simplistic as coaches might need to be more flexible in their use of behaviours to build and maintain effective coach athlete interactions than an either/or alternative. There may be occasions, for example, when an athlete centred approach might necessitate an autocratic approach, which is not catered for within Grecic and Collin's (2013) model. Lara-Bercial and Mallett (2016) suggest coaches may have a preferred balance point along the full range of leadership style continuum, but suggest Serial Winning Coaches are adept at shifting along the leadership spectrum from more directive to more collaborative attitudes and practices to suit the context, situation, people and time-constraints, much like a human chameleon (Vallee & Bloom, 2005). Interest in leadership style has also extended beyond the dichotomous approach of transactional versus transformational leadership that Grecic and Collins (2013) portray, with Servant leadership and its role within the development of coach behaviours also attracting much attention over recent years within the sport coaching literature (Rieke et al., 2008). Its core

constructs of trust, humility and service to others; emphasis on teamwork and community; involving others in decision making; and being strongly based in ethical and caring behaviour would all provide the opportunity to deliver on Côté and Gilbert's (2009) 4Cs (Rieke et al., 2008; Vella et al., 2010). Servant leadership provides a different approach to traditional notions of leadership, with other peoples' needs and aspirations being placed ahead of the leaders, and a mantra of serving first before leading. Rieke et al.'s (2008) quantitative analysis of questionnaire-based responses from high school athletes advocated the benefits of adopting servant leadership approaches as increased athlete satisfaction, where athletes perceived they were getting better instruction and training; increased intrinsic motivation and enhanced mental skills, particularly confidence and mental toughness.

However, quantitative questionnaire based empirical evidence from Rowold's (2006) analysis of student perceptions of coach leadership styles within Martial Arts recognises that coaches at the start of their journey might utilise a more transactional leadership approach while they are mastering the safe organisation and management of session planning and delivery and Morbée et al. (2020) recognise the contextual pressures to win, along with other evaluative contexts, might lead coaches to adopt directive behaviours more frequently. Differences may, therefore, be found within netball coach education and development systems with the degree of inclusion of leadership training and which elements of leadership are encouraged at what stage in a coach's development, so there is value in exploring the inter-personal knowledge and skill development of coaches within Côté and Gilbert's (2009) definition. The empathy and reflective practice required to develop these leadership skills also reinforce the need to examine the intra-personal skill development suggested.

Côté and Gilbert's (2009) inclusion of intra-personal knowledge and skills recognises the need for coaches to be open minded and to value reflection to encourage ongoing learning. Jacobs et al. (2016) adopted a range of qualitative methods to explore the impact of a critical reflection course, based on rational-emotive therapy advocating the adoption of critical reflection as a means for coaches to develop themselves to become the 'good coach' they aspire to be. These intra-personal skills reflect the need for coaches to have empathy with others, use emotional intelligence within their coaching and have the integrity and morality to put the athlete's needs at the centre of the coaching, balancing those needs with the pressure to win (Whitley et al., 2018). An analysis of the degree to which each nation has embraced the inclusion of professional, inter-personal and intra-personal knowledge and skills, together

with an understanding of the contextual and situational factors influencing each nation (Whitley et al., 2018) provides an opportunity to benchmark similarities and differences across nations that might facilitate the analysis of equivalence of qualifications.

Côté and Gilbert (2009) point out that an effective coach is not the same as an ‘expert’ coach, as coaches need to acquire the range of knowledge and skill sets to underpin their coaching and then be able to adapt and use those skills to meet the needs of the individuals they are working with, in whatever context they are working in. Coaches only become ‘experts’ when they are able to do this consistently over an extended period of time. Schempp and McCullick (2010) suggest expert coaches’ knowledge and skill set are extensive and recognise the value of experience to support the extensive knowledge base coaches gain over years of deliberate practice, making mistakes and having a drive to always learn more. Coach decision making, and abilities to be flexible and adaptable have also been a defining feature of youth sports coaches (Allen et al., 2012) highlighting the need to consider the degree of emphasis on practical experiences within coach development, not just formal courses and qualifications, when considering portability issues.

2.4 Growth of coach education and development frameworks

An integral focus of the whole professionalisation movement within sport coaching is “to guarantee a minimum level of quality in the coaching workforce for the benefit of athletes and participants...and increase the recognition and representation of coaches as qualified professionals” (Lara-Bercial et al., 2017, p. 44). Undertaking training as a coach is an important step in ensuring coaches are providing quality coaching to participants (Debanne & Fontane, 2009). He et al. (2017 & 2018) identified within their empirical work examining actual versus ideal sources of coach knowledge that coach education, certification and licensing programmes can provide assurance that coaches have an acceptable level of competency, depending on the rigour and quality of the programme and thus present an opportunity for cross-national recognition of qualifications. However, this is complicated by the degree of variation in the systems that have evolved across different countries and sports, largely as a result of traditions within countries, differences in social, employment and qualification status of coaches and potential conflicts between cultural influences, or habitus, and over-riding educational systems (Lara-Bercial et al. 2017; Stodter & Cushion, 2014). Erickson et al’s. (2007) adoption of a retrospective interview and quantitative account of high

performance coach development called for research to provide greater depth of knowledge on coach development pathways to help whilst Al-Busafi (2008) and Callery et al.'s (2014) more qualitative survey and interview based evidence suggested a need to identify similarities and differences across cultures, systems of delivery, content and accreditation to support a process of comparison (Al-Busafi, 2012; Callery et al., 2014). Lyle and Cushion (2017) also suggested the rigorous examination of content delivery and assessment, together with an analysis of the impact of coach education on coaches' preferences for gaining knowledge.

Well-developed and large-scale coach education systems have been reported within America, Canada and Australia (Koh et al., 2011), with Al-Busafi et al. (2012) also including the UK, though regional differences within the global picture were reported by Koh et al. (2011), suggesting Asia have less well-developed coach education systems, with the exception of a performance perspective within China. Similarly, Bale (2006) and ICCE (2010) identified the increasing numbers of systematic coach education programmes around the world, but there is not yet a global one, and raise the question whether this would be helpful or not.

Where well developed coach education systems are in place, they provide a potential platform for comparative work, depending on the degree of similarity found across systems. Al-Busafi et al.'s (2012) empirical case study approach to examine national and international coach education systems found shared similar characteristics across Canada, Australia and the UK including different levels of qualifications and defined content for each of those levels. Differences were exhibited in the systems, modules and programmes including assessment and accreditation, which highlights challenges for accrediting equivalence (Al-Busafi et al., 2012). Another challenge to the portability of qualifications highlighted is the pace of change and the dynamic nature of the countries' coach education systems (Al-Busafi et al., 2012) which infers that what might be judged as comparable at one point in time may not be at another point in time. Australia, New Zealand and Singapore all had a 3-tier structure to their accreditation which infers equivalence, but Singapore accredited theory and practice differently and Australia moved to a more flexible approach in 2008, allowing more freedom for individual sports to choose the number of levels of qualifications (Australian Sports Commission, 2008; The Singapore Sports Council, 2010). Some sports have developed international systems (e.g. Golf, Football, Snowsports, Tennis and Judo) to bring commonality at the higher end of qualifications, others have looked to provide some commonality in the structure of coach education programme across a continent. Europe, for example, developed a 5 tier qualifications system in 1999 which was then reviewed and

streamlined into a 4 tier system in 2007, including Apprentice Coach- Coach- Senior Coach and Master Coach (Lara-Bercial et al, 2020). The UK sought to bring some commonality within the four home nations and adopted a 4-tier UKCoaching Certificate (UKCC) in 2006, with First4Sport as the awarding body overseen by UKCoaching. However, this harmonising of coaching qualifications across the four nations was challenged by Sport England's Coaching Plan for England (2017) which highlighted the need for collaboration in sports coaching between NGBs and the Chartered Institute for the Management of Sport and Physical Activity (C.I.M.S.P.A.) which is now the professional body for sports and physical activity with the remit of further driving up coaching standards (Gill, 2021). So comparative work might need to be time framed and updated on a regular basis to accommodate this speed of change within and across nations.

As a result, there is much variation in structure of coach education frameworks. The ICCE recognised the challenge this gives a sport in assessing the transferability of skill sets within one sport across nations, as well as the problem of transferring coaching skill sets from one sport to another. In 2012 they developed the International Sport Coaching Framework to provide some commonality in the use of language surrounding the principles of coaching. Efforts have thus been directed to establish the body of knowledge necessary to underpin effective coaching and the key competences. ICCE have shaped their International Sports Coaching Framework (2012) and updated versions (2013; 2017) around six key functions that coaches should be able to perform that might guide the contents and assessment of coach education and development programmes:

1. Set the vision and strategy for the team or programme.
2. Shape the environment, i.e organise setting, staff, resources, monitor progress.
3. Build relationships – lead, manage, educate.
4. Structure and conduct practice and competition preparation.
5. Read and reflect on the field i.e. observe, make decisions and adjustments.
6. Reflect on and learn from one's own actions – self monitor, evaluate programmes and develop professionally (ISCF, 2013; Gould & Mallett, 2021).

They identified and defined four levels of coaching indicating the knowledge and competences that coaches would be expected to achieve at each level, as follows:

Table 1 Coaching role descriptors identified within the International Sports Coaching Framework version 1.2 (2012)

Role descriptor	Knowledge and competence
Coaching Assistant	- Assists in the delivery of sessions. - Plans, delivers and review basic coaching sessions, sometimes under supervision - Basic level of knowledge, competence and decision making to deliver the primary functions with guidance - Supports the engagement of pre-coaches
Coach (Lead)	- Plans, delivers and reviews coaching sessions over a season, and sometimes part of a wider programme. - Extended level of knowledge, competence and decision making to independently deliver the primary functions which are defined as 1. Setting the vision and strategy, 2. Shape the environment, 3. Build relationships; 4. Conduct practices and prepare for and manage competition; 5. Read and react to the field; 6. Learn and reflect. - Supports the engagement and development of pre-coaches and coaching assistants.
Advanced/Senior Coach	- Plans, delivers, leads and evaluates coaching sessions and seasons. - Extended and integrated knowledge, competence and decision making to deliver the primary functions and to mentor others - Works independently and plays a leading role in the structure of the programme. Manages the development of coaches, Coaching assistants and pre-coaches
Master Coach	- Oversees and contributes to the delivery, review and evaluation of programmes over seasons in medium to large-scale contexts, underpinned by innovation and research. Specialist and integrated level of knowledge and competence, recognised as an expert with highly developed decision making skills - Often involved in management structures and development programmes for other coaches

Many nations have adopted this framework directly to underpin their formal coach education structures which helped facilitate cross-national comparison and provides a potential benchmarking tool to examine the netball coaching qualifications frameworks within World Netball. The European Union adapted the framework to forge links with Qualification frameworks, as indeed has South Africa, where the South African Sports Confederation and Olympic Committee (SASCOC) have developed their framework for Long Term Coach Development to identify, recruit, support and provide recognition to coaches (SASCOC, 2012). Their qualifications framework has also been built around the needs of coaches at predetermined stages of development, identifying the knowledge expertise and experience

required to be effective at each level. Their recognition of coaching competence is aligned to National Qualifications Framework (NQF) and the South African Qualifications Education and Training Authority (CATHSSETA), which provides a platform for educational equity and coaching standardisation across sport federations, together with structured professionalisation and accreditation process of the sport coaching sector generally. South Africa's Coaching Framework identifies the competences and skills their coaches are required to develop to fulfil five different coaching roles (i.e. apprentice coach, coaching assistant, coach, senior coach and master coach) so extends the ISCF's (2017) four stage framework to include the apprentice coach.

Three key areas have been identified within work across Europe that sports consider when building a coach certification and recognition system: the differing learning theories which underpin the knowledge, competencies and expertise demonstrated at different stages; the coaching roles, functions and tasks which should align with different coaching contexts; and the deployment and regulatory issues. To address this latter point, Lara-Bercial et al. (2017) suggest coaching system builders need to identify clearly who coaches are considered capable of working with at each level of qualification and clearly describe what the coach is able to do at different stages of development. Where there are licensing systems in place the length that license is valid for needs clarity as does the requirements for renewal and maintenance of currency.

These formal coach education systems have tended to be organised in a linear manner with higher qualifications being directed at higher levels of performance rather than providing opportunities for the development of coaching expertise across the 4 x 4 coach development model (ISCF, 2013). The Canadian system is something of an exception and considered a world leader by Gill (2021) as a result, given they do recognise the different contexts that coaches work in and operate a three-stream coach education system of community sport coach, competition coach and instruction coach, each with their own number of levels to suit the needs of coach and performer. France was also found to distinguish the needs of differing coaching contexts particularly with youth sport and thus provided a more holistic view to coach education (Knowles et al., 2001).

Al-Busafi et al. (2012) suggested focusing on one sport to provide a brief overview of accreditation structure i.e. levels, mode of delivery and content, whether generic or specific for the sport and who has responsibility for the coaching system. The issue of political drivers

in sports organisations was raised, together with the degree of partnerships with universities and the need to consider accrediting experiential learning, particularly for countries where there are no formal coaching programmes presently. Quality control of assessment and accreditation was also highlighted but with a necessary proviso to take account of financial, political and cultural situations. Where research has focused on one sport, for example Volleyball, Riu et al (2014) utilised the ISCF identified levels of certifications Assistant Coach, Coach, Senior Coach & Master Coach to base their qualitative comparison of volleyball coach education systems across five nations comparison on and found some uniformity across national coach education systems, though differences were reported in how overt distinctions between participation and performance were made in France compared to the very performance orientated systems within Portugal, Spain, Brazil and Italy. The coach education systems did not follow the same pattern in each country with variation demonstrated in the coach development activities based around the range of educational training including individual learning, distance learning, supervised practice and recognition of prior learning. It is reasonable to expect, therefore, variation within netball formal coach education and development opportunities between nations too.

2.5 The nature of formal coach education

Formal coach education provides the opportunity to disseminate the growing body of scientific knowledge underpinning coaching and for the application of theory to practice (Day, 2013). Day's (2013) historical analysis the coach education systems in place suggest many have tended to be delivered through formal, mediated, learning opportunities, based around the belief that knowledge is passed from one generation to the next (Carlsson, 2021; Coombs & Ahmed, 1974; Moon, 2004; Werthner & Trudel, 2006). As such, formal courses have tended to be delivered by NGBs of sport via face-to-face tutor, or presenter, led workshops with a mix of theory and practical sessions though other providers of formal coach education include tertiary courses in sports science and coaching (Day, 2013). Nelson et al's. (2006) literature review of formal, non-formal and informal learning sources for coaches suggested formal learning programmes tend to require candidates to demonstrate prerequisites in admission guidelines, before embarking on a course that enforces compulsory attendance, a standardised curriculum and culminates in assessment and certification. The use

of accreditation of prior learning (APL) and fast track options are evident, particularly relating to performance as an athlete when moving into coaching, though differences are found in the degree of APL provided across nations. Werthner and Trudel 's (2006) case study of a Canadian coach's learning journey suggested being an athlete added value but was not an exclusive criterion. Spain permitted experienced athletes to gain direct entry to master coach level, whereas Portugal identified coaching pre-requisites. However, Rui et al. (2014) found no accentuated discrepancies despite the different structures within Volleyball. Riu et al. (2014) also reported all NGBs were supported by National organisations, some recognised University study via Physical Education programmes though not all, but all countries demanded minimum mandatory schooling to enter the education process.

Differences are also found in the organisation of courses with substantial differences of course lengths reported, some courses delivered in a concentrated framework whilst others have an extended period for delivery. Concerns were raised with the Pro and A Diplomas in football with the concentrated delivery model being less effective than the dispersed model from a learning perspective (North et al., 2016). Most delivery of courses occurred on weekday or using a combination of weekdays and weekends within football, but netball is not at a similar point in their professionalisation so this may not be true of netball. Knowles (2001) combination of action research and reflective practice of coaches within higher education coaching programmes had previously suggested extended time frames for delivery gives a better chance for new knowledge to be integrated into coaching practice. Other findings included reflections on the length of time from the end of one course to the next, suggesting there is no surprise that developing coach knowledge relies heavily on personal experience and other learning forms (Cushion et al., 2003; Knowles, 2001). All countries demanded ongoing CPD, with variable amounts (Knowles, 2001). Based on semi-structured interviews of ten Canadian coaches exploring the impact of the national coach education programmes across the coaches' lifespan, Deek et al (2013) suggest the coaching certification structure encouraged continuous learning and lasting knowledge acquisition, though there were differences in timings and frequencies per year within programmes and also across coach individual experiences. This shift away from qualifications as an end point to a lifelong coach learning approach asks questions of portability and the degree to which World Netball wants to focus on portability of qualifications per se rather than developing expertise.

In addition to the delivery model of a course, the content, modes of assessment and modes of delivery exhibit differences across nations. Al-Busafi et al, (2012) examined the number of

hours courses focused on sports science, sport coaching and coach management, but little research is available that has addressed the professional, inter and intra-personal knowledge and skills that Côté & Gilbert (2009) advocate as necessary to be an effective coach. From an assessment perspective, the assessment of competences that forms a natural part of formal education qualifications needs to be robust and clearly articulate what coaches are considered competent to do at each level of qualification. Such quality control often requires sport governing bodies to work in partnerships with other agencies as awarding bodies, which can provide constraints on both content and assessment modes. However, it does provide authentication of the underlying training process that guides employers in their appointment of coaches, an important aspect of assessing the equivalence of qualifications when coaches wish to move from one country to another. Rui et al. (2014) found assessment and evaluation within the volleyball national coach education examined tended to follow traditional tests and exams, though differences across nations were reported in the degree of contextualisation of assessment, with France demonstrating more encouragement for contact with the tutor.

Assessment has tended to adopt a tick-box approach to a range of ‘competences’ that coaches need to demonstrate to be successful in achieving the next level, though North (2016) and North et al.’s (2012) use of programme theories from a critical realist perspective within football coach education systems report some concern about a lack of consistency in assessment practices both between and within countries. An increasing tendency was reported for national associations to focus on formative assessment (assessment for learning) as well as summative assessment (assessment of learning) which is consistent with elements of the reality-based learning concept but significantly increased the number of assessment hours. Indeed, some questioned whether summative assessment against minimum standards was consistent with reality-based learning. Such variability of assessment modes and types poses another challenge to the issues of portability of qualifications.

2.6 Criticism of formal coach education and challenges for comparative work

Formal coach education provides the opportunity to demonstrate competence or standards of coaching that can be mapped against criteria normally identified for a profession (Duffy et al., 2010), but the effectiveness of coach education courses have been called into question within Abercombie’s (2015) reflective analysis of professionalisation of sport coaching

within the UK; Glen & Lavelle's (2020) use of extant research to explore the impact of coach educators in enacting behaviours change in coaches and Maclean & Lorimer's (2016) empirical evidence utilising an interpretative approach with semi-structured interviews of male coaches across a range of sports. Cushion et al. (2010), and McCullick et al. (2009), in their literature reviews, noted the ability of coach education to enact changes in coaching behaviours as an ongoing debate. This raises an issue for the reliability of basing a comparative system on formal qualifications alone, given the intended impact of a coach education course may not match the reality of coaching behaviour exhibited (Maclean & Lorimer, 2016). Both Abraham & Collins (1998), from their behavioural analysis and Cushion et al.'s (2003) position paper suggest a major criticism of coach education is that of relevance and how applicable the information and knowledge gained is. Even the pertinence of resources utilised within course delivery have come under scrutiny within Lyle et al.'s (2010) content and framework analysis of materials used within levels 1 -3 formal coach education courses across 5 sports. Nelson et al.'s (2006) conceptual review of learning types suggested formal coach education is more like training or even indoctrination than education, as coaches tend to be exposed to a toolbox of professional knowledge and a gold standard to aspire to achieve utilising expected set behaviours. Similarly, Taylor and Garratt's (2010b) sociological analysis of the professionalisation of sport coaching suggest coach education courses tend to homogenise and brand practice with a tendency to lose cultural and historical nuances, supporting the view that coaching becomes a tool of the welfare state. Formal coach education courses have also received criticism for their 'knowledge transfer' approach to education and many have sought to extend the range of learning opportunities provided both within and alongside the formal delivery.

Research over the last decade or so has indicated a variety of sources supporting coach development (Nelson & Cushion, 2006) with Nelson et al. (2006) looking to provide a conceptualised framework to support discussions and recognise that the drive towards a professionalised coaching system fails to consider the hugely important aspect of how coaches learn. Cushion et al.'s (2003) Bordieuan analysis of coach learning suggested sports coaches learn primarily from their observations of other coaches, their experiences as athletes and their own coaching. Nelson et al.'s (2006) literature review suggested the learning episodes within formal and non-formal learning, though frequently identified within empirical research, can often be low impact compared to those from informal learning episodes. Research from both qualitative and quantitative perspectives has sought to explore

the role different types of learning play within behaviour change (Mallett et al., 2009) and coach preferences for different learning types (dosSantos et al., 2010). Mallett et al's (2009) position paper based on their search of empirical evidence highlighted that distinguishing between formal and informal learning is less helpful than acknowledging the varied impacts of each, whereas dosSantos et al (2010) quantitative analysis of coach perceptions indicated coach perceptions might vary depending on prior experiences and stages of coach development. Moon (2004, 2013) identified the value of providing learners with a range of learning opportunities, so that coaches could benefit not just from their mediated, formal coach courses that are a necessary part of their qualification pathway for any profession to assure standards and quality control (Gill, 2021; Lara-Bercial & Bales, 2020), but also the extended learning opportunities that support a coach's journey. Duffy et al, (2010) identified that professionals would normally be expected to keep up to date through a range of recognised continuous professional development courses, so account needs to be taken of the ongoing CPD and engagement from the coaches in their learning particularly given the consensus among research that informal learning offers the most profound and lasting learning opportunities (Cassidy, 2009; Cushion et al., 2003;)

Concerns have been raised not just about the impact of formal coach education when compared to other learning forms but also the learning environment created within the course design and delivery itself (Cassidy, 2009; Cushion et al., 2003; Erickson et al., 2008; Lyle et al., 2010; Nelson et al., 2006; Nelson & Cushion, 2006). Callary et al. (2014) provided empirical, qualitative evidence combining an initial survey with follow-up interviews of system managers to compare seven high performance coach education programmes with a particular focus on how far alternative methods of learning, particularly mentoring and critical reflection had been adopted. They described goals, curricula and pedagogical approaches and considered the implications for professionalisation. Intentional learning opportunities provided through internships were often coupled with reflective processes, mentorship and communities of practice. Callary et al. (2014) supported the use of different types of mentoring relationships – formal, informal and facilitated, each with different degrees of contact. They highlighted New Zealand & Norway's use of Communities of Practice, identifying the need to give time to developing relationships, the importance of regular meetings after an initial programme and the different impact on coaches of delivery modes. The value of problem-orientated, role play and case studies to develop expertise

around specific high performance coach issues was highlighted along with the important issue of the quality of the person running the coach training.

Day's (2010) historical account cautioned the impact of initiatives to professionalise coaching leave little scope for a craft interpretation of coaching as credibility is only awarded to those who progress through science orientated coach education programmes with the purpose of mastering tacit pedagogy and are thus likely to inhibit innovation. Day (2010) suggests this craft learning is embedded in more informal learning opportunities, such as communities of practice, and emphasise the importance of a coaches' own experiences when playing as well as the crucial role that working with other coaches plays in the development of coaching practice. However, empirical evidence from Nelson et al. (2013) using a combination of qualitative methods to interview and questionnaire coaches interviews highlight that coaches want more active involvement in courses, suggesting that working with mentors could go some way to address the shortcomings of formal education, though there needs to be recognition that more active involvement of coaches within their learning does ask questions of the skills sets of coach educators. The behaviours and practices of coach educators make long standing impressions on coaches, particularly given the reliance of coaches in their early stages of development on the formal coach education courses and qualifications, as indicated from Nash & Sproule's (2011) exploratory study interviewing experienced and novice coaches.

Within football, North (2016) adoption of a critical realist approach utilising programmes theories to benchmark the English F.A. coach education system against the best in the world highlighted a key area for improvement is their coach educator training systems, given there appears to be a large coach educational 'legacy' workforce, many of whom are part time and difficult to influence on 'new coaching ideas'. There was also concern that national associations had very underdeveloped initial and further education programmes for coach educators, even amongst more established national associations, though there were examples of good practice (North, 2016). Nash & Sproule's (2011) more interpretative approach also identified the delivery of courses tended to be too narrow in focus and would have benefitted from greater exposure to wider educational skill sets particularly questioning, problem solving and decision-making skills. At the expert end of the spectrum, the informal learning from incidental conversations with other coaches proved to be utilised more extensively than at the early stages of development. A further complication to comparative work was

highlighted in Cassidy and Kidman's (2010) analysis of the language used within the text of coach education materials, coupled with interviews of those writing the courses, indicating the paradigm shift that New Zealand Sport has made from an accredited and certified, standardised programme to an ongoing professional development process informed by an applied athlete-centred philosophy. All these components of coaching systems need consideration when looking to compare qualifications across nations and identify similarities and differences.

Comparative studies of coach education systems are thus complex. Abercombie (2015) points out that a drive towards a professionalised coaching system is in everyone's interest so that athletes and NGBs are safe in the knowledge that coaches know what they are doing and why at all levels of participation and performance, but how to provide that comparability evidence most effectively is still not clear. Within Rugby, a qualitative global comparison study (IRB, 2013) sought to summarise the systems; identify the overarching features and implications for transferability; identify national coaching benchmarks and provide a comparison at different levels of the purpose, pre-requisites; duration; assessment; learning outcomes and content of coach education across different nations. Links to ISCF and EQF were highlighted where they existed and the mediating factor of tutor training and quality control of those delivering the coach education was highlighted in efforts to develop a central global template.

EU Project Coach Learn (Lara-Bercial et al., 2016) provided a system mapping tool, with key features linked to the educational framework, advocating step by step guides to mapping qualifications and developed a set of tools to support comparisons between national systems: The mapping tools were advocated to facilitate a dialogue between any two qualifications being compared to address some of the difficulties other researchers have reported. A series of step-by-step questions were asked in a sequential manner to identify similarities and differences between two systems, identifying whether a nation's qualification sits within an NQF; is aligned to EQF; is mapped against coaching roles and is competence based, built around learning outcomes and units of learning. Consideration was also given to how competences are developed and evidenced to fulfil specific coaching roles, with a particular population, and at a certain stage of developing expertise. ESCF (2017) was utilised as the benchmark for such a comparison, though the mapping exercise is advocated for use with a direct comparison of one system against another, and not necessarily for multiple systems.

2.7 Global mobility of workforce – how others manage.

Global mobility of workforces is a challenge across most occupations, given that our passports present restrictions for where we can go and what we can do in different countries, at the same time as more and more jobs are only open to those that have formal accreditation (often degrees) or to people with a specific form of vocational and occupational training, many requiring ‘licences’ to practice (Johnson & Wolf, 2009). Sport coaching generally and netball coaching specifically are not alone in their quest to develop a system that eases movement of their workforce personnel across national boundaries. This section explores both the solutions other professions have adopted to address this problem and the practice other sports have adopted to cope, to present potential models for World Netball to adopt. This section relies heavily on grey literature, i.e. policy and strategy documents, as well as personal communications sourced from contact made by the researcher with the NGBs to clarify information regarding how different sports manage the global mobility of their coaching workforces.

Well-established professions requiring graduate entry, such as medical and dentistry, tend to structure their comparative work with a Global Federation, for example the Global Dental Federation that provides the global voice and individual nations providing a list of qualifications they recognise, or endorse, within international degree programmes. Each nation provides guidance through, for example the General Medical or Dental Council within the UK, or the New Zealand Qualifications and Credentials Framework, for which home and overseas programmes they recognise (GMC, 2019; NZQA, 2020). Within the UK, the GMC’s Generic Capabilities Framework then identify the professional knowledge, professional skills and professional values and behaviours that UK consider appropriate for Medical practitioners to practice in the UK (GMC, 2019) and anyone without these endorsed qualifications wishing to practice within the UK are required to take the UK Medical Licencing examination, which is a combination of written and practical assessment to check equivalence of capabilities (UKMLA, 2023). Within nursing, there was a more recent shift from vocational based training to more professionalised education and increasing use of Baccalaureate and degree entry requirements. Baker et al.’s (2021) empirical evidence identified considerable diversity of levels and standards of nursing training and care within and between countries. Nursing’s solution followed a similar path to other medical professional training, with The Global Alliance for Nursing Education and Sciences

(GANES) set up to provide guidelines for nursing education and promote greater harmonisation of nursing training globally. Guidance from the Global Pillars Framework included required knowledge and practice skills; communication and collaboration; critical thinking, reasoning and clinical judgement; professionalism and leadership as well as providing guidance to course developers and institutes running nursing programmes of study. Assessment of the equivalence of nurse qualifications when trained in a different country would normally require candidates to demonstrate they can practice safely and effectively, taking into consideration their qualifications, training and experience. Judgements on equivalence are then made by a national council, for example the Nursing and Midwifery Council in the UK, based on evidence provided and practical assessment.

Empirical evidence from other vocations have reported challenges in judging equivalence of qualifications when there are different structures of learning programme (Maandag et al, 2007; Brockman et al, 2011). Teaching is faced with a struggle between the demands to train teachers at a high academic level versus organising a satisfactory relationship between theory and practice, which is potentially similar to coaching, given the range of coach development providers now in existence, including universities. There is global acceptance of different routes into teaching, with different models of learning based around time in school versus training institutions, but there are differences in the willingness of nations to accept qualifications from outside of their home nation when the training is of different lengths (Gift, 2023). When utilising a checklist approach to conduct comparisons within the teaching profession, Maandag et al. (2007) highlighted the importance of taking note of delivery modes and learning environments when utilising comparing programmes of study, as well as the structure and content of systems in use.

To address difficulties of judging equivalence of qualifications there have been some key legislative processes, for example the Lisbon Recognition Convention (2001) and Bologna process (1999) aimed to support comparisons of degree programmes and align these with other vocational qualifications through the development of National Qualifications Frameworks (NQF), Aligning a European Higher Education Structure in Sports Science (AEHESIS) and the European Credit Transfer System (ECTS) (Duffy, 2008; Petry et al., 2006). These aimed to provide transparency of what students have learnt at different levels of learning with clearly articulated graduate competences and learning outcomes for programmes of study, quality assured by the European Standards and Guideline (ESG) but

intended for universities to still maintain their national identity (Petry et al., 2006). Similar systems were developed within United States, Asia and Pacific and Africa, though with more limited application in some other regions of the world (Huisman et al., 2012). Challenges were found with the accreditation of prior learning, the extent of change and the variation of numbers of levels of NQFs across nations. For example, PhD level of study is designated as level 8 within Europe, Level 10 within Africa, Emirates, New Zealand and India and level 12 within Scotland. So, despite the move to make comparisons easier internationally, countries still find themselves mapping their qualifications across nations to work out the equivalence of the very frameworks that were designed to simplify the process (NZQF/EQF Technical report, 2016). The degree of engagement with NQFs of netball coach education qualifications may, or may not, provide greater clarity for transfer of expertise across nations as a result.

Within sport coaching, globalisation of the coaching workforce is most readily seen in the context of high-performing positions in professional and Olympic sports. Coaches moving from one country to another can bring excellent technical and tactical knowledge but can struggle with the language and will need to understand the culture difference to their own country (Mallett et al., 2021). He et al. (2018) review of both empirical and non-empirical studies relating to gymnastics and rhythmic gymnastics coaches examined differences between eastern and western cultures of sport coaching and suggested a better understanding of how coaches from different countries learn to coach is now essential to consolidate transferability of registration and accreditation of coaches to practice. Given that each nation has its own sporting governing body, history and contextual issues behind their coach education and development systems, there is a need to analyse the training that coaches receive within their development and the competences they are expected to be able to demonstrate at different stages in their journey to facilitate the assessment of transferability of skill sets from one nation to another. Differences are evident across sports in the ratio of professional versus volunteer workforces, the degree to which qualifications are aligned to NQFs and the level of integration with universities.

Those sports that have a more mature degree of professionalisation, or are Olympic sports, such as Golf, Skiing, Tennis, or Judo, have a different ratio of volunteers versus professional coaches to cater for, relative to netball, and have adopted different models to structure their coach learning. Skiing has operated a licencing system for over 40 years and adopts an international qualification to cater for the higher end of performance that should permit

coaches to work anywhere in the world, though France also requires incoming coaches to pass a personal performance test before being allowed to coach. National organisations then align themselves with that overarching international qualification, for example the British Association of Snowsports Instructors operates a blended learning approach, and coaches move from Level 1 through to 4, based on the UKCC and ISCF model. Qualifications are aligned with both Scottish and European NQFs and Level 4 is recognised as the International Sports Coaching Diploma. Snowsports England, though, encourage coaches coming into the country to apply through completion of an 'equivalency form'. Everyone is dealt with on their merit, rather than having a list of qualifications that are considered equivalent and coaches are then awarded the commensurate award within England, based on the evidence provided. Golf adopts a slightly different system, having based their qualifications on the ISCF, writing their own version (IGCF, 2013). Trainees wishing to gain the Professional Golfers Association of North America (PGA) awards sign on for a 3-year training programme working through an Association of Sports Qualifications (ASQ) Level 1 Coaching Assistant course then a Level 2 Coach award, delivered through a blended learning approach. Volunteers are encouraged to take their first step with their home nation and, for example, in England complete an Activator course.

The International Judo Federation opted not to try and judge equivalence between different nations for their top level of coaching, given the challenges universities faced with credit transfer (Kozsla, 2023, pers.comm.). Instead, any coach wishing to sit on a coaching bench at an international level of performance must qualify through the International Judo Federation Academy, based in Malta, whether previously a world champion or not. Quality and equity in courses is assured by a team of tutors who fly out to deliver the practical elements of the course, with the more theoretical topics being delivered online. Courses are available in a number of different languages and the academic nature of IJF academy work produces research that can then be published within their own journal, to continue to develop the subject knowledge within the sport (Kozsla and Galea, 2023, pers. comm.). Home nations can then align their qualifications with the IJF. British Judo, for example, has adopted the UKCC levels 1-4 structure to their coaching awards, with Masters level courses being delivered through named universities, delivered by judo specific staff to achieve IJF recognition, despite being a distance learning masters provision. Efforts are currently being made to align the British Judo Level 3 with the IJF Level 1 (Callan, 2023, pers.comm.). To manage incoming coaches or performers transferring into coaching, British Judo insist on individuals

working through the level 2 course, in order to be insured to work independently, irrespective of their home-based qualification.

These Olympic sports operate systems that are not dissimilar to World Netball Officiating, where there is an International Umpiring Award at high performance level that World Netball own and oversee to ensure quality and portability on the international scene. Below that at regional level, Europe Netball, for example, has developed a Europe Netball Officiating Transfer Policy (2024). Europe Netball have their own officiating awards available for countries who wish to use them, but also run a system of endorsement for other awards. England for example, have their awards endorsed by Europe Netball. This aims to give a straightforward transfer of qualifications with other nations also endorsed by Europe Netball, though some nations might still require a practical assessment to check the standard of umpiring. Where a nation is not endorsed by Netball Europe or comes from outside of Europe, the assessment is made by a panel who map the criteria, competence and quality of learning programmes and then deal with each individual on merit via an Umpire Transfer Request Form on google drive (Palmer, 2023, pers. comm.). All umpires are required to meet Europe Netball's policy regarding safeguarding, though umpires are often required to complete a practical assessment too. Officiating at the top level encourages consistency across nations, to encourage neutrality within umpires, so coaching would have to consider the degree of similarity they wish to adopt versus the degree of national differences in coaching they wish to maintain if they are to adopt a similar system to officiating.

There is a tendency for team sports to be driven more from a regional perspective in their efforts to balance provision for coaches in paid employment versus the development of volunteer coaches (Duffy et al, 2010). The Union of European Football Associations (UEFA) aimed to solve equivalence issues for coaches at both voluntary and paid capacity. A Pro Licence at the top level was underpinned by a UEFA A and B and more recently a C licence, which should then be internationally recognised and transferable. Although there was increased harmonising across a number of countries, North et al.'s (2016) empirical evidence also found high levels of variation in diploma implementation and operation across the national associations, due to the autonomy of delivery resting with the nation delivering the course. North (2016) raised concerns that the qualifications may not be as 'equivalent' as they intended to be, due to changes made in the delivery of each nation. Netball would need to be aware of such challenges if they wished to adopt a similar system.

Basketball and Handball also developed a regionally based approach, with Masters level awards servicing top level coaches and based at key universities. For example, TF University in Budapest deliver a European based distance learning Masters course, in English, for international coaches underpinned by national delivery of other levels of coaching (Nemeth, 2023, pers. comm.). Similarly, within Handball, Levels 1,2,3 sit within home nations and Level 4, Master coach award is part of the European Handball Federation, or an EHF endorsed course run within the national federation. These programmes are supported by the European Handball Federation Competence Academy & Network (CAN) run by an EHF Expert Group, drawn from within and outside of handball. So, there are options here for netball to structure portability through regional levels, perhaps with a direct link to universities within high performance coaching.

World Rugby have adopted a different system again. Having conducted a global comparative study in 2013, World Rugby developed a matrix approach to identify clearly which nation's qualifications are equivalent with a 'Global Coaching Qualifications' section on the World Rugby webpage now, detailing which national qualifications are deemed equivalent to each of the World Rugby qualifications. There are a series of online workshops to support coach development too. Similarly, within cricket, individual nations, for example the English Cricket Board, identify on their website which other nations' qualifications are equivalent. They also recognise that not everything covered within a course is assessed and employing coaches might also require information about CPD attended and currency of coaching practice.

Formal, mediated coach education courses are a necessary part of a qualifications pathway for any profession to assure standards and quality control (Gill, 2021; Lara-Bercial & Bales, 2020), but Artes et al. (2016), Callery et al., (2012) and He et al. (2017; 2018) recognise they are only one source of a coach's lifelong learning process. The importance of other learning activities to support a coach's journey is now widely recognised (Moon, 2004; 2013) and He et al. (2017; 2018) highlight how globalisation and advances in technology facilitate the flow of coaching knowledge so recognise the impact of coach learning from other sources beyond formal coach education courses and indeed beyond coaching as a discipline. Being an athlete, parent, learning from others and other qualifications are examples cited in Callery et al.'s (2012) empirical exploration of the impact of episodic experiences on becoming an experienced coach. There is a recognition of just how idiosyncratic learning experiences are,

both between and within individual coaches, often mediated by the coaches' curiosity, desire to improve and inevitably impacted by prior experiences coaches bring to any new learning opportunity (Moon, 2004). If licences are to be the primary recognition of the coaches' mastery of the practical demands and competencies of sports coaching, as ENSS (2007) suggested, then judgements of equivalence of qualifications may need to embrace the learning beyond the formal qualifications per se and so become more of a portability of expertise than just qualification.

The Australian Cricket Board are looking to reduce the emphasis on formal qualifications and replace them with personalised records of skill sets, considering replacing formal qualifications with ongoing records of skill sets (Lyons, 2023, pers. comm.). Australian Water Sports are similarly contemplating using a 'skills passport' that focuses on the skills needed to impact participants. They have added a fifth C to Côté & Gilbert's (2009) original 4 Cs, 'Caring', and Australian Waterpolo are using these 5Cs as an opportunity to identify the skill sets necessary, aiming to use this as a basis for a more sophisticated system of APL (WUF, 2018). Coaches need to provide evidence to support their skills in each of the 5Cs to warrant APL. Within Netball, the Oceania region are exploring a similar approach to their developments, utilising a 6C approach to define their core beliefs and values that underpin their framework to develop coaches, players and officials alike: Confidence, Competence, Connection, Caring, Character and Contribution, so adopting a similar approach to Australian Waterpolo is another option for World Netball (WUF, 2018).

Equestrian sports also recognise the importance of ongoing CPD as well as attendance on formal courses and have established an International Group for Equestrian Qualifications (IGEQU, 2013) to harmonise qualifications across different equestrian disciplines. Courses within different disciplines are compared and mapped to provide an agreed matrix of minimum requirements at 3 international levels for their coach educators. Individuals completing qualifications in one country and wishing to work in another can apply for and be granted an IGEQU coaching passport, providing their course is on the approved list, which can provide evidence of experience within and beyond their qualifications and support transferability of qualifications across nations. A similar approach has been adopted by The British Association of Sports and Exercise Scientists for those wishing to apply for endorsement or re-accreditation. Candidates are required to present evidence of engagement within development opportunities across a range of learning activities, formal, non-formal

and informal and demonstrate their ability to apply content of courses to practice (BASES, 2023). Candidates are expected to draw on personal examples and include evidence of the use of reflective practice and ongoing learning. Applications are reviewed by British Association of Sport and Exercise Scientists (BASES) trained and recognised reviewers. World Netball could, therefore, adopt a more holistic approach within any portability enhancement scheme, where qualifications are matched but notice is also taken of coach learning across a range of sources, together with the coaches' ability to apply that learning to their own professional practice. World Netball might also consider how many of the key drivers of coaching systems identified by European Sports Coaching Framework (2017) they are able to take into consideration: Coaching Practice; Coaching Expertise; Coach Development; Coach Certification and Recognition and an Athlete-Centred Vision.

Lefebvre et al. (2016) utilised Côté & Gilbert's (2009) classification of professional, inter and intra-personal knowledge and skills set to review 285 Coach Development Programmes within a range of countries in order to classify CDP learning and permit comparative analysis of similarities and differences between programmes. CDP programmes were identified within participation and performance contexts, their modes of delivery were identified as online, individualised or collective in-person, i.e. delivered to a group, and five organisational contexts were identified – large scale, small scale, university-based, formal and non-formal. Most emerged as part of national accreditation with a smaller number as private, research or community activities. Lefebvre et al. (2016) identified the majority of CDPs were focused on professional knowledge, with few adopting an inter-personal knowledge focus and less still adopting an intra-personal skills focus. Lefebvre et al. (2016) thus provides a possible mechanism for classifying learning of coaches, across all learning activity types that would support the desire to raise the profile of inter and intrapersonal skills and move beyond the traditional reliance on content and professional knowledge (Garner et al, 2020). Lefebvre et al.'s (2016) adoption of a flexible approach to their systematic review permitted the inclusion of non-formal as well as formal education though recognised this necessarily involved an incomplete picture of information available within the public domain. Lefebvre et al (2016) also recognised their need to include English speaking research led to countries such as Brazil where the link between coach education and universities is much closer, being under-represented. Their work also stopped short of interviewing to determine the situational and contextual issues behind the programmes.

2.8 Summary of the case ‘for’ a comparative analysis versus ‘of’ a comparative analysis

The recent growth of sport coaching research has seen the emergence of the conceptualisation of sport coaching in efforts to integrate more social aspects of coaching and gain a more holistic understanding of the coaching process, which the more positivist, reductionist research had been criticised for not addressing. Within this conceptualisation process authors have sought to bring clarity to thinking and understanding. Cushion et al. (2006) recognised the need to gain a better representation of the complexity of the coaching process and give more emphasis to the essential social and cultural elements of the process. To gain greater clarity, Cushion et al. (2006) distinguished between models ‘for’ and ‘of’ coaching by identifying models ‘for’ coaching as idealistic representations and models ‘of’ coaching as empirically based. Similarly, Hughes (2022) explored greater conceptual clarity in the relationship between philosophy and sport coaching suggesting that a philosophy *of* coaching might be something we articulate and thus different from actually *doing* philosophy *for* coaching. In a similar way, this section seeks to distinguish between the need *for* a comparative analysis and the process *of* conducting a comparative analysis.

The case *for* a comparative analysis relates to the benefits it offers to facilitate a better understanding of an idea, theory, problem or question by comparing items to one another and distinguishing their similarities and differences (Bryman, 2016). The key similarities and differences are highlighted with a view to exploring potential solutions to problems. Research within sport coaching has utilised comparative analyses to achieve several purposes. For more positivistic approaches to comparative analysis, such as North’s (2016) examination of different coach education systems the reason for the analysis was to compare the English FA system against other systems in the world to identify best practice. Those that have adopted a more interpretative approach (Al-Busafi et al., 2012; Callary et al., 2014) have tended to use the comparative analysis for a deeper understanding of the nature of coach education to explore geographical similarities in the trends adopted. Others (He et al., 2018) used the comparative analysis for exploring similarities and differences between eastern and western cultures in their coach education, whereas the purpose for Gök and Aslan’s (2023) extensive search of European countries was to inform future development of coach education. Other authors have used their comparative analysis for a deeper understanding of coach education systems within one sport (IRB, 2013; Rui et al., 2016) with IRB (2013) aiming to exploring the development of a collaborative system for the judgement of equivalence of qualifications

to support their increasing global movement of their coaching workforce. Comparative analysis is thus a powerful tool for gaining an insight into a range of issues, to compare two or more topics and identify patterns, relationships and other important insights. As such the comparative analyses can inform decision making and help us understand the world around us.

Each of these comparative analyses are preceded by research to gather information that might support an idea or that might highlight something that was different or unexpected, but the research underpinning the comparative analysis provides the evidence to support potential solutions. This research information gathers via exploring the netball coach education and development systems of six nations in order to provide the evidence to support a potential solution to the problem of judging equivalence of qualifications and support increased global mobility of netball coaches. List of similarities and differences are generally produced within comparative analyses so that consideration can then be given to how changes in one aspect might impact changes in others. Impacting, outside, environmental factors can also be given due consideration. As such, a distinction can be drawn between the reasons *for* a comparative analysis, i.e. the purpose of adopting the comparative analysis and the nature and structure *of* the comparative analysis i.e. what to include and how to conduct the analysis. Choices made for inclusion and methods of comparison adopted will, necessarily, be informed by the reasons for the analysis in the first place and the nature of the ‘problem’ or ‘understanding’ sought. For example, Callary et al (2012) included analysis of the different learning types within high performance coach education programme across seven nations whereas IRB (2013) and Rui et al (2016) have focused on one specific sport, to gain a more in-depth descriptive analyses of coach education programmes across nations to examine course content, length and assessment at different levels of qualification. Gök and Aslan (2023) highlighting similarities and differences in the organisation around the coach education systems as well as within them; Lefebvre et al (2016) adopted a classification system for the modes and delivery of coach education courses and North’s (2016) critical realist approach utilised Programme Theories based on CMO (Context – Mechanism – Outcome).

Within this research, the rationale *for* adopting a comparative analysis was to gain a deeper understanding of the coach education systems across the six nations. A comparison was made *of* information gathered from documentation and interview analysis to identify similarities and differences within structure, content, assessment of different levels of coach

development. This comparative analysis also sought to gain understanding *of* the situational and contextual constraints surrounding each system through exploration of the coaching cultures encouraged and philosophies underpinning the different systems. By identifying the similarities and differences across nations, potential solutions could be explored to help world netball move towards establishing a system to support the global mobility of heir coaching workforce as well as contribute to the growing literature basis of comparative analysis within other sport.

2.9 Research Questions

1. What are the similarities and differences between netball coach education programmes in six nations, as representatives of the six regions of World Netball?
2. What are the situational and contextual factors experienced when planning and delivering each nation's netball coach education programmes?
3. To what extent can netball coach education programmes be mapped across each other to enable international portability and a shared understanding of qualifications?

Chapter 3 Method

3.1 Research paradigm adopted

This research set out to examine each nation's coach education and development system, and provide empirical evidence to explore their structure, content and assessments, seeking to gather an all-round view of the systems in place and the lived experiences of those working within and through the systems. The research did not seek to measure and test hypotheses, look for numerical cause and effect relationships or indeed identify which system, or part of the system is more or less effective, so did not adopt a positivist approach. Instead, the research aimed to explore and gather data, search for patterns and then make inferences so an inductive approach was predominantly used (Bryman, 2016; Gray, 2014).

The lived experiences of those that work within each system and who have travelled through the systems were explored to draw inferences on the realities of system application across different nations, adopting a constructionist ontological stance (Bryman, 2016; Kahn & MacEachenn, 2021; Sandberg, 2005). From an epistemological perspective, an interpretivist approach was adopted to understand the philosophies behind and within each system and provide insights into the complexities of each nation's cultural and situational constraints (Denscombe, 2010; Gray, 2014; Potrac et al., 2014). Similar to Al-Busafi, et al.'s (2012) adoption of an interpretive perspective to analysis national and international coach education systems, this research aimed to illustrate similarities and differences between nations, though recognised the need to provide some structure for analysing the multiple realities explored (Denscombe, 2010). Findings of this research were intended to provide a pre-cursor for the development of a mechanism to support increased portability of qualifications globally, so also claim to be pragmatic in nature (Giacobbi et al, 2005).

3.2 Methodology

This research aimed to find out what was the reality within this domain of national coach education systems, and each phase of the data collection was used to generate the questions asked in the next phase. To access, interpret and understand data, documentary analysis was utilised in the first instance, which Bowen (2009) recognises as a staple in qualitative

research. Documentation analysis is a useful method for searching for background information and historical insights, formulating relevant questions and providing supplementary evidence to support later empirical stages of the research, tracking changes and developments in systems and processes, and corroborating evidence from other sources (Bowen, 2009). Examples of research within sport coaching that utilised documentation analysis include the IRB (2023) in their comparative study of qualifications across different nations within rugby; Lefebvre et al (2014) in their development of a classification system for coach education and Rui et al. (2014) in their analysis of volleyball coach education system across five nations. Bowen (2009) does warn, though, of the challenges documentation analysis can present in accessibility and lack of completeness, and these challenges were reported by the IRB (2013) and indeed experienced within this research. For example, only some countries had readily accessible documentation.

A popular approach within coaching research has been to supplement documentation analysis with the inclusion of other methods to provide a more in-depth understanding of the NGB formal coach education systems and to facilitate the triangulation of data findings (Denzin & Lincoln, 2005; Watts & Cushion, 2017). Callery et al. (2011), for example, utilised an online survey to gain a more detailed insight into the Canadian ski coach workforce and identify geographical differences in their experiences of their coach education system, whilst Callery et al, (2014) added follow-up interviews to their online survey when exploring coach experiences of high-performance coach education programmes. Al-Busafi et al (2012) was able to supplement their analysis of the coach education systems in seven different countries with attendance at coach education courses and the recording of observations and field notes to give their analysis a more holistic approach.

In this research, attendance at courses within different nations and direct observation of courses was not an option, as there was a global pandemic at the start of the research process and there was no funding for international travel. Instead, information from the documentation analysis was supplemented with interviews, rather than surveys or questionnaires, to permit the gathering of more in-depth, personalised viewpoints from the interviewees which an online or pencil and paper questionnaires or survey would not permit to the same degree. Questioning skills and probe questions were used to explore the lived experiences of the system managers who plan and deliver the formal coach education programmes and a sample of coaches who have worked through the courses (Watts &

Cushion, 2017). Data collected was therefore qualitative rather than quantitative. As part of the research process, it was important to remain open to the addition of new material and findings as they emerged and, as such, adopted an iterative approach so that there was a constant weaving between data and theory throughout the research (Bryman, 2016).

3.3 Reflections on researcher's journey, experiences within that journey and role within World Netball

The researcher's personal, professional and vocational interest in this research area grew from a passion to improve the coaching process and the degree of positive impact coaching can, and should, have on participants. Interest in the quality of the formal coach education provision grew as the researcher's experiences within both the university and NGB contexts developed, particularly the low completion rates of some NGB qualifications. Anecdotal reports from candidate coaches suggested many of the barriers for them completing their awards related to the work-life conflicts typically experienced by women coaches more generally in sport (Bruening et al, 2014; LeDrew & Zimmerman, 1994; LaVoi & Dutove, 2012), but more specific challenges were also commented on including difficulties in adopting some of the coaching methodologies being suggested within formal education, particularly when this provided a very different approach from that which coaches were familiar with. Such comments, combined with mentoring of UKCC Level 3 coaches, stimulated an interest in the impact of formal coach education and the support available around formal courses to help coaches enact the changes in behaviour that formal courses might have encouraged within their learning programme. Coaching alongside coaches from New Zealand and discussions about underlying beliefs, values and coach education systems raised the researcher's awareness of differences across nations, not just in the structure of coach education pathways, but the underpinning philosophies and coaching cultures being encouraged. This raised a further question in the researcher's mind of what other nations within netball might be doing with their coach education and development.

Ensuing discussions to refine ideas put the researcher in touch with the then Chair of the International Netball Federation, now World Netball, Coaching Advisory Panel who were looking to move towards a system of judging equivalence of qualifications to support the increasing global movements of their coaching workforce. Research into the underpinning coach education and development systems would be helpful in considering what system

might be possible to generate within netball. At the time the research was conducted, the researcher did not have a direct involvement with World Netball, but WN was an interested party in the outcome of the research. A research proposal was submitted to the Chair of the International Netball Federation Coaching Advisory Panel at the outset of the research for their approval. Once permission was obtained, the INF CAP identified initial contacts within the six nations nominated to be part of the research. As WN were an interested party in the research, updates were given in person to the CAP once the research was underway, and then via written reports part the way through and at the end with a final report submitted in October 2024. Other information requested by the CAP was provided to support CAP discussions of their developing endorsement system. A summary of the key stages of decision making in developing the structure and methodology of the research is given in Figure 3.

When research is conducted over several years, there are many experiences, learning opportunities and challenges along the way. Similar to others who conduct research whilst juggling work and life issues, the researcher faced challenges in gaining sufficient runs of time to get coherence of thinking, absorption and assimilation of material. The pace of change within coaching related literature over the last few years merely compounded that challenge. Reflections on the research process highlighted the logistical issues that research across different countries presents, though the options to utilise virtual environments has been invaluable to support this research. The researcher found that each nation had different expectations of protocol to be followed to access individuals as potential participants and different sensitivities that needed to be taken into account, both when interviewing individuals and when reporting findings. Conducting interviews within pandemic lockdowns were notably longer than those since lockdown, perhaps an indication of how much participants missed the netball contact they were used to so that was an added challenge at the start of the interviewing process. One of the most humbling experiences for the researcher, though, was the response of those invited to be part of the research project, particularly from other nations. Some reported feeling honoured to be part of a cross-nation research project which spoke volumes for the commitment and passion of those contacted and suggests an enthusiasm for more netball related research, which MacLean et al. (2022) highlighted as being under-represented in academic literature. However, similar responses were also gained from fellow academics who were contacted and system managers of a range of other sports who gave willingly of their time and whose openness in sharing experiences was not only

refreshing but left the researcher feeling most privileged to have come into contact with such positive individuals.

As the research progressed, managing shifting perspectives and working out new boundaries of investigation was an ongoing challenge. Despite similarities in some aspects of the coaching culture reported within each country the researcher became increasingly aware of the strength of the situational and contextual influences on the systems currently in operation, providing support for Stodter and Cushion (2014) who highlighted the impact of culture on coach learning. The experiences of coaches within each nation were different, not just in structure, content and assessment of their formal coach education pathway, but in the delivery, underpinning philosophy and degree of support available around the formal courses, which asked questions of whether a purely mechanistic approach to judging equivalence would be enough as it could risk missing the more individual or national perspective. Other experiences of challenge was applying the plethora of literature relating to qualitative methods to this research question and enacting the different forms of analysis given the breadth of advice available as to how to conduct thematic analysis particularly.

A GLOBAL COMPARATIVE ANALYSIS OF NETBALL COACH EDUCATION

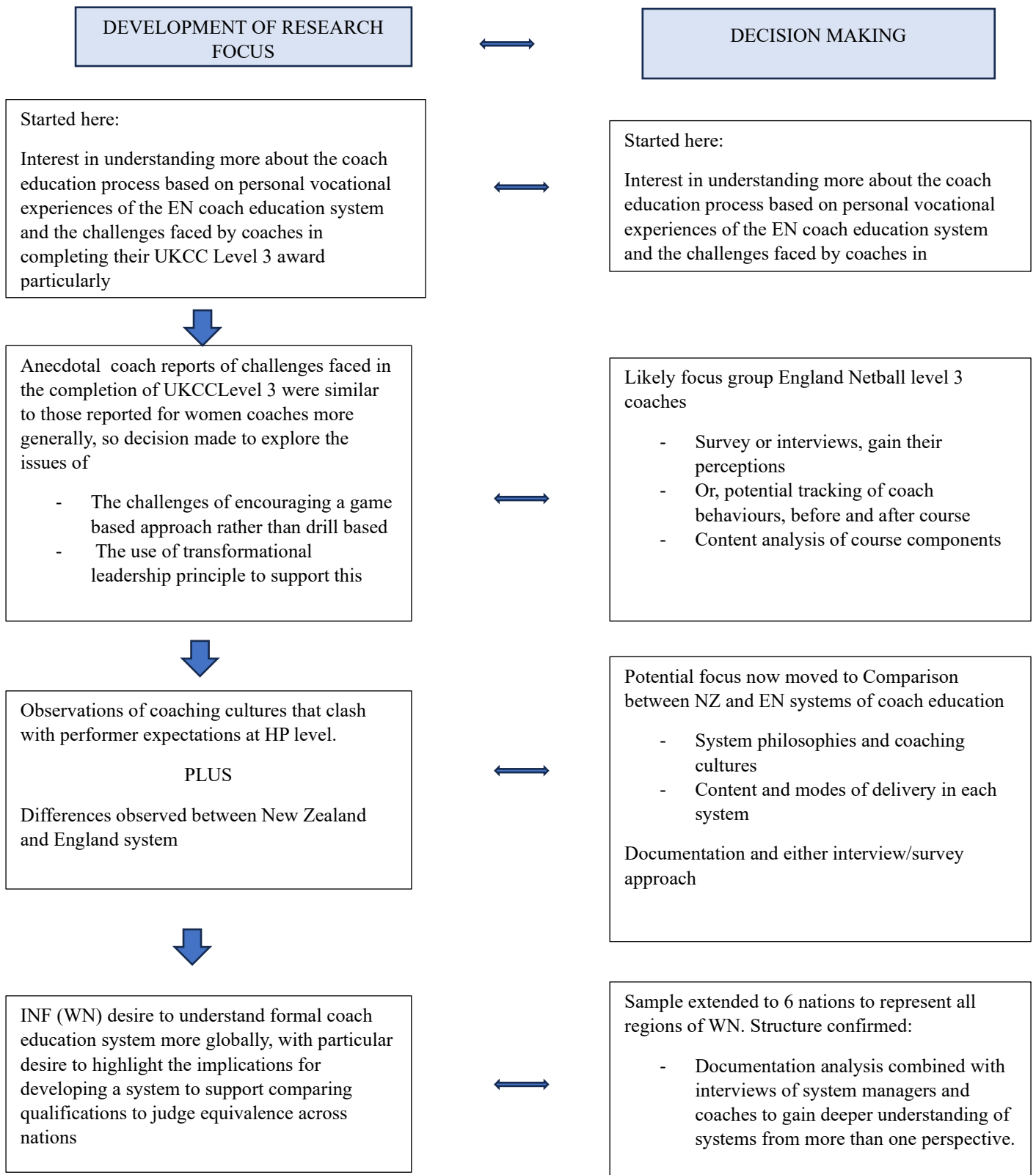


Figure 3. Summary of the development of researcher ideas and decisions

3.4 Methods adopted

Thematic analysis (TA) and content analysis (CA) were used to capture and report the meaning of both the documents and the interview transcripts (Crowe et al., 2015; Bryman, 2016). Thematic analysis is a flexible analysis tool and versatile enough to be utilised across interviews and text based information sources, and was used to identify patterns within data whereas the content analysis was used to tease out more precise information relating to structure, content and assessment of formal coach education (Bryman, 2016; Erlingsson & Brysiewicz, 2017). Tables generated from the content analysis were used to provide a visual display to an overview of different elements of the coach education process to help facilitate discussions regarding similarities and differences between national systems, rather than utilising the frequency of words or terms within the documentation and interview transcripts..

The thematic analysis helped identify and analyse patterns (themes) within data (Gray, 2014). Though there have been a variety of approaches advocated to conduct thematic analysis (Braun & Clarke, 2006; Côté et al, 1993), **this research adopted** Braun & Clarke's (2020 & 2021) more recent suggestions of a more flexible, reflexive approach that utilises the researcher's subjectivity as an analytic resource and their reflexive engagement with theory, data and interpretation.

To facilitate the process of making direct comparisons between findings within different nations and identify similarities and differences, a Framework Analysis method was adopted, which Gale et al. (2013) report being commonly used within medical and social policy research and Bryman (2016) suggests is a helpful way to organise and synthesise themes relevant to a researcher's question or focus. The Framework Method is particularly well suited to the use of thematic analysis of transcripts or documentation and generates a matrix with rows (cases), columns (codes) and 'cells' of summarised data, providing a structure into which the researcher can systematically reduce the data, in order to analyse it by case (country & level of qualification) and by code (themes). Gale et al's (2013) 7 step guidance was followed: transcription; familiarisation; coding; development of a working analytical framework; applying the analytical framework; charting data into the framework matrix and interpreting the data. This framework analysis was particularly helpful in organising the data and in spotting similarities and differences between nations as the data built up across the research.

This research was conducted in three phases, which are summarised in Figure 4. Phase 1 involved analysis of the documentation that was available in the first instance. Findings from this analysis were used to generate questions for Phase 2, interviewing the system managers, and the analysis from these interviews was used to inform the questions developed for phase 3 the coach interviews. Where more documentation was suggested, or received, from the system managers these were included within the final documentation analysis. Findings from all three phases of the research were used within the comparative analysis conducted and examples highlighted. Details of each phase are now presented.

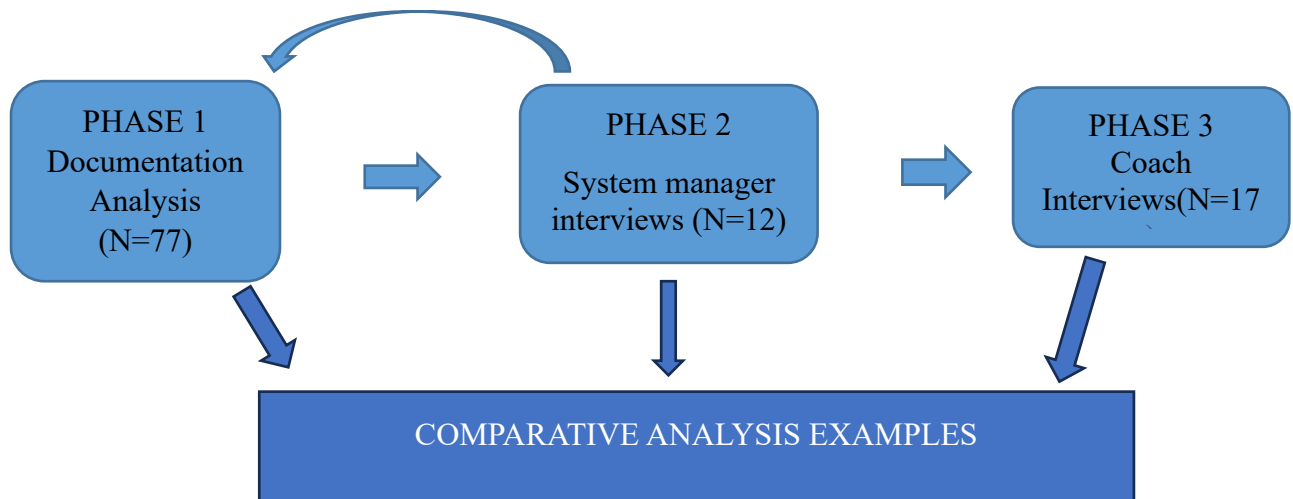


Figure 4 Summary of the phases of research conducted.

3.5 Participating nations

The International Netball Federation (INF), now World Netball (WN), identified 6 nations to be included within this research, to ensure all regions within their global coaching community were represented, so nations were purposively sampled (Bryman, 2016). The 6 Nations participated in this research were:

Australia, England, New Zealand,
Singapore, South Africa and Trinidad & Tobago.

These were identified as nations that had either a leading role within their region in coach education and development or were represented on the then INF Coaching Advisory Panel, so involved in the netball coach development process globally. These nations provided a sliding scale of involvement within the research, with some nations able to provide documentation to support the research and a greater number of interviewees than others. This was symptomatic of the stages those countries are in with their coach education and development systems and the contextual and situational challenges they work with but does represent a limitation of this research.

3.6 Ethical approval

Ethical approval was obtained from the University of Gloucester's Research Ethics Committee and the research was conducted in line with the guidance available within the University's Research Ethics Handbook (2008). In the first phase of data collection, documentation was accessed via the internet and subsequently added to via suggestions from the system managers, during their interviews or when updating the content throughout the timeframe of this research. The researcher was keen to be aware of any potential sensitivities in reading and reporting national differences and utilised critical reflections to self-check the reporting of any sensitive material (Denscombe, 2010).

In addition to the formal interview process, contact was made informally with individuals working within other sports to help define the options that might be available to World Netball. Direct reference to some of these personal communications have been made within this report but only with each individual's agreement.

3.7 Phase 1- Documentation Collection and Analysis

3.7.1 Documentation sampling strategy

Documentation regarding each nation's netball coach education system was obtained from National Governing Body websites in the first instance. Four countries had information readily available on their National Governing Body websites – Australia, England, New Zealand and Singapore.

In line with Bryman & Bell's (2007) guidance for making ethically sound choices of documentation to include within the research, documentation was accessed directly from each

nation's governing body websites which were specifically designed to advertise both content and philosophies behind each coach education and development system. Since this research aimed to adopt an iterative approach, the documentation analysis also included any suggested further sources of documentation introduced by the system managers, such as E12, a powerpoint presentation from an education and training workshop. Also included were any updates of documentation within the timeframe of this research (Documents A6 & A7). For South Africa, this permitted some detail to be included within this first phase of analysis, though for Trinidad & Tobago, information was not available at all via documentation, so all data reported from T & T has been drawn solely from interviews. 77 documents were consulted in total (Australia 21; England 14; New Zealand 18; Singapore 12; South Africa 12), details of which can be found within Appendix 1.

3.7.2 Thematic analysis of documents

In the first stage of analysis, documents were read and re-read to interpret the rhetoric in an iterative manner and gain insight into the systems being adopted and the cultural messages evident within the written word (Bowen, 2009; Smith & Sparkes, 2016). An inductive approach to identifying codes was adopted by highlighting elements of the text that had importance, then notes were made down the side of the text to summarise comments in text, akin to Braun and Clarke's (2006) codes or short quotes were used to represent the essence of that section of text, akin to Côté et al. (1993) meaning units. These were then transferred onto coloured post-its and placed on flipcharts. Similar post-its were grouped to build up a visual representation of potential sub-themes, or dimensions. Where a group of similar post-its became large, the degree of connection was considered and decisions made as to whether the large group was just that and would be left or whether the group needed to be broken down further. Once these connections were made initially, further connections between these groups were then identified and grouped into dimensions, sub-themes and then themes (Smith & Sparkes, 2016; Braun & Clarke, 2006; Côté et al., 1993). The use of a wall to display the flipcharts of post-its provided the opportunity to step back and look for those connections to build into themes, but also allowed for an overall view of information and start to build a sense of the degree of similarity and differences across nations. The groupings were then revisited after a time lapse to cross-check accuracy and consistency of interpretation and to

adopt a more reflective approach to the thematic analysis process (Braun & Clarke, 2019; 2021).

Findings from this inductive start to the documentation analysis were used to identify areas of questioning for the system managers and a more deductive approach to the analysis process was then adopted to generate the final thematic diagrams for each nation, similar to Maandag et al.'s (2007) adoption of a checklist approach to structure their international comparison of teacher education in schools. Table 2 outlines the themes identified during documentation analysis and an excerpt from the thematic analysis of New Zealand's documentation is included in Appendix 2 as an example.

Table 2 Definitions of themes used during documentation analysis

Theme	Definition, or Criteria for inclusion
Vision & Philosophy	Vision statements; aims & objectives; coaching philosophy identified
Formal Learning	Formal coach education format and pathway; historical and contextual information and partnerships supporting the formal pathway
• Structure	
• Content	Overview of what is included within each system and qualification. Professional; Inter and Intra-personal Knowledge & Skills
• Assessments	Details of modes of assessment; tasks included at each level
• Mode of Delivery	Face-to-face delivery versus home learning Inclusion of online and blended learning modes
Other learning types around the formal	Types of learning made available around the formal courses. Support available to the coach as they progress through the learning pathway
Contextual issues	Opportunities and challenges identified in text

3.7.3 Content analysis of documentation

Similar to the IRB (2013) and Rui et al. (2014), the content analysis was utilised to supplement the thematic analysis and draw out more specific details from the documentation that were then used to explore the different structures of coach education systems, their content and assessment at each level. Length of courses, content, assessments and competences developed were compared to explore the potential matching and mismatching of

experiences across nations. This provided an opportunity to explore potential comparative or benchmarking tools for judging equivalence of qualifications.

To provide an overview of the structure of each nation's coach education qualifications system, the stated aims and learning outcomes of each level of qualification were matched against the ISCF (2012; 2013) to identify the coaching qualifications that each nation provides within the 4-stage model of Coaching Assistant; Lead Coach; Head Coach and Master Coach. and the content of courses and competences were classified using Côté & Gilbert's (2009) professional, inter-personal and intra-personal knowledge and skills.

3.7.4 Framework analysis

Framework analysis (Bryman, 2016; Gale et al. 2013), was utilised to bring together the results of each nation and facilitate direct comparison between nations. Framework analysis is designed for the management and analysis of qualitative data and has been popular within large scale social research and more recently has become more popular within medical and applied health research (Gale et al., 2013). The sub themes and themes identified within the thematic analysis were utilised to generate a framework matrix as indicated in table 3 below, with the nations as the cases (rows) and key themes as the codes (columns) (Gale et al., 2013; Bryman, 2016). The cells were then utilised to highlight similarities and differences to gain an insight into the comparability of experiences of coach development within each system. An exert from this framework analysis for the theme of 'content' is included in Appendix 3. This framework restructured and summarised the data, providing a visual representation that was then used to gain an overview of the similarities and differences evident between countries to form part of the comparative analysis (see Appendix 6)..

Table 3 Outline of framework matrix used to facilitate direct comparison between nation's documentation analysis

		Vision & Philosophy	Formal learning				Other learning	Contextual factors
			Structure	Content	Assessments	Modes of delivery		
Australia								
England								
New Zealand								
Singapore								
South Africa								

This documentation analysis was also used to generate the questions for Phase 2, the system manager interviews

3.8 Phase 2 – System Manager interviews

The purpose of interviewing the system managers was to gain a deeper understanding of the contextual issues influencing the development of each system, the philosophy driving the systems, any constraints or challenges the nation is operating under and identify each nation's hopes and aspirations for ongoing development of their coaching workforce.

A semi-structured approach was adopted to the interviews which included open-ended questions with follow-up probes (Bryman, 2016). By adopting a semi-structured approach, answers were comparable through the stem questions being asked to all interviewees, allowing differences and idiosyncrasies of each nation to be explored in more detail via the probe questions. Following Côté et al. (1995) protocol, the interview questions provided a guide to the topics only, with new information brought into the interview being explored and probed. When interviewing 'experts' there are demands on the researcher to be flexible to avoid restrictions being placed on the quality of information obtained and prevent any narrowing of focus of the interview (Côté et al., 1995; Bryman, 2016). This was particularly important within the Trinidad & Tobago and South African interviews where some extended use of probe questions was utilised to gain more detailed information, to address the difficulties of having sparse or no documentation for these two nations within Phase 1 of the study.

Interviewing the system managers was used to gain a deeper understanding of the realities and lived experiences of planning and delivering the coach education and development systems as well as giving an opportunity to deepen understanding of the following areas:

- the thinking and philosophical approach behind the system in place – each country's beliefs and values
- the cultural, operational and contextual influences each country is managing
- coach support and development around the formal coach education
- strengths and limitations of the current system
- hopes and aspirations for ongoing future development

3.8.1 Pilot Interview

A pilot study was conducted with a member of the England Netball coach education team who had coached across all levels of play including National level and, at the time of the pilot interview, was a National Selector. The pilot interview provided the opportunity to explore questions used and answers gained for potential ambiguity in questions (Hassan et al., 2006), but also to gauge the length of interview, and self-assess the researcher's ability to conduct interviews, test readiness and enhance the reliability of the study (Doody & Doody, 2015). The interview protocol using Skype was tested too. Interview questions were sent through 48 hours prior to the interview, to assist the interviewee to prepare for the interview.

3.8.2 Reflections on pilot interview

The pilot interview took 89 minutes, with a discussion afterwards of the interviewee's immediate reactions to the process. A feedback form was sent through a few days later to obtain more specific feedback from the interviewee after time had elapsed to reflect on the process. Reflections on the interview process led to a reduction in questions and the use of broader, higher order questions to keep the onus on what was important to the interviewee, rather than the more targeted questions initially attempted. This allowed for a more inductive approach to the questioning rather than seeking for specific information and knowledge and

thus also helped control for any potential interviewer bias within the questioning process. The reduced number of questions were then checked by a neutral, independent colleague with extensive experience in qualitative interviewing techniques within teacher education to check the degree of openness within the questions. The finalised interview questions are included in Appendix 4. Reflections on the feedback received from the pilot interviewee also led to the researcher ensuring that communication of the broad areas of interview questions would be sent through to each interviewee at least 24 hours before the interview, though not the exact questions. This was to support readiness for the interview without looking intimidating.

3.8.3 Sampling strategy – participants

Purposive sampling (Miles & Huberman, 1994; Patton, 2002) was adopted in the first instance to identify the potential sample. The INF (now WN) Coaching Advisory Panel gave recommendations of first contacts in each country as an initial introduction to that nation. Each of these contacts were emailed and invited to be part of the study, sent an information sheet and consent form. All those contacted agreed to be part of the project and returned their signed consent form (Denscombe, 2010). Four out of the six nations then recommended contacting and interviewing other personnel so that the purposive sample was combined with snowballing sampling (Bryman, 2016) to reach the range of personnel recommended within each nation.

In total, 11 System managers were interviewed from the 6 countries (Aus-1; England – 4; New Zealand – 2; Singapore- 1; South Africa – 2; Trinidad & Tobago – 1). The differences in numbers interviewed within each nation gives an indication of the differences in the structure of the governing bodies behind the coach education system. To preserve anonymity of participants, names were withheld from the report and pseudonyms allocated as follows, all names beginning with S to identify they are system managers, rather than coaches:

1. Sheila Australia
2. Saskia England 1
3. Susan England 2
4. Scarlett England 3
5. Sophie England 4
6. Savannah New Zealand 1

- | | |
|--------------|-------------------|
| 7. Selina | New Zealand 2 |
| 8. Sebastian | Singapore |
| 9. Sade | South Africa 1 |
| 10. Shara | South Africa 2 |
| 11. Shanice | Trinidad & Tobago |

The direct reporting of role titles has not been included to avoid identification of individuals, but at the time of interviewing, three participants were their national representative on the International Netball Federation (now World Netball) Coaching Advisory Panel or working as national technical officers, four were Senior management within their NGB, including CEO and General Manager roles; six were middle management including leading the coaching, education, training or coach development and one was an ex- Head National coach working within coach development. To give an indication of the lens through which these system managers view the world of coach education and development, a more detailed description of each system manager's role and responsibilities and prior relevant experiences are included in Appendix 8. All participants who were contacted completed the interview (100% response rate). Participants were given the opportunity to withdraw from the study at any stage and counselling support was made available to the participants, should the interview exploration of beliefs, values, cultural and historical influences cause any emotional discomfort.

3.8.4 Procedure for System Manager interviews

On receiving the returned and signed consent form, a mutually convenient mode and time of interviewing was agreed via email, taking into consideration different time zones. At least 24 hours before the interview a reminder was sent through via email, along with an idea of the questions coming to help the participant get in the mind set for the interview. Interviews were conducted via Skype, Zoom or Phone, according to interviewee preference. Face-to-face interviews were not feasible for many, given the diverse geographical location of participants. Skype or Zoom interviews were encouraged rather than phone calls to facilitate rapport building and the development of interpersonal relationships, which would normally be possible in a face-to-face situation (Braun & Clarke, 2013). Such an approach to interviewing permitted the interviewer to be aware of participant changes in body language and facial

expression, particularly to assist the reading and pacing of the interview. Judgement of thinking time and interviewees' management of emotions can be more accurately gauged where interviews are conducted with visual contact between interviewer and participant, though the interviewer was conscious that note taking when in view could detract from eye contact with the participant and thus risks losing some of the attentive listening skills.

To overcome this, interviewees were asked at the beginning of the interview if they minded the interview being recorded and this was done via Zoom, Panopto/ChiPlayer or through the use of a dictaphone. Two recordings were taken of each interview, to ensure there was a back-up in case connection was lost from one source. The interviewer also took brief notes during the interview which helped with interviewer recall of information, the highlighting of key points to be revisited and presented the ability to track which conversations had already addressed some of the questions and thus reduce repetition for the interviewee (Gray, 2014). Where interviewees were in the UK (Sophie; Shanice) and expressed a preference for face-to-face interviews, this was accommodated by the researcher. These interviews were conducted at a venue chosen by the interviewee, which was a coffee shop in a university campus for Sophie and within a hotel for Shanice. One interviewee (Sebastian) preferred Whatsapp, so the researcher was able to be flexible to meet interviewees' needs and preferences.

Interviews lasted mean 74 minutes (range 47 – 120 mins), depending on the individual answers and ease with talking. Interviews started with a question regarding their role as system manager to open up the conversation and give some specific context to the conversation from the outset. After the main body of questions, a final question was introduced to invite the interviewee to allude to anything they felt important that had not already been asked, to conclude and round off the interview. The main body of the interview encouraged system managers to explore how the current system was arrived at, the coaching culture being encouraged and examined reflections from the system managers on where they are looking to take the coach education system in the future. A specific question was included to explore the system managers' perspectives on the help they would like to assist the assessment of transferability and equivalence of qualifications and the challenges they face when trying to do that. The interview schedule including questions asked and indicative probe follow-up questions is included in Appendix 4, with further probes being reactive and dependent on individual responses included in Appendix 4.

To minimise any potential negative impact of the researcher's experience leading to bias within interviews, ongoing self-reflection was conducted, including relistening to interviews to check and re-check any leading of questioning than was unintended and also working with a 'critical friend' to check and challenge the interviewing and analysis process. Other potential barriers include the researcher being known to some of the interviewees, which could affect the tone and direction of interview conversation or assumptions being made. To minimise the impact of these potential barriers, active listening skills and probe questions were employed within interviews to ensure clarity of interpretations and check meaning. Each interview was also started with questions about roles and general chatter to settle the interviewee into the interview, to make sure those who did not know the interviewer were put at ease, but also to set the tone and focus for those who were known to the researcher.

3.8.5 Data analysis of system manager interview transcripts

Interviews were listened to and transcribed for the most part by the researcher directly or through Dictate2Us. In each case the researcher went through the interview and transcription a number of times to ensure the researcher was well acquainted with the content, often re-listening to the audio alongside to pick up on any emphasis evident from the interviewee in their tone and the visual to check for interviewee reactions or body language that might emphasise certain comments more than others. Transcripts were sent to interviewees for member reflections, as suggested by Braun & Clarke (2013) Smith & McGannon (2018), Tracy (2010), Tracy & Hinrichs (2017). Interviewees were invited to check for accuracy, but also given the opportunity to expand on the data to encourage the generation of greater levels of insight and richness to the transcripts collected. This was helpful where there were cultural differences in language used and thus enhanced the 'transferability' element of trustworthiness (Bryman, 2016; Nowell et al., 2017)). The researcher was also able to check the understanding of participant perceptions to minimise the impact of personal bias influencing the interpretation of participant words used ('Confirmability') and to obtain 'dependability' (Bryman, 2016, Nowell, et al., 2017). This research adopted the use of a 'critical friend', as suggested by Smith & McGannon (2018), to establish rigor within the thematic analysis stage of the data analysis process. The 'critical friend' was asked to conduct a thematic analysis of an example of an interview transcript and then encouraged to challenge and develop interpretations of the researcher's codes and themes. The 'critical friend' had

prior experience of qualitative research within teacher training, thus injecting an element of objectivity into the thematic analysis process and provided an opportunity for the researcher to reflect on other interpretations and explanations for choices and groupings of themes and so refine the process.

Once member reflections were completed, any names included in the transcripts were deleted to maintain anonymity and confidentiality. Interviews were coded and stored as Sheila (Aus), Saskia (Eng)...etc., to preserve anonymity of individual interviewees. Audio recordings of interviews were stored on a university password protected staff account for security and a backup copy stored on a hard drive in a locked cabinet. Transcripts were also stored electronically in the same password protected manner and hard copies used to support analysis, which were also stored securely.

Thematic analysis was conducted on each transcript with initial meaning units (Côté et al., 2003) or codes (Braun & Clarke, 2006) being identified utilising an inductive approach in the first instance. Annotations were made of the codes on transcripts, then on post-it notes, these were then grouped into sub-themes, and lower order themes. Where nations had more than one system manager interviewed, different coloured post-its were used for each system manager to bring together a composite thematic analysis for system managers within each nation. The thematic analysis was revisited after a time period had elapsed to cross-check the codings and groupings and it was this revisiting and use of visual display to build the thematic analysis that facilitated a more reflective approach to be adopted (Braun & Clarke, 2021). Key themes identified at this stage and their definitions are outlined in Table 4.

Table 4 Definitions of themes used during SM interviews thematic analysis

Theme	Definition
Philosophy	Aims & objectives Coaching culture encouraged in coaches; learning culture to support candidate coaches
Structure	Historical timeline of changes Partnership & collaboration Any equivalences with other systems mentioned
Formal, mediated learning	Levels & expectations Content Modes of delivery
Other learning around formal	Mediated, non-formal Un-mediated Levels of integration
Contextual challenges	Workforce size & quality Operational challenges
Critical reflections	Issues with current system Culture shift needed
Aspirations for the future	Hopes & aspirations for the future
Desired help with assessing equivalence of qualifications	Any suggestions made by interviewee for help they would like; or discussion of the challenges they face when assessing equivalence of qualifications

Similar to the use of framework analysis within phase 1, these themes were then utilised to generate a framework matrix to facilitate comparisons across nations, with nations being utilised as the cases (rows) and the themes being used as codes (columns) in line with Gale et al. (2013) and Bryman (2016). The cells were again used to identify similarities and differences between nations within each theme. The results of phase two data collection and analysis were also used to generate questions for Phase 3 of the study to structure the interviews of coaches.

3.9 Phase 3 Coach interviews and analysis

Phase 3 of the research involved semi-structured interviews with coaches (N=17) who have progressed through, or are still progressing through, each nation's coach education system. Coaches were able to reflect on the reality of formal education from the participant perspective, the philosophies encouraged within their coaching and the learning environment provided within and around the formal elements of their education. Coaches were encouraged to reflect on their coaching journey so far and identify episodic experiences that impacted their

development, to gain an understanding of the relative impact of coach education courses within their overall learning which may have implications for any portability system adopted (Callary et al., 2012; Douglas et al., 2016; Nash & Sproule, 2011). Coach responses provided the opportunity to gain insight into their current coaching philosophy; their use of coaching behaviours and practice structures as well as the degree of change they have experienced over time. This gave an indication of the degree of awareness of, and buy-in to, the use of coaching behaviours that are more empowering, autonomous and athlete-centred; the degree of use of game-based practice structures rather than a reliance on more traditional drill-based approaches within each nation, which have potential implications for the movement of coaches from one nation to another.

Coaches were also able to give an insight into the changes they perceived within their nation's coach education provision, both content and approach to delivery, and the scaffolding of coach learning in and around the formal courses. Similarities and differences here may ease, or complicate, the portability of qualifications. Where coaches had worked within more than one nation, reflections were encouraged, through extended probe questioning to explore their experiences when moving from one system to another to inform the design of any system intended to enhance the portability of qualifications.

3.9.1 Development of coach interview protocol – pilot study

The document analysis and interview responses from system managers were used to devise the interview schedule for the coaches. The first draft of questions was piloted with a carded High-Performance Coach from New Zealand, working with a superleague franchise in the UK. This pilot gave the opportunity to hear from a coach who had experience of two systems to test the questions. The interview was recorded and listened back through a number of times, taking note of the interviewee's responses and reactions to questions. Verbal feedback was obtained from the interviewee which was combined with the researcher's own reflections of the reactions to the questioning. As a result, questions were refined to reduce the perception of difficulty and encourage easier flow to the interview and a second pilot interview was conducted with another UK Superleague coach. The interview was again recorded and listened through a number of times, to hear the responses, pauses, reactions to questions. Feedback from the coach was positive, so it was this set of questions that was progressed to the interviews (see Appendix 5).

3.9.2 Sampling strategy – Participant coaches

A purposive sampling approach (Patton, 2002; Miles & Huberman, 1994) was adopted again here, with system managers being invited to recommend coaches that could be approached to interview. Mindful of data protection, system managers were invited to either forward the researcher's invitation to be part of the study, contact details and the information sheet with consent form to the coaches they were recommending or, where permission from the coach was obtained, email contact details were passed on directly to the researcher.

The NGB system managers were asked to identify and recommend coaches (preferably 4) that they

- considered to be an advocate/ambassador for the NGB's preferred approach to coaching i.e. are in support of the beliefs and values encouraged throughout their training and development.
- were active coaches, for example coaching regularly over a 12 month period. NGBs were invited to include an individual that is still in their system but taking a break (<2 years) and intending to return to coaching if they wished to be as inclusive as possible.
- have engaged in the national coach education system, seeing at least one qualification to completion within the last two years, and/or
- have engaged in NGB Continuous Professional Development or been connected with NGB over a 12-month period.

NGB system managers were asked, where possible, to nominate coaches working at Participation/ Community levels and others at Performance/High Performance. Similarly, if some coaches worked with children and others with adults. 23 coaches were recommended and contacted, of which 17 were interviewed from the 6 nations (74% response rate): Australia – 4; England – 3; New Zealand - 4; Singapore – 2; South Africa – 3 and T & T – 1.

All coaches had experience coaching across age groups and levels of participation and performance including 14 working with national teams and 6 National Head Coaches.

Coaches reported working their way through their NGB award schemes, 2 currently still completing their English Level 3 award; 1 with qualifications from previous versions of awards within their nation and 1 had qualifications from Australia to Elite level, as well as

their home nation qualifications. 11 coaches reported being involved with coach education and development and/or mentoring; 2 coaches have presenter or coach developer qualifications, though others reported involvement within coach development activities via workshops and conference delivery. 1 coach also had accreditation from Canada and is an ICCE Coach developer. All coaches had consistent and sustained work within netball, with 2 working within their NGBs at some stage in their careers.

Coaches reported gaining experience coaching across different contexts, often working their way up through the age groups, though 1 coach now focuses on community level netball with youngsters, despite having experience in adult national level work abroad. Other coaches focused more on coaching adults, working at performance and high performance/elite levels of competition. 14 coaches were working with age group and/or senior national squads and 6 at National Head coach level. 2 reported coaching Men's teams and indoor netball and 2 were part of their national selection processes. Most coaches started as volunteers, but have progressed to career coaches, 8 working as professional coaches at the top level, or working as a paid role within clubs or school/university environments; though Crystal reported all coaches in Trinidad & Tobago are voluntary, only receiving a small stipend in some instances.

To preserve anonymity, coaches were given pseudonyms as follows:

- | | |
|--------------|----------------|
| 1. Cali | Australia 1 |
| 2. Corrie | Australia 2 |
| 3. Coleen | Australia 3 |
| 4. Ciji | Australia 4 |
| 5. Claire | England 1 |
| 6. Charlotte | England 2 |
| 7. Catherine | England 3 |
| 8. Cyndie | New Zealand 1 |
| 9. Chloe | New Zealand 2 |
| 10. Caitlin | New Zealand 3 |
| 11. Cara | New Zealand 4 |
| 12. Chun | Singapore 1 |
| 13. Chow | Singapore 2 |
| 14. Cassa | South Africa 1 |

15. Chinue	South Africa 2
16. Chad (M)	South Africa 3
17. Crystal	Trinidad & Tobago 1

A more detailed synopsis of the coaches' experiences can be found in Appendix 9 to give an indication of the context of their perceptions of their learning journey comes from.

3.9.3 Procedure for Phase Three Coach interviews

As in phase two, contact with the coaches was established in one of two ways, either directly from the researcher using the email/phone contact details passed on from the system managers, where permission had been given; or through the system managers who sent out the invitation, information and consent forms and coaches emailed the researcher directly with their signed consent forms. Coaches were encouraged to ask for further clarification if they would like it.

Coaches were invited to be interviewed via Skype for Business/ Zoom/Teams/ Whatsapp/ phone or face-to-face, whichever suited them best. The face-to-face option was made available as some coaches preferred that option whilst they were in the UK at International Competitions. Once the interview date was agreed, a reminder was sent 24 hours before the interview with the following information to give the coaches a chance to prepare their mind set for the interview:

"I am just interested to talk about your journey as a coach, with a particular focus on the coach education and development experiences you have had so far."

A similar interview structure was adopted as for the system manager interviews, with an opening question to get the conversation going and a semi-structured interview approach was adopted with similar open ended 'stem' questions asked to all coaches to facilitate comparison in the analysis. Probe questions were again utilised to encourage depth of response (Nelson et al., 2013). As a result, interviews could be flexible and keep the focus of the interview clearly on the interviewee's agenda, so there were different probe questions asked across the interviews.

At the beginning of each interview, permission was obtained from the coach to record the interview and make notes as the interview progressed. Interviews were recorded on Otter.ai

which was also used to start the transcription process of each interview. A back up audio recording was taken via panopto or a Dictaphone and on the one occasion where Otter.ai did not record, the transcription was taken from the audio recording by the researcher directly.

The interviews lasted from 1 hour 10 minutes to 2.5 hours, very dependent on the individual coach being interviewed. All interviews were transcribed verbatim, with Otter.ai as a start and then the researcher listened and updated each transcript until saturation and no new changes were made. The transcripts were then emailed to coaches with an invitation to member reflect, similar to the process adopted with the system managers in phase 2. Coaches from different nationalities were particularly helpful in working through scripts and helping to ensure correctness of terminology and interpretation, for example where Maori terms were utilised or accents had led to mishearing. Once the transcriptions were completed, names were blocked out for anonymity and transcripts were stored securely under the same password protected university system, or locked cabinet, along with the system manager transcripts.

3.9.4 Data analysis of coach interview transcripts

As in phase 2, each interview transcript was read and re-read to familiarise with the content. Interviews were replayed alongside this reading to ensure any vocal emphasis heard on elements of the answers or non-verbal responses was noticed as an indicator of levels of importance of information. The same approach was adopted for the coach interviews as was utilised to analyse the system manager interviews, i.e. initial meaning units/codes identified inductively on transcription scripts, then post-it notes. These were grouped into sub themes and themes, with different colours being adopted for different coaches within a nation to produce a composite thematic analysis for each country. Table 5 below provides an overview of the key themes identified and the definition of inclusions for each theme.

Table 5 Definitions of main themes identified within coach interviews

Theme	Definition
Coach perceptions of their coaching journey	Underpinning experiences – playing; coaching Qualifications in and beyond netball
Motivations	Reasons for coaching
Coaching history and development	Coaching journey, groups worked with so far
Learning opportunities provided	Formal mediated learning Other forms
Philosophy	Coaching behaviours and culture utilised Changed in philosophy and coaching culture in system
Key learning or episodic experiences	What has impacted coach learning most
Challenges faced	Range of challenges coaches have faced
Suggestions moving forwards	What to keep and what to change

The thematic analysis was revisited after a time period had elapsed to cross-check the codings and facilitate a more reflective approach to be adopted (Braun & Clarke, 2021). To facilitate the comparison of findings, the framework analysis approach (Gale et al., 2013) was used again here with the nations and themes used to generate the framework matrix. The cells were then used to highlight similarities and differences between nations on each theme.

3.10 Critical reflections on methods adopted

This research adopted two sources of data collection, documentation and interviews, and three methods of analysis, to gain a more rounded or holistic picture of each nation's coach education and development systems, particularly by opting for interviewing both the system managers and the coaches. This section reflects on the pros and cons of each, given the benefit of hindsight and experience gained through this research.

The documentation analysis did indeed provide a non-obtrusive means of gathering information, relying more on running records via organisational documents rather than personal, episodic pieces (Gray, 2014). The use of NGB websites were relatively easy to access and searches through those websites allowed the researcher to gain an insight into the organisation (Bryman, 2016). This was invaluable for gaining a feel for the stage of development within each country, the ethos each NGB was portraying and a useful first step in the research that underpinned the interview process. Some nations were also helpful via sending through further details, not freely available on the website to give greater depth of

knowledge about course content and delivery, but others were unable to do that given the information was not yet available electronically. Although documentation was only available for some countries online, so that differing levels of information were available from the start, which is often a problem within documentation analysis, that lack of information was also an indicator for where each country was in their use of online resources and information for their coaches more generally. This collection of documents also permitted the incorporation of updated versions of policy documents particularly, which enabled keeping up to date with the pace of change in some countries over the timespan of this research. The use of content, thematic and framework analysis on the documentation allowed the researcher to explore beyond the surface messages and investigate underpinning messages and ideologies to gain as much as possible from the documents that were accessed.

The use of follow-up interviews added depth and breadth to the insight gained through the documentation, particularly for nations where documentation was limited or non-existent. The adoption of semi-structured interviews did indeed allow for a degree of similarity in the stem questions, but the advantages of semi-structured interviews over structured interviewing were evident in the flexibility to follow-up on individual comments and interests (Bryman, 2016). The researcher has extensive experience in interviewing within other life contexts, and is a qualified counsellor and assessor, so has training in effective questioning and active listening skills, so was able to use these skills to put the participant at ease, be sensitive to shifts in body language and tone of answers to pace and redirect conversation where needed which helped encourage participants to relate their stories and experiences, even when those were more sensitive. For example, some participants shared details of the impact of their political and educational systems; attitudes towards women in sport; and the guidance that spirituality provides, each of which impacted the participants' netball world. The researcher felt honoured that individuals shared some personal information and took that as an indication that the trust that the researcher hoped to establish within the interview process had indeed been successful in at least some of those interviews. This highlighted the need to take note of the contextual and situational constraints each nation was operating within. At times, though, the researcher was guilty of finding this information a little too interesting and, listening back to interviews, there were times when the researcher could have brought the conversation back to task more quickly, perhaps avoiding the occasional lengthy interview transcription.

The researcher's reflections of the interview process included some occasions where the introductory chat which was aimed at putting the participant at ease was too long, which interviewers need to be aware of when people are giving of their time and have busy lives. An ongoing reflection of the interview process was the need to monitor the degree of openness in phraseology of questions to avoid leading the participant or allowing researcher bias to creep in to the dialogue and, similar to Bryman's (2016) suggestion, was the challenge of getting the interview script in the first place. The pilot interviews were invaluable here, though the researcher conducted two pilot interviews for the coaches to ensure confidence in the appropriateness of question stems. Interviews did indeed prove to be versatile but also time consuming, as many texts suggest, for example Gray (2014) and Bryman (2016) and much time was spent in establishing online calls to fit in with lifestyles of each party and manage time zones across nations. The researcher was able to meet participant preferences for location and mode of interviewing to a certain degree, though connection issues were an ongoing challenge, incurring a rather large bill for one interview where connections had been repeatedly lost and resulted in a very expensive international call completed over a mobile phone! Transcribing is also very time consuming, even when AI is used to start that process, as interviews still need to be re-listened to and interpretations checked. Although all interviews were conducted in English, there were accents from different countries and for some individuals English was not their first language, which required sensitivity within the interview process but also some follow-up checking with participants to ensure the message being interpreted was an accurate representation of the intended message from the interviewee.

The choice of most appropriate analysis tools was another challenge, given the degree of crossover between different qualitative analysis tools that Vaismoradi et al (2013) highlighted, as well as the degree of challenge in the process of conducting thematic analysis itself, highlighted by the ongoing debates of how to do this effectively (Côté et al (1993); Braun & Clarke, 2006; 2013; 2019; 2020; 2021). However, the researcher feels the use of the three different types of analysis, thematic, content and framework, though time consuming and labour intensive, was justified, as each method provided an opportunity to tease out different elements of information and gave a more in-depth picture of what was going on in each nation. It was this combination of analysis tools that overcame the challenges faced in bringing together the amount of information collected into meaningful, digestible representation for others to read.

One of the attractions of thematic analysis was the versatility and popularity amongst qualitative researchers reported by Bryman (2016), which the researcher would agree with having used it. However, the researcher also agrees with Bryman's (2016) statement of the lack of clarity in what constitutes a theme, and the researcher did, indeed, find this a challenging process and took help to support confidence in choices of themes from others. The benefits of thematic analysis, though, was being able to establish patterns that allowed the data to directly relate to the research questions (Gray, 2014) and form the basis of the direct comparison that the framework analysis permitted. The framework analysis permitted the researcher to manage large amounts of data and by using this at each phase of the research was able to gauge comparative patterns between nations. The construction of the matrix provided a summary visual display that eased the identification of similarities and differences and provided an overview of the comparative analysis. The framework analysis, though, has the same issues as thematic analysis with the need to be aware of subjectivity and researcher bias. To address this, Bryman's (2016) and Nowell et al.'s (2017) guidance for ensuring trustworthiness was followed closely, particularly given that there was potential for the findings from this work to be used internationally in the future. Confidence in trustworthiness and attention to detail was thus important to the researcher, though mindful that there is a need to balance the degree of attention to detail adopted, otherwise identifying themes becomes very difficult to achieve.

Though the framework analysis was useful for structuring and prioritising the information, there was always the potential that such an approach would oversimplify any comparative work (Bryman, 2016; Gale, 2013). Use of the content analysis provided the opportunity to address this and compare more specific details of coach education systems, as other authors within sport coaching literature have adopted (Al-Busafi et al., IRB, 2013; Nelson et al., 2013; North et al., 2012; Rui et al., 2014). Quantifying the use of language and ideas that is a common use of content analysis (Bryman, 2016) was not as important here as the opportunity for visual display of elements of the coach education systems to support the comparative analysis and benchmarking exercises attempted here. The researcher was left feeling that all three methods of data analysis complimented each other well.

Summary of chapter

This chapter has outlined the theoretical underpinning behind the choices of methods adopted to address the research questions and outlined the procedure followed throughout the three phases of the research project. The three phases of research were used to provide an in-depth understanding of what is learnt by coaches, how it is learnt and assessed, and what the underpinning philosophies are driving the systems and the coaching cultures being encouraged as a result. Figure 5 provides an overview of the information that was collected within this project. The findings from this collection and analysis of data are reported and then discussed in subsequent chapters of this report.

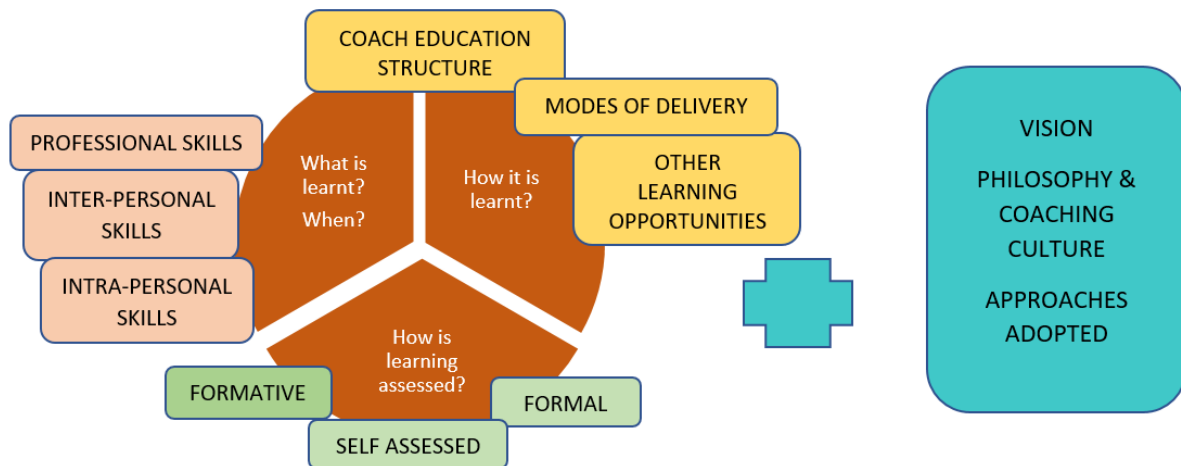


Figure 5 Summary of information collected within this project.

Chapter 4 Findings

4.1 Introduction to chapter and overview of findings

This chapter displays the key findings from the thematic, content and framework analyses across the three phases of the research. Figure 6 provides an overview of the thematic analysis results drawn from the thematic maps for each phase of the investigation. The key themes identified were Philosophy; Structure; Learning opportunities; Contextual challenges and Coach perceptions of their learning journey. Although all phases of the research provided evidence across the themes, there are some themes that drew more evidence from one source of information than others. For example, the ‘contextual challenges’ drew more heavily on the system manager interview findings, as the interviews sought to gather insight into the philosophy driving the methodological approaches encouraged and the day-to-day lived experiences of those responsible for the planning, delivery and monitoring of the formal coach education systems particularly; and ‘coach perceptions’ drew more directly from the coach interviews. Figure 6 identifies the sources of evidence that have been predominantly drawn from for each thematic component i.e. Documentation (D); System Manager interviews (SM); and Coach interviews (C).

The key themes are explored in subsequent sections of this chapter. As findings from each key theme are presented, they are supported by content analysis results to provide more specific examples, where appropriate. Framework analysis results are used to facilitate direct comparison between countries of sub-themes to explore the degree of agreements, or similarities, across nations, as well as key differences.

A GLOBAL COMPARATIVE ANALYSIS OF NETBALL COACH EDUCATION

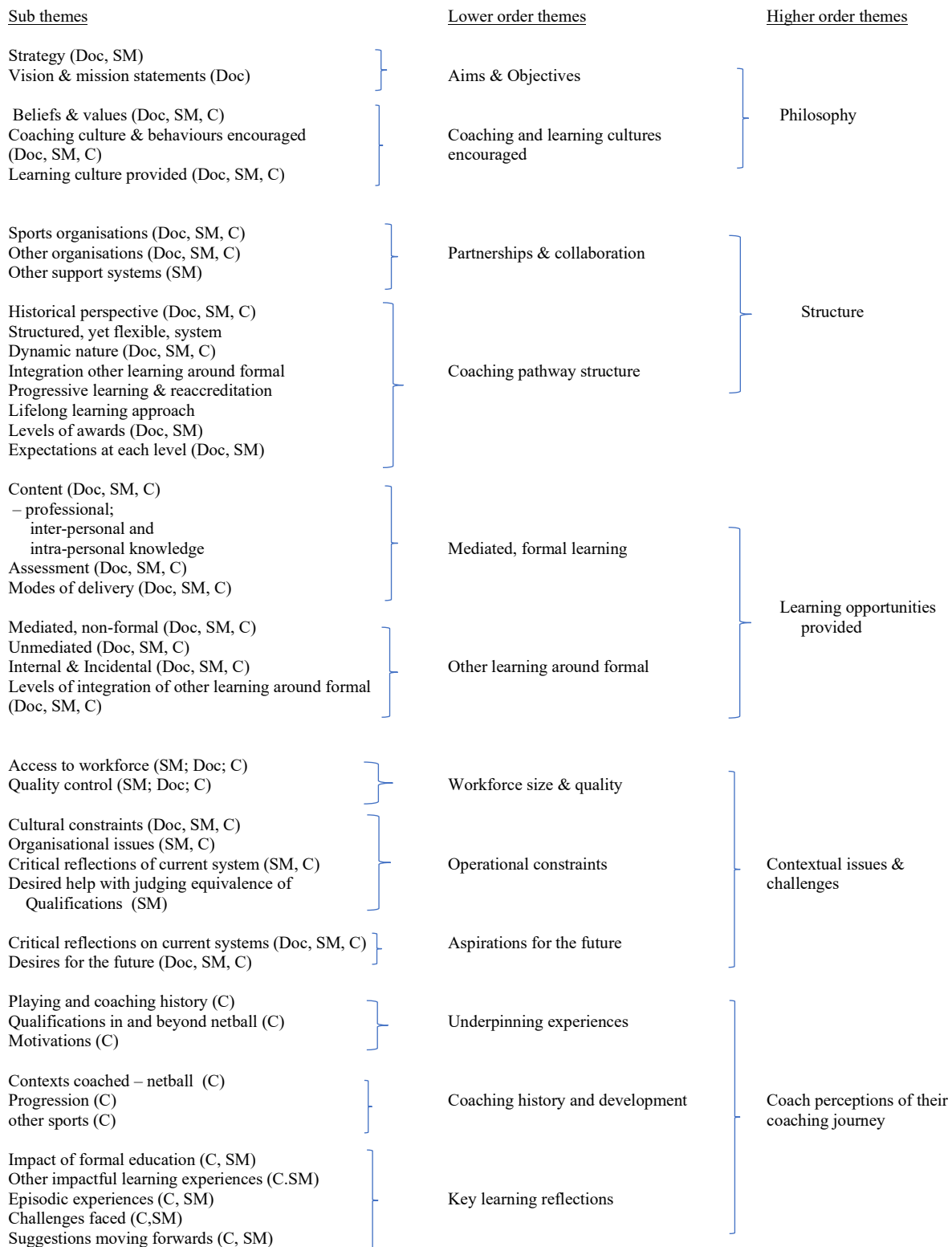


Figure 6 Overview of thematic analysis results across all phases of the research

4.2 Philosophy and coaching approaches adopted to apply theory to practice.

This section reports the findings from documentation, system manager and coach interviews to gauge a sense of where netball is within the journey of change that coaching has experienced over the last two decades particularly. Findings are explored to ascertain the philosophy underpinning each nation's coach education and development system and the coaching cultures encouraged within the systems. Two key sub-themes were identified in Figure 6 above: Aims & Objectives and Coaching and Learning Cultures Encouraged, findings for which are now reported and discussed.

4.2.1 Aims & Objectives

As Lara-Berical et al (2017) suggested, the beliefs and values held by each country, that underpin their current coach education and development systems, are shaped by their history and current interpretation of the role of sports coaches within their society and this is an important element of the professionalisation process. None of the nations examined here reported fully professional status for their netball coaches, indicating a mix of volunteers and paid roles, providing ongoing support for Chelladurai (1986) and Duffy et al.'s (2011) suggestions that sport coaching is unlikely to meet the needs of a fully-fledged profession and is still developing within a blended model. Differences between nations exist though, with Sebastian, Chun and Chow reporting that Singapore netball coaches tend to be paid at junior level, working through schools, with the higher levels of performance and adult coaching tending to be where volunteering roles permeate. Similarly, Sade and Shara also reported coaches working within South African schools and universities as paid roles, though Claire, Charlotte and Catherine all reported their journeys from volunteer to paid coaching roles within England, recognising the increasing opportunities for career coaching within netball over recent years. Crystal and Shanice confirmed a volunteer system within Trinidad & Tobago with a small stipend at higher levels of performance only. Findings within these nations thus suggest that the qualitative differences in the role sport coaching plays within different societies and subsequent structures of coach education systems highlighted by Chelladurai in 1986 and Duffy et al. in 2010 and 2011 still exist within netball.

NGB partnerships with national and international agencies play an important role in shaping the structure, content and delivery of coach education systems and differences were noted here. Netball Singapore Coach Education has a dual delivery system with Sport Singapore

ensuring a compulsory Sports Science component is delivered even at Level 1; whereas other nations report an NGB based delivery of their formal coach education pathways. Crystal, Saskia and Susan recognise the opportunity for cross- sport development opportunities within their national sports organisations at higher levels of qualifications in place of NGB formal qualifications. The strategy documents produced as a result of the collaboration between NGBs and national or even international partnerships identify each nation's vision and their key aims and objectives to progress towards their end goals. Table 6 summarises the key visions and objectives identified by each nation, together with the key strategy documents orchestrating these, where they were available to the researcher.

All nations, where documentation was available, identified they were focused on developing the quality of their coaching, which supports Chelladurai (1986), Gill (2012), Lyle and Cushion (2017) and Lara-Bercial et al's. (2020) suggestions that this is an important part of the journey towards greater professionalism. Singapore is aiming for "all athletes to be under the guidance of quality coaches" and to develop "high quality and professional coaches" (Doc S6) whilst England are aiming for "more coaching: better coaching" (Doc E1). Ongoing reviewing and development of strategy and policy documents is evident from the trail of documentation obtained within this research. New Zealand HP Coaching plan 2011-2022 and HP strategy document 2015-2023 demonstrates a commitment to "ongoing, sustainable investment in the development of elite coaches" (Doc NZ9); Australia's regular reviewing and updating of their National Coach Accreditation Framework (2018; 2020 and 2023) and Singapore's Continuing Coach Education programme (Doc S6 & S7) are further examples. This ongoing monitoring and reviewing of systems are an important part of the quality control of coach education and mirrors the dynamic nature of sport coaching developments within other sports (ICCE, 2010). These findings suggest the importance attached to providing guidance for the development of coach development programmes within Australia, New Zealand, Australia, Singapore and South Africa, highlighted by Gill (2021), Koh and Chew (2015), Segwaba et al. (2014) and Sport New Zealand (2014), have indeed impacted the sport of netball, whereas Saskia suggested that coaching needed a higher profile within England, having been somewhat neglected in recent years, so there is clearly some further work to be done here.

A GLOBAL COMPARATIVE ANALYSIS OF NETBALL COACH EDUCATION

Table 6 Key vision statements, objectives and guiding strategy documents

Nation	Vision	Key objective(s)	Strategy document(s) guiding developments
Australia	“World leading coach accreditation and development system...Deliver the right type of coaching, by the right coach, in the right environment, to the right people” (Doc A4, p. 6) “The only coach you need to be better than, is the one you were yesterday” (Doc A4, p.13)	Recruit – the right number of coaches into the system Train – qualify the appropriate number and level of coaches Support – the coaching community to allow them to achieve their potential in their chosen environment Retain – provide systems of recognition and reward in order to retain the coaching community (DocA4, p.10)	Coaching Blueprint E-Learning resource ‘Coaching Our Way – player centred coaching’
England	Vision: First Class Netball experience through great coaching Industry leading education and training Mission: “Transform coaching – one size does not fit all” and extend the netball coaching family (Doc E1)	“Need coaches that inspire, grow, develop and retain netballers in all the places where netball happens” (Doc E1) Raise the profile of coaching Strategic goals 1. More coaching 2. Better coaching 3. Inspired and connected coaches (Doc E1)	EN Coaching strategy What it Takes to Win Model E- learning onefile system
New Zealand	“World leading coaching system that enables coaches to meet the needs of community sport participants and performance athletes” (Doc NZ16) “We produce Silver Ferns that win” (Doc NZ9) “To empower the ongoing development of coaches through targeted programmes aligns to NNZ player, coach and official pathways” (Doc NZ2). (Doc NZ2) “Ongoing, sustainable investment in development of elite coaches” (Doc NZ9)	Coaches at all levels are valued and supported Coaching communities are developed to meet participant and athlete needs More and better coaches “A collaborative culture sustaining lifelong learning” (Doc N27, p.16)	L.E.A.R.N.S Model (Doc NZ CCA) NZ Community and High Performance plans (2015-2023)
Singapore	“Training and development system to develop high quality and professional coaches...promote social values and principles! (Doc S6) “Sport Singapore seeks to ensure that our athletes are always under the guidance of quality coaches” (Doc S6)	“Systematic development through innovation and best practices and the development of quality coaching programme” (Doc S6) Continuing coach Education programme gives coaches the platform to continually upgrade themselves in their area of coaching (Doc SCCE)	Sport Singapore Coaching excellence programme (Doc S4) GameforLife Framework (SS 2012)
South Africa	“An effective, cohesive, inclusive and ethical coaching system that promotes transformation and excellence in an active and winning nation” (Doc SA11)	“The SA model for LTCD will position coaching to play its part in creating n active and winning nation, as well as contributing to the process of transformation through the creation of new and validate pathways for volunteer, part-time and full-time paid coaches” (Doc SA10)	

Australia and Singapore also provide a more overt mechanism for coaches to continually upgrade themselves, particularly Singapore's adoption of their licencing system with clear guidance given for ongoing learning between or post qualification (Doc A8; A9; S6 & S7). This provides support for a lifelong learning approach to coach development in line with Deek et al. (2013) and Dweck's (2006, 2009) suggestions but also suggests differences in the stages of system development across nations, given the different buy-in to coach licencing seen across nations (North et al., 2016). Such a dynamic nature of formal coach education, coupled with ongoing learning for coaches between qualification levels, provides an immediate challenge for developing a system to enhance portability of qualifications, as the systems themselves are evolving all the time. Formal qualifications are also recognised as only part of the coach development journey (Artes et al., 2016), so capturing a moment in time to assess equivalence in qualifications, or experience, of coaches is a challenge from the outset.

Within these vision statements and objectives (Table 6) there is evidence of a 'winning', ego-orientated outcome focus, with NZ's statement "We produce Silver Ferns that Win" (DocNZ9) and the vision statements of Australia and NZ who express a desire to be "world leading" in their coach accreditation and development systems (Doc A4, Doc NZ16). England also aims to provide "industry leading education and training" (Doc E1), so there is a competitive element within the vision statements. However, this traditional interpretation of coaching as 'win focused', is balanced by a recognition of the wider remit of coaches, for example, Singapore emphasised the importance of coaches as role models for young athletes and their responsibility to promote social values and principles (DocS6 & S9). South Africa also desire an "effective, cohesive and ethical coaching system that promotes transformation and excellence in an active and winning nation" (Doc SA11). So, there is evidence that netball has embraced the more holistic understanding of the role of the sport coach beyond just performance development suggested by Abercombie (2015), SDIC (2003) and Jones (2006).

England and South Africa recognise the inclusive, connected and transformative impact that good coaching can have on participants (Doc SA11; E1), which supports Kerr and Stirling's (2015) suggestion that sport coaching should mirror the move that teaching has made from punitive methods to more positive confidence building methods (Berliner, 2001). Considering the impact of poor and good coaching also supports Côté & Gilbert's (2009) inclusion of the 4Cs as a consideration of the impact of coaches within their definition of effective coaching.

England's recognition that "one size does not fit all" (Doc E1) highlights the need to extend quality coaching beyond just performance-based groups and take into consideration developmental and lifespan aspects of coaching, providing support for Abercombie's (2015) suggestion of being mindful of the needs of grassroots sport coaching as well as performance levels. New Zealand clearly identified their preparation of coaches to focus on community as well as performance groups (Doc NZ16) and Australia's vision to "not just deliver the right types of coaching, but the right coach, in the right environment, to the right people" (Doc A4) suggests a recognition for the variety of skills sets needed for coaches to work effectively across the differing coaching context identified in ISCF (2013). However, netball, as represented by these nations, stops short of the Canadian's three-tier system of a community coach, competition coach and instruction coach (Gill, 2021) and has not, as yet, fully embraced the suggestions of Navin and Vinson (2020) to give clarity to the demands of coaching within different contexts in relation to participation and a performance and recognise the training needs for coaches to be effective within each.

There is evidence of encouraging long-term coach development through Australia's vision statement of "the only coach you need to be better than, is the coach you were yesterday" (Doc A4) and New Zealand's objective of providing a collaborative culture sustaining lifelong learning (Doc NZ7). Australia also aims to provide support and a system of recognition and reward to retain the coaching community (Doc A4), suggesting an intention by the NGBs to provide an ongoing and shared journey of development for their coaches.

4.2.2 Coaching and learning cultures encouraged

System managers gave a first indication of the application of these vision statements into practice. There are two elements to this – the coaching culture that the system is encouraging within its coaching workforce and the learning culture within the planning and delivery of the formal coach education programmes. A key element for modern day coaching to address is the degree to which each nation has adopted an athlete centred approach to the coaching culture they are advocating (Kidman, 2005). Figure 7 provides examples of the beliefs held by each nation, as indicated by quotes from the system managers.



Figure 7 System manager quotes indicting their approaches to player/athlete centred coaching.

All nations indicated a desire to develop coaching cultures that encourage the athlete, player, or participant to be at the centre of the learning process, with Sebastian highlighting Singapore's belief in the fun element of coaching specifically and the introduction of a pre-requisite module on Values and Principles, just as New Zealand underpins their coach education framework with a player-centred coaching module. Shanice emphasises Trinidad & Tobago's belief in the need for players to be themselves first, Susan suggests England wants coaches to really understand their participants and Savannah and Selina emphasise their strong Maori culture behind the New Zealand approach. McCarty et al. (2022) suggests this has been prevalent since the Silver Ferns inception with a strong belief, since the game went professional, in the importance of being role models and developing positive team culture. An indication of NZ's focus on the importance of working in a holistic manner is indicated by their inclusion of HAURO which is a Maori concept of health and wellbeing, with four dimensions that Savannah talked about as four walls: Taha Tinaha (Physical wellbeing); Taha Wairua (spiritual well-being); Taha Whānau (social wellbeing) and Taha Hinengaro (emotional and mental wellbeing). The importance of individual wellbeing from all-round

perspective is considered an important element of peak performance and thus NZ coaches are encouraged to adopt a holistic approach to their coaching and their L.E.A.R.N.S. model is a clearly identified thread throughout their programmes to help (see Fig. 8). This model clearly places the ‘learner’ at the centre of the coaching process so offers flexibility in the use of terminology rather than referring to ‘athlete centred’; ‘player centred’ or ‘coach centred’ approaches which can be confusing depending on the context each term is used, i.e. whether referring to the coach-athlete interaction or the coach educator-coach relationship. Garner et al.’s (2022) critical realist approach to addressing use of terminology within ski coaching proposed a conceptual model for ‘person-centred’ learning to address this very issue, to help

L	Learner centred	Range of methods to suit each person’s learning preferences, pace and skill
E	Environment	Good relationships, non-threatening climate – mistakes are OK, children learn by taking risks and making mistakes
A	Actively involved	
R	Reflect	Help people self-reflect; connect to past experience and apply learning to the future
N	New Knowledge	Need skills to build each person’s experience
S	Stretch	Right amount of stretch to challenge each person – increases self confidence and self efficacy

Figure 8 New Zealand’s LEARNNS model (Doc NZ3)

coaches see beyond the sport and look at the person in a more holistic manner, which Garner et al (2020) suggest was Kidman’s (2010) original intention. Given that terminology appears to be utilised synonymously at present within the documentation, netball might consider clarification of the use of each term within netball coaching contexts. Garner et al.’s (2022) suggestions are evident within Shara’s comments that South Africa have identified the need to look at the ‘person’ first, encouraging coaches to be a “remarkable person before you are a remarkable coach”. This emphasises the extension of the Kidman et al.’s (2010) learner centred approach to the coach learning experiences too.

However, there are differences in how close each nation is to achieving these aspirations of learner, or person, centeredness within both the coaching cultures they are encouraging and the learning culture adopted for coaches within their formal learning experiences, given the stages of each coach development system, and the historical and situational factors influencing their current position. These are explored later in this chapter (section 4.7). Table 7 utilises framework analysis to give an overview of the application of theory to practice

adopted within each nation to underpin the coaching culture that is encouraged with participants as well as the learning environment provided for coaches.

Table 7 Framework analysis summary of the stage each nation has reached in its application of theory to practice that underpins the coaching culture encouraged with participants and the learning environment provided for coaches

	Australia	England	New Zealand
Coaching culture encouraged	Athlete centred Less directive Increasing game sense, scenario based work Work through principles rather than skill based	Person-centred, holistic approach Recognise role of practice beyond technical and tactical outcomes Confidence to use range of styles Increased game sense approach	Holistic Maori influence - HAUORA Learner centred – LEARNS model Growth mind set Strong, value-based philosophy
Learning culture provided	Gap in leadership training Coach education more coach centred Coach takes ownership for learning Move to self assessment Working with others and observation	Developing sense of support for coaches from EN Encourage positive mentoring skills Growth mind set and lifelong learning encouraged Increased game sense approach Changing learning culture	Healthy community connections Desired qualities of humility and hard work Hear the coach
	Singapore	South Africa	Trinidad & Tobago
Coaching culture encouraged	Move away from yelling Fun, learning approach Changing playing style More game play Sport role in developing positive values	Traditional approach in schools School system ‘win orientated’ Netball as a caring safe haven Need to change attitudes Opening up philosophy Learner centred approach Positive confidence building approach Sensitive, supportive and culturally aware communication	Encourage dynamic play with flair Play and coaching style based on culture Be yourselves to get the best from players Favour game sense approach
Learning culture provided	Opening minds to new and more positive ideas Desire for ongoing, long term development	Lack of desire/need to qualify Need to change attitudes Open up mind set to training Opening up philosophy Learner centred approach Increase exposure to range of coaching styles	Self directed Workshop then assessed in skill delivery

From an epistemological perspective there is a growth mind set evident within NZ, Singapore, England and South Africa (Dweck, 1986, 2006, 2009). Sebastian, Cassa, Chad, and Scarlett point out that Singapore and England are looking to enact a culture change in both coaching and playing styles respectively. Cruikshank & Collins (2016), Garner et al. (2020); Kidman (2005), Kidman et al. (2010), Nash et al. (2017) and Towler (2019) all suggest that to enact a person centred approach to coaching requires coaches to be equipped with a greater range of leadership skills beyond just the traditional transactional, autocratic approach. Armstrong (2001), Navin et al. (2018; 2020) and Turnnidge and Cote (2016) advocate transformational leadership, Garner et al. (2020) suggesting ‘other centredness’ and

humility are important elements, so a servant leadership approach (Armstrong, 2001). Saskia and Scarlett from England and Sade and Shara from South Africa report they are looking to grow coach confidence in the use of a range of coaching styles and Sheila and Cali highlight a lack of leadership training within the Australian system to support this, despite adopting a more scenario-based approach to training that facilitates problem solving skills in players.

Sebastian and Sade report similarities to Whitley et al (2018) in that South African and Singapore schools are very win orientated, making it a challenge for coaches to adopt a long-term developmental approach to the coaching environment created. Rather than facilitate experimentation and player ownership of their learning, Sade and Shara report coaches still tend to adopt a more traditional skill-based approach to coaching. System Managers Sebastian, Sade, Shara and Shanice report they are working to overcome a yelling and often punitive coach-athlete interaction still found within South Africa, Singapore and Trinidad & Tobago. This highlights the uphill battle that netball coaching has in changing historical and socio-political attitudes that are well engrained within their societies. However, Shara talks about the importance within South Africa of netball as a 'safe haven' for girls, so there are opportunities for working with coaches to change attitudes, open up more growth mind sets in their coaching workforce and provide a more confidence building, culturally aware approach to coaching. Sebastian also reports the adoption of a strong value base to their approach within Singapore. As a result, there are differences in the degree to which each nation provides that autonomous - supportive environment highlighted as desirable by Conroy & Coatsworth (2007).

From a methodological perspective, there is commonality in the aspirations of each nation to adopt a game sense, problem solving approach, and use the full range of leadership, or coaching, styles to empower their athletes (Light, 2004 & 2017). Sheila reports Australia have increased their game sense approach, utilise scenario-based practices and work through principles rather than skills. However, these are more aspirational targets for some nations, as Scarlett suggests she still sees too many sessions that do not look like the game, so practicing with problem solving and questioning approaches is still a work-on in England. Sheila suggests Australia also do not yet see the game sense approach fully embedded in their coaching. Although Australia emphasised their use of game sense approaches, they adopt a 7-step skill development syllabus for their early technical and tactical development, only introducing a constraint led practice approach later in the coaching journey, which raises a debate on the application of underpinning theory to effective practice and when coaches

should be introduced to which theoretical aspects in their development. As Taylor and Garrett (2013) suggest, there is variability across nations: all have the aspiration of developing coaches who can adopt learner centred and game based approaches to their coaching, but whether that is realised or aspirational is variable across nations, as well as between individuals within the same nation.

To explore the degree to which coaches are given the skills set to support working across the full range of leadership styles (Cruikshank and Collins, 2016; Nash et al., 2017; Towler, 2019), notice has been taken of developments in the use of questioning skills and game based approaches to practice, together with the degree of adoption of a more holistic approach to coaching (Arthur et al., 2017; Kidman et al. 2010; Conroy & Coatsworth, 2007). Figure 9 reports the thematic analysis results of coach perceptions of the coaching cultures they adopt and their perceptions of the changes within the formal coach education system during recent years. This gives an indication of the shifts in terms of messaging that coaches are aware of, which has implications for World Netball when deciding on equivalence, or portability of qualifications.

Codes	Dimensions	Lower order themes
Player/athlete centred & attention to individual Holistic Problem solving & game related practice Communication & relationship building Importance of beliefs & values	Coaching behaviours and coaching culture utilised	Philosophy & coaching culture
Player at centre of learning Community involvement Questioning Experimentation, active learning Traditional elements still evident More support for coaches to develop Shift in culture More meaningful, practical learning approaches in courses Use of varied assessment methods Changes in voluntary and paid roles	Changes in philosophies and coaching culture within the system	

Figure 9 Thematic analysis results from questions relating to coaching culture adopted by coaches and changes they report within their national system of formal coach education.

All coaches expressed the importance of putting the participant, performer or athlete at the centre of their coaching, with Crystal suggesting coaching is “always about developing the athlete” despite also reporting the pressures within Trinidad & Tobago of the prevalence still of more traditional and punitive behaviours within much of the sport coaching; Charlotte talks about “doing the best I can for the players in front of me”; Chun looks to provide a “fun and enjoyment philosophy”; and Cara suggests coaching is about “putting the person first, performance second”. Chinue recognises that if “coaches take care of the player, the player takes care of the performance” and Charlotte suggests that coaching should be about a shared learning journey. These coaches, as advocates of their national systems, were unanimous on this, providing support for Kidman (2005) and Kidman & Hanrahan’s (2010) work on athlete centred coaching. Netball, as a sport, does seem to be encouraging coaching to move beyond merely transactional, directive, behaviours, indeed England Netball’s adopts Person-Centred as a core value to their 2021-2031 Adventure Strategy (EN, 2021). However, similar to the system manager comments discussed above, there is variation in the manner in which these nation’s coaches apply those principles, with differences found in references made to their participants as athletes, players, learners or people. Coaches also emphasised their role in working with teams, but Ciji highlighted their awareness of the individuals within those teams and Cassa referred to the importance of accepting individual personalities. Cassa identified the importance of listening skills to help coaches and Cali, Claire and Cassa highlighted the need to balance leadership styles to vary their approaches and be adaptable to suit the context they were in, which are concepts considered exemplars of expert and serial winning coaches (Côté and Gilbert, 2009; Lara-Bercial and Mallett, 2016).

Ciji highlighted the shift in training over the last 5 years within Australia where athlete involvement and the use of questioning approaches to develop thinking players has been an increasing focus, considering “HP is long term not fast food” (Ciji). There is an increased understanding of players as people not just netballers (Chinue) and the desire to coach from a more holistic perspective is very evident (Corrie, Charlotte, Cyndie, Cara, Crystal). Coaches identified the need to adopt coaching styles that encourage player interactions and focus on social skills (Cyndie) underpinned with more of a growth mindset (Ciji) and identify the role of the netball coach for social change (Cassa, Chinue, Chad, Chun, Crystal). Coach perspectives thus not only provides support for the role of a coach being more of an orchestrator of learning (Jones, 2006) but also lends further support for the use of the full range of leadership styles (Garner et al., 2020).

To enact learner centred approaches to coaching and provide an empowering rather than a directive learning environment puts emphasis on the development of inter-personal and coaching methodological aspects of coach knowledge and skills and within team sports requires coaches to use problem solving, game related training activities where the focus is on player involvement in decision making and problem solving. This could be through using scenarios within training activities but most certainly using TGfU and Game Sense approaches to structuring the practice environments which was widely reported by coaches Cali, Claire, Charlotte, Catherine, Cyndie, Chloe, Cassa, Chun, Chow.

Chloe stressed the importance of providing a positive supportive culture with Crystal reporting a move to more positive feedback and Cyndie and Crystal emphasising the importance of communication and building relationships. Charlotte highlighted the use of questioning to encourage players to explore ideas and Caitlin identified how “questioning has really changed my coaching”, so indicates that at least some of the netball coaches are adopting Jones and Turner’s (2006) suggestion of advocating problem solving and holistic approaches and Light’s (2004, 2017) proposal to adopt more positive pedagogy. However, coaches reflected on the challenges that engaging with the more questioning and game sense approach had presented them with initially and how much they either valued or appreciated support in applying course content to practice. As such, experiences within netball coaches mirrors those reported within empirical evidence from Jarrett and Harvey (2013) who reported varied uptake of game based approaches due to a range of reasons, including lack of exposure of coaches to GBA rather than performative cultures; Stodter and Cushion’s (2014) suggestions that coaches can be challenged in enacting the GBA back at home where this provides a clash with the philosophies within the club and the impact of habitus on predispositions to adopt GBA demonstrated by Light and Evans (2016) work with rugby coaches. Leduc et al (2013) also highlighted the importance of reflective skills in supporting coaches to enact learning from their formal courses and suggest this holds the key to coaches obtaining deeper learning and their ability to change their behaviours. The degree of support available to coaches around or following a formal course delivery is likely to impact the degree of adoption of ideas presented within those formal courses, which presents a further challenge to any system developed to assess transferability of qualifications.

It is also clear from all three source of evidence here that notice should be taken of the approach adopted by the NGBs to support coaches through their learning journey, to see how far NGBs have moved beyond a purely ‘knowledge transfer’ approach to coach learning,

given the challenge this approach has in enacting behaviour change (Abercombie, 2015; Cushion et al., 2010; McGullick et al., 2009). Being able to put the coach at the centre of their learning within formal courses has been suggested by LeDuc et al. (2013) as an important element in facilitating coaches to transform the content of courses to their coaching cognitively, emotively and/or practically, so experiences of coaches on these formal courses is important to consider, in addition to the knowledge and skills sets developed.

Coaches reported welcoming the changes in focus on formal courses over the last few years which would support Piggott's (2012) suggestion that coaches preferred open and discursive courses. For example, Charlotte welcomed the more interactive approach and the move away from quite such a focus on theory that she had found intimidating at the time, though she had found the formal course very useful to understand how to put sessions together. Chad reported benefitting from learning under the Australian system as well as SA, which he found more confidence building, gaining the understanding that there is no fixed way to do things, what you know is never wrong, and the importance of understanding and decision making to improve. Chun reports the courses in Singapore are still quite technical and theory loaded and quite dictatorial, despite changes in the focus for coaches to develop their inter-personal skills. Chinue reflected on how their level 2 course had moved from catching you out and autocratic behaviours to empowering players, being more consultative and how much she wished she had had that approach earlier, as she had felt scared on her level 2 and did not want her players to feel the same way: "autocratic leaders mistake form of discipline for respect and it's not fiction, the fear". Chloe reflected particularly on how powerful the player centre approach had been within their formal modules, teaching how to place the focus on the player, using questioning, the importance of building networks and the realisation that you need to initiate the learning you are after. Similarly, Catherine also reported the powerful messaging of her formal courses encouraging a different approach of giving players ownership of learning, and the use of scenario-based learning so the coach is not talking all the time.

The changes made within recent years to the content and delivery of coach education and development opportunities have thus impacted coaches. However, some coaches reflected on the challenges they experienced in enacting such a culture shift within their coaching journey from the more traditional, directive approaches to the more supportive empowering methods. In particular, the challenge of returning home after a course and trying to put into practice messages learnt (Stodter & Cushion, 2014), where some nations do not have support beyond

the formal courses to the same extent as others. Also challenging was striking the right balance between more player empowerment methods with the pressure to win (Segwaba et al, 2014; Whitley et al., 2018) though Ciji suggests a solution: “It’s about winning, don’t shy away from it but focus on steps leading to winning”.

4.2.3 Summary of section

Table 8 summarises the similarities and differences for the coaching culture encouraged within the coaching workforce across the different nations and the philosophy driving the coach education programmes, in each phase of this research. The similarities present the common core that should be easily transferable, but the differences are the alerts that whatever system World Netball adopts might need to be aware of, the potential anomalies that might present barriers to portability of qualifications. Even within the similarities identified here, such as athlete and learner centredness, the aspiration to achieve this is similar, but there are still hidden differences in the degree to which each nation has currently achieved that aspiration. Given the dynamic nature of the system and the changes reported by coaches, it would seem datelines of qualifications will be an important consideration of not only what and when coaches learn but also how they have learnt.

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Table 8 Summary of the similarities and differences in philosophies encouraged within the coaching and driving the coach education and development programmes.

Similarities:

Documentation	System managers	Coaches
• Structured aims and objectives • Supported by strategic development & planning • Underpinning philosophy highlighted • Performer centred approach • Relationship building important • Balance of F2F delivery with practical • Professional, inter-personal and intra-personal skill development • Competence based	• Increased focus on Player centred coaching • Opening up Growth mind set • Holistic, value-based philosophies • Increased range of styles • More positive environment • Empowered and supported coaches	• Personal • Hunger to learn • Player centred- involvement, empowerment • Importance of relationship building • Positive, supportive environment • Importance of game activities and developing game sense • Importance of listening and questioning skills • Importance of reflection and adaptability • Holistic approach • Systematic • Support coach development • Learner centred approach in coaching and in delivery of coach education and development • Increase focus on game sense, problem solving • More focus on inter-personal skills and communication, especially questioning to facilitate learning • Scenario based practice • Changes in formal F2F session delivery

Differences:

Documentation	System Managers	Coaches
• Degree of integration of development opportunities with formal elements • Content included at different stages	• How, where and when introduced • Historical cultural approaches • Focus on game sense and working through game principles • Level of community connections	• Journey to current philosophy • Influencing factors on developing philosophy • Challenges faced when adopting questioning and game sense approach

4.3 Structure of National Coaching Qualifications

All nations reported their use of formal coach education qualifications as the core of their coach development pathway, which ENSS (2007) has recognised as an essential part of developing a coaching licence and Day (2013) suggests provides the opportunity to disseminate the growing body of scientific knowledge underpinning sport coaching facilitating the application of theory to practice. All countries have a progressive system of formal qualifications, outlined in table 9 below, though at the point of sampling Shanice and Crystal reported courses within Trinidad & Tobago reported had not run since 2012 so they were reliant on the development of regional online courses from the Americas Federation of Netball Associations (AFNA) for qualifications. Their level 3 was also ‘pending’ development within University (Shanice) so the structure included within Table 9 is more of an aspirational and/or historical one for Trinidad & Tobago than a current one. All other nations reported courses were running regularly, operating under ongoing review and development programmes.

Table 9 Outline of formal coaching pathway structure

Australia	England	New Zealand
6 Tier	4 Tier	5 Tier
Foundation Development Intermediate Advanced Elite High Performance	Level 1 Assistant Coach Level 2 Coach Level 3 High Performance programme	Foundation Community Coach 1 – Technical Community Coach 2 – Tactical Performance Coach High Performance Coach Development programme
Singapore	South Africa	Trinidad & Tobago
4 tier	5 tier	3 tier
Foundation Level1 (Provisional) Level 1 (Full) Level 2 Level 3	Pre-level Apprentice Coach Level 1 Assistant Coach Level 2 Coach Level 3 High Performance/International coach	Level 1 Level 2 Level 3 (pending)

The structure of each nation’s formal coach education system revolved around a linear progression of awards, giving coaches a structured progression to their learning with a route

to move from novice to expert coaches (Dreyfus & Dreyfus, 1986). Similar to Al-Busafi's (2012) findings within other sports, Table 9 indicates differences in the number of levels each nation adopts within their pathway structure as well as the titles, suggesting challenges in comparing equivalence of qualifications, particularly in attempts to match up awards to the International Sports Coaching Framework (2012, 2013), or indeed National Vocational Frameworks. Each nation does, however, give clear pre-requisites and guidance for ongoing development and expectations for coaches looking to progress from one level of qualification to another - see Table 10.

Table 10 Pre-requisites for entry into pathway and guidance give to coaches for progression from one level to the next

Nation	Pre-requisites to entering formal coach education pathway	Guidance/expectations identified from one level to next
Australia	NetSetGo	Skill development Framework Coaching update logbook (Docs A5: A19) Series of tasks over 4 year period post qualification 50% updating through coaching hours Increasing no. hours/points with higher qualifications. Mentoring/facilitator for course encouraged from Advanced (Doc A5)
England	DBS Safeguarding & First Aid- maintain currency each 3 years throughout coaching journey	Plan of action and goals set in professional discussion to guide
New Zealand	Player Centred Coaching Introduction to Netball rules Netball SHEILART – growing physical capacity	Level of playing as athlete No. years active coaching before presenting for next award Ongoing learning activities available
Singapore	Principles & Values module Current first Aid 70% pass in online :eve; 1 Netball Rules Theory exam Knee programme Physical screening for fitness to coach	National register of coaching – updates every 3 years with guidance of % coaching practice & % coaching education – split between attendance courses and self-guided
South Africa		Re-accreditation every 3 years

Thus, coaches are encouraged to continue to engage in lifelong learning (Deek et al., 2013), grow from one level of qualification to the next and are required to record their development practically within coaching logbooks in Australia (Doc A5) and be part of the National Register of Coaching within Singapore, where coaches need to meet percent time targets within different learning opportunities as part of their reaccreditation applications. There are key idiosyncrasies in different national systems that provide messages of those nations' underlying philosophies – the inclusion of a player centred coaching module for New Zealand (Doc NZ2) and the Principles and Values module for Singapore (Doc S12). Australia and Singapore also refer to physical screening for fitness to practice for coaches, with Singapore highlighting the need for coaches to be able to set up demonstrations as part of that physical capability, though recognise that is not necessarily the coach that needs to perform them (Doc S4,6&7) and Australia suggesting coaches should be able to demonstrate, even if in slow motion (Doc A9). New Zealand's Netball SMART programme and Australia and Singapore's inclusion of the KNEE programme to underpin physical developmental aspects of training and injury prevention are idiosyncratic and would need to be noted for coaches transferring into these countries as potential differences and upskilling needs. The guidance for ongoing development was variable, with Singapore's requirements being the most explicit. Their national register of coaches requires stipulated hours or percentage development in different learning activities for each year, with increasing demands as coaches progress through different levels of awards. Reaccreditation every three, or four, years is also overtly part of South Africa, Australia and Singapore's pathway so the logbooks, or records, that coaches keep within these nations could provide a potential mechanism for developing a 'coaching passport' of evidence of knowledge and skill development.

Selina reported a key development in New Zealand was a move to their Framework, launched in 2017 and revised in 2019, which signified a shift to a more modular learning journey for coaches. This permitted some flexibility for coaches to structure their learning, giving them some options of the order in which they can complete modules to suit their needs more directly, and take more ownership of their learning journey. Selina noted this framework development has also facilitated more flexible entry and exit routes, including opportunities for accreditation of prior learning and an accelerator programme for elite players (Doc NZ 15). Despite these benefits, New Zealand's System Managers Savannah and Selina both reported there are ongoing problems with the framework that they are working hard to address. Other nations have also built in flexibility within their pathway, Susan and Scarlett

suggesting elite players can short cut their journey, in recognition for their game knowledge as a player, and enter the system at Level 2 for England; Singapore provides a Coach Accelerator programme (Doc S11); and Australia provide a sliding scale of Recognition of Prior Learning (RPL) depending on the level of athlete. Suncorp Super Netball (SSN) athletes receive full RPL for the Foundation course, opportunity to tailor the face-to-face workshops at Development level and the Advanced and Elite level of qualification can provide RPL for the specific areas of court that athletes play within (Doc A9). Netball therefore tends to agree with Werthner and Trudel (2006), in their recognition that being an athlete added value to sport coaching journeys, though is not necessarily an exclusive criterion. New Zealand, Australia and South Africa operate an ‘accreditation of prior learning’ approach to integrate coaches who may come from abroad or have a different, yet complimentary, skill sets that could be used as a basis for developing a mechanism for judging equivalence of qualifications and does present the possibility of recognising transferable skills from other professional training too. However, this is not without its difficulties as the NZ coach, Cara, reported that when working in Australia her qualifications were not recognised as she was told she could only be accredited with the Foundation level, despite being an experienced coach. This example merely emphasises the need to find a more successful system to assist coaches working in different countries and recognise other forms of training within those decisions.

The linear progression for coaches through the formal coach education pathways offers awards at higher levels of coaching that relate to working with higher levels of performance athletes, so provides little evidence, yet, of netball embracing the concept of formal qualifications that service the variety of coaching contexts identified in the 4 x 4 Coach Development model (ISCF 2012), or identified as a developmental need for the coaching workforce by Navin & Vinson (2020). However, the use of the ‘community coach’ award titles within the New Zealand’s system suggests a more overt focus on participation, whilst their higher levels of awards focus more on performance contexts (Docs NZ 6,7,11 & 12). Thus, there is a clear delineation of preparation to coach within different context populations within New Zealand’s system. Australia recognised some coaches “have ambitions to coach at the highest level they can attain, while others take great joy in coaching foundation players” (Doc A3, p. 16), so also recognise the different needs of coaches working with different populations. Their solution was to focus some of the lower coaching awards within specific age groups, but importantly “.... what remains at the core for all coaches is a

commitment to learning and the broadening of their coaching skill set, relevant to their needs and the needs of their players” (DocA3, p.16). So, there is an increasing awareness of the need to contextualise information, even if the qualification structure remains a linear one. Although the main focus of this research was the formal coach education provision, it is worth noting where each nation does currently aim to provide the training for their coaches to work in differing participation and performance environments. Table 11 outlines where nations have provided this support.

Table 11 Current provision of coaching awards for different age groups and coaching contexts

Participation groups	Australia	England	New Zealand	Singapore
Children	NetSetGo 5-10 years Funnet – 5-7 years Netta – 8-10 years (Doc A22) Development	First Step netball 4-7 years & High 5 Netball 7 – 11 years until 2019 Bee Netball from 2019 4-11 years	Foundation years 1-8 Year 1 &2 – 4v4 Years 3&4 – 5v3 Years 5&6 – 6v6 Years 7&8 – 7v7 CC1 – (under 15)	KidzNet Net4all Foundation
Adolescents	Development & Intermediate	Teaching -Key stage 3 Teaching Level 1 & 2	CC 1 (Under 15)	Net4all Level 1
Adults	Development & Intermediate (Doc A5)	Back to Netball Walking Netball Levels 1 & 2	CC1 & 2	Level 1

Performance groups	Australia	England	New Zealand	Singapore
Emerging athletes	Intermediate Advanced	Level 2	Community Coaching 2 Performance (Doc ZN5)	Level 1 & 2
Developing athletes	Advanced Elite (Doc A7)	Level 3	Performance	Level 2
HP/Elite athletes	High Performance	HP CPD programme	HP	Level 3

Table 11 indicates that, to meet the needs of the increasing range of populations involved in netball, NGBs are diversifying their offers and supplementing formal qualifications with non-

formal, attendance-based workshops or online resources to support those working within different coaching contexts. New Zealand embraces the early years coaching provision within their foundation level of their coaching pathway, but other nations identify their early years programmes more as pre-requisites for entry to the formal coach education pathway. There are also differences in the target groups at the performance levels of awards, most notably a difference with the Level 3 formal qualifications between Singapore, South Africa and England. Table 12 explores target audiences of each qualification within each nation in more detail, together with length of course and an indication of the modes of delivery, which provides support for Lara-Bercial et al.'s (2017) suggestion that variability is found with how learning is structured, delivered, and assessed. More detail follows on the assessments within each award later in this report.

Differences can be seen at the high-performance level, where England adopts a programme of support rather than a qualification, and some nations relate to 'as required' as their length of courses, given the individualised nature of their programmes at that level. At the High Performance level, New Zealand adopts a system of 'carded coaches' to identify a select group of coaches that are part of the High Performance Development programme. This system was reviewed in 2013-14, to reduce numbers down from 20 coaches to 6 head coaches, 2 Assistant coaches plus Silver Fern coaches. Selina reports that the development of these carded coaches operates via a community of practice, supported by conferences, workshops and cross-code work with other coaches whereas Scarlett reports England's high performance programme coaches can also access a cross-sport leadership programme, though the numbers accepted on the course is very limited. These more individualised programmes of support for high performance coaches within netball are similar to those reported by Callery et al. (2014) i.e internships, mentoring and communities of practice. The increasing reliance on individualised learning programmes as coach expertise matures supports Deek et al.'s (2013) observation that coaches rely less on formal learning as their experience grows and Nash and Sproule's (2009) empirical study of expert coaches tended to find informal methods more helpful for ongoing development than formal courses at this stage in their development.

Scarlette and Sophie reported that, since 2019, EN have employed a full-time coach developer to support their superleague and franchise coaches, so there is a more targeted, individualised, coach development now at that level. The most recent version of the Level 3

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Table 12 Summary of target groups and lengths of awards in each nation

AUSTRALIA	ENGLAND	NEW ZEALAND
Foundation Beginner & Club coaches (Doc A9,22) Development Club, Association & regional coaches <i>4.5 hours; online</i> Intermediate Representative, talent identification & state league <i>7 hours; blended</i> Advanced Representative, talent identification & state league <i>29 hour + coursework</i> Elite SSN assistant, underage state, state league (top level) and potential high-performance coaches <i>As required</i> High Performance Top level state league. State/territory. ANL or SSN coaches <i>As required</i>	Level 1 – Assistant Coach Assist more qualified coaches; deliver aspects of session (Doc E6) <i>2 day (DocE5); online since 2021</i> Level 2 Club, team or school environment <i>5 day until 2021 – now 3 x online + 2 day F2F</i> Level 3 Experienced coaches working with athletes in longer term. Long term club development. <i>Pre-2020 7 day course; since 2021 online x 4 workshops + 2 Day F2F</i>	Foundation Parents; organisers; helpers; coaches <i>Online resources available</i> Community Coach 1 (Technical) Entry level development coach Focus - participation Up to and including under 15 age groups <i>8 modules + coursework Blended</i> Community Coach 2 (Tactical) Community coach – participation & competition <i>8 modules + coursework Blended</i> Performance Coach Coaches who have desire to work with more talented athletes – centre or zone representative teams and squads <i>7 modules + coursework</i> High Performance Challenge and support development of elite coaches <i>As required</i>
SINGAPORE Foundation Beginning coaching +netball skills <i>Pre-reading; 7.5 hours + coursework</i> Level 1 (Provisional) <i>Principles & values module; 7.5 hours</i> Level 1 (Full) School & Club coaches <i>15 hours +30 hour sports science module</i> Level 2 Superleague; national representative; competitive club coaches <i>30 hours</i> Level 3 National & International level coach <i>As required</i>	SOUTH AFRICA Pre-level Apprentice Coach <i>1 day</i> Level 1 Assistant Coach Introduce and develop basic skills through safe, fair and enjoyable sessions (Doc SA9) <i>3 day</i> Level 2 Coach Provincial teams; working towards HP; national championships for schools <i>3 day+ 1 year coaching</i> Level 3 High Performance/International Coach Coaches working at National level	TRINIDAD & TOBAGO Level 1 Level 2 Level 3(Pending)

award within England has ‘mentor’ assigned to each coach aimed at providing support to complete tasks and help coaches apply theory to practice, which is a different system from Australia or New Zealand. The differing levels of support around the formal coach education award pathways indicated here are explored in more detail later in this report, but findings

can contribute to the debate on whether coach developers, mentors or communities of practice are the most effective support for ongoing learning of not just experienced coaches but less experienced too (Nash, 2003; Nash & Sproule, 2009; Nash et al., 2017; North, 2010).

4.4 Potential Benchmarking of Netball qualifications to the International Sports Coaching Framework (ISCF 2012; ESCF 2017).

The first challenge for those wishing to assess equivalence of qualifications, is the extent of differences between the systems and the number of levels of qualifications, as Rui et al. (2014) also reported within Volleyball coach education systems across five nations. Although Rui et al. (2014) reported no discrepancies between systems despite these different structures, how each nation might match up to the International Sports Coaching Framework of Coaching Assistant; Coach; Senior Coach; and Master Coach (ISCF, 2013; ESCF, 2017) is the first challenge for addressing the judgement of equivalence in qualifications. At first look, England, South Africa, Singapore and Trinidad & Tobago utilise award titles of Levels 1, 2 and 3 which might indicate similarities in knowledge acquisition and levels of expertise, as measured by the learning outcomes and competences assessed. Given that Australia grew its 6-tier model from a 3 tier one, also named levels 1, 2, and 3 in 2006 where Sheila suggests those levels had been “pretty much the UK Levels 1,2 and 3”, the suggestion here was the old Level 1 (and UK Level 1) would equate to the current Development module ; Level 2 to the Advanced award and Level 3 to the High Performance qualification. Sheila also reported the extra awards were included to bridge the gap between levels that Australia felt were too large. Australia have also been a driving force behind both Singapore, who licence their awards from Australia (Sebastian), and Trinidad & Tobago whose Level 1 and 2, when they ran, were instigated from Australian coaches working over in Trinidad & Tobago (Crystal). Shara suggests South Africa have drawn on expertise from the UK, New Zealand and Australia in the development of their qualification system, so the degree of similarity suggests benchmarking these qualifications against the ISCF(2012) ought to provide a straight forward tool for assessing equivalence of qualifications.

The England system, when under the auspices of the UKCoaching Certificate, was modelled on the ISCF, with Level 1 identified as an Assistant coach role, though might be more aptly

named a Coaching Assistant as they are qualified to work alongside a higher level coach rather than independently. Scarlett suggested the term Assistant Coach can be misleading as coaches who are more highly qualified and working as an assistant coach within a performance context would not be commensurate with this first level of award. England Netball's Level 2 represents a coach who can plan and deliver independently and Level 3 a Senior coach. Level 4, or Master coach, has not yet been written, just piloted (Scarlett). The degree of similarity outlined above between national levels of qualifications would suggest a straightforward benchmarking against ISCF would be feasible to support judgements of equivalence of qualifications. Table 13 explores a potential match-up of awards via the identified outcomes of each level within each nation, benchmarked against the four ISCF coach criteria, as suggested by Al.Busafi et al. (2010). South Africa also included an Apprentice Coach stage in their South African coaching Framework (North, 2020).

Table 13 Levels of national awards benchmarked against ISCF levels via outcomes of courses.

ISCF level & overview of expectations	Nation & level	Outcome expectation
Apprentice	Pre-level	Basic coaching principles and rules
Coaching Assistant Assists in the delivery of sessions, within practices and competitions Conducts basic coaching sessions, sometimes under supervision (ISCF, 2012)	Australia Foundation	"Designed for beginner and club coaches" (DocA22)
	England Level 1	"assist more qualified coaches. Delivering aspects of coaching session, normally under direct supervision" (Doc E6)
	New Zealand Foundation	"awarded to a coach that has completed all four year level certification. This could be a parent/caregiver, teacher, member of the community who has a particular interest in working in all developmental levels at junior stage" (DocNNZ4,p. 3)
	Singapore Pre-level	Pre-requisite (DocS4)
	South Africa Pre-level	Basic coaching principles and rules
Coach Plans, leads and evaluates coaching sessions and blocks of sessions Leads own sessions, but will often work under supervision as part of a programme's staff Delivers sessions over a season often as part of a wider programme Supports Coaching Assistants and pre-coaches in their	Australia Development	Includes coaching task consisting of coaching activities over a 2 hour on court session in small coaching groups (Doc A12) Club, Association & Regional coaches & teachers (Doc A5, p.4)
	Australia Intermediate	Be able to teach a skill to a group of athletes 30-40 mins (DocA14) Representative, talent identification and state league level (Doc A5)
	England Level 2	"for those interested in coaching netball in a club, team or school environment" (Doc E3)
	New Zealand Community Coach 1	Entry level coach (Doc NZ3). Community, participation coach providing quality coaching up to Under 15 age group (Caitlin)
	New Zealand Community Coach 2	CCA for coaches working with athletes from 12-18 years (Doc NZ5)

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development (ISCF, 2012)	Singapore L1	Foundation coaching course; School and club coaches (DocS4) Able to prepare preparatory and developmental level athletes for positive competition experiences, in a planned and coordinated programme (School system athletes) (Doc S9,p. 3)
	South Africa Level 1	“able to introduce and develop basic skills through safe, fair and enjoyable sessions” (Doc SA9, p. 2)
Senior Coach Plans, leads and evaluates coaching sessions and seasons independently. Oversees and contributes to the delivery of programmes over seasons, in specific contexts. Involved in the management and development of other coaches (ISCF, 2012)	Australia Advanced	60 minute practical coaching session within a training environment (Doc A11) Apply the advanced tactics and strategies of netball in a competitive situation...plan and prepare training sessions that compliment the yearly plan (DocA7) Coaches of representatives, talent identification and state league level who are developing advanced coaching principles and practices” (Doc A5, p.4)
	Australia Elite	Coaching skills within a competitive environment (DocA13) Identify and implement elite tactics and strategies in a competitive situation...Plan, prepare and evaluate an integrated yearly plan for an elite team...apply working knowledge of scientific theory and principles of training and its application to Netball at elite level (DocA7) Coaching at the highest level of state league, Australian netball league and National Netball league & aspiring to the HP coaches (Doc A5, p.4)
	England Level 3	“For experienced coaches who are looking to players over a prolonged period of time and who are responsible for developing the long term club coaching programme” (Doc E5) “Plan, implement, analyse and reviews annual training programme” (DocE9)
	New Zealand Performance	“For coaches who have attained their CCA and are working with representative athletes within the development and performance levels” (Doc NZ5, p.3)
	Singapore Level 2	Netball Superleague; National representative & competitive club coaches (DocS4)
	South Africa Level 2	Tactical play – strategic management of game play Comprehensive session planning Coaching provincial teams, working towards HP, national championships for schools
Master Coach Oversees and contributes to the delivery of programmes over seasons, in medium to large scale contexts, underpinned by innovation and research. Involved in designing and overseeing management structures and development programmes for other coaches (ISCF, 2012)	Australia High Performance	Highest level state league, Australian Netball League and National Netball League, working as Head coach capacity and have overall responsibility for delivery of netball programme within our high performance system (Doc A5, p.4)
	England Non-formal	High Performance coach development programme Opportunity for UKCoaching leadership development
	New Zealand High Performance	“Coaches must be engaged with the development of elite athletes within the HP pathway” (Doc NZ5, p.3) Facilitated formal and informal programme designed to challenge and support individual development of elite coaches. (Doc NZ5, p.3) Individual Development programme (IDPP); learner centred (Doc NZ6p.1) Carded coach system (Doc NZ7)
	Singapore Level 3	Minimum coaching of 7 years at provincial level “The highest level of accreditation designed for coaches at a national and international level” (Doc S5)
	South Africa Level 3	International level minimum of 10 years Podium finishers or top 5 in CWG

Though the match up for England is straight forward, except at Master coach level where there is no qualification, per se, rather a high-performance coach development programme, the other nation's match ups are less clear. Part of the issue is the parity of Level 1-2-3 courses. Though the use of 'Levels' in the titles infers connections to National Vocational Qualifications frameworks which were established to facilitate portability and transfer of qualifications, there are differences in the numbers of NVQ levels across nations, which complicates comparisons. England & Europe operate an 8-level system, Australia, New Zealand & South Africa 10 levels and Scotland 12 (NZ & ENQF joint report, 2016). The parity of the different levels cannot therefore be assumed, particularly when matching up to ISCF Coaching Assistant versus Coach role, given that most formal coaching qualifications are aimed at supporting candidates to coach rather than to assist. An example here is Singapore Level 1 and where to place that. Australia's foundation course is difficult too as the stated aims are to be a beginner coach at club level which infers a level of dependency on more experienced coaches, but if coaches are working independently then they belong more in the Coach category. Level 3 also poses problems, with Singapore and South Africa differences when compared to the England Level 3 is an issue. Singapore and South Africa target their Level 3 at national coaches, whereas England targets more experienced coaches who are investing in being better coaches, not specifically national coaches (Saskia, Susan, Scarlett). This lack of equivalence of awards with the same titles presents problems for portability of qualifications. A closer look at the content, modes of delivery, assessment, philosophy and coaching culture encouraged was therefore conducted to gain more clarity. At High Performance level, though, Australia provided an excellent match up to the skill sets identified for a Master coach, with very overt links to the skill sets identified in ISCF (2012) for a master coach, see table 14.

Table 14 Australia's High Performance matching of competences with performance elements for their High Performance course (Doc A6)

Competency	Performance element
Set the Vision and strategy	Develop a coaching philosophy and Vision with leadership and communication as the underpinning key elements
Shape the environment	Lead the players, coaches and support staff to create an environment that enables the Vision to be achieved, consistent with the coaching philosophy. Apply working knowledge of a coach's legal responsibilities and their application to Netball
Build relationships	Lead and influence people, enabling them to be successful and interact effectively with relevant stakeholders
Conduct training and competition	Develop the game plan, skills, techniques and decision making capacity, consistent with the coaching philosophy, that will enhance development in all areas of performance. Teach advanced Netball skills, recognising and encouraging individual strengths and correcting errors in technique. Devise training sessions for elite individuals to improve their competence and range of skills. Instruct and implement the principles, functions and strategies associated with each playing position within the team strategy. Analyse match play styles and systems and introduce and advance tactical responses Apply working knowledge of scientific theory and principles of training, sports science and sports medicine and their application to netball.
Learn & reflect	Constantly seek opportunities for formal and informal learning to ensure continuous growth. Self-reflect on coaching behaviours and develop and action plan for improvement. Be creative and look for solutions that continue to grow the programme and the people. Manage personal development and own health and well being

4.4.1 Summary of section

To summarise, the comparison of different nation's structure of formal coach education pathways suggested the following similarities:

Documentation	System Managers	Coaches
• Structured formal coach education programmes to support coach journey • Formal qualification programmes overseen by NGB • Pre-requisites and follow-up tasks combined with formal delivery • Dynamic system	• Recent history - Ongoing development of programmes • Partnerships & strategic development - Links with National sporting bodies • Formal content & assessment updates • Development of other learning opportunities around formal	• Progressive experiences through levels • Changes in structure of NGB system over time • Changes in coaching methodology over time • Value of formal education • Changes in delivery modes and nature of F2F sessions

Key differences, that present challenges to portability include:

Documentation	System managers	Coaches
• Number of qualifications in each system • Pre-requisites prior to starting programme • Inclusion of RPL • Other qualification/development programmes surrounding formal programme • Expectations and structure of support for learning at each stage • Degree of flexibility within system to individual coach journey • Inclusion of Diploma quals in pathway for Australia	• Particular details of inclusion within syllabus • Types of assessment at each level • Use of formal assessment versus reflective or developmental opportunities • Changing nature of F2F delivery • Movement to online and blended learning	• Content at each level of award • Balance of theory to practical • Modes of delivery • Introduction of pre-requisites and CPD expectations • Connections with other countries and other sports • Level of support integrated or around formal programmes

This section has raised a number of challenges for developing a benchmarking system and resonates well with Lefebvre et al (2016) who highlighted how complex the process of judging the equivalence of qualifications is. There is a clear message across all sources of information that each nation's coaching development pathway is a very dynamic one, and

perhaps a limitation of this research is that it provides a cross-sectional view of these systems only, rather than a more longitudinal study. With such a dynamic environment, netball presents a real challenge to those who wish to develop a mechanism to assess equivalence of qualifications as changes are ongoing within countries, let alone across countries. The implications being that any system designed to facilitate portability of qualifications would need to pay attention to timeframes or datelines that qualifications were completed in. Susan suggested this is most challenging in the community level of qualification, particularly where employers need to be confident in what coaches know and can do for insurance purposes when working independently. Initial efforts to benchmark against ISCF (2013) and ESCF (2017) through learning outcomes were not conclusive, so a deeper level of analysis to assist this potential benchmarking process is now provided with the exploration of content, modes of delivery and assessments of formal qualifications, though Stodter and Cushion (2014) caution that comparisons need to also take into consideration a nation's history and cultural influences and He et al (2018) highlight the need to consider how coaches learn in different countries as well as understanding coach preferences.

4.5 Analysis of content, modes of delivery and assessments within awards.

This section provides further exploration of qualifications to give a more in-depth look at potential mapping tools and utilised Côté & Gilbert's (2009) differentiation between professional, inter and intra-personal knowledge and skills as an analysis tool to categorise knowledge and skill sets at each level of course. The degree of similarities and differences across programmes of study can then be assessed to consider transferability or equivalence of qualifications and to identify any gaps in knowledge and skills set for coaches wishing to transfer from one nation's qualifications to another. It should also permit confirmation of benchmarking against the ISCF levels of coaching. ISCF (2012), Jacobs et al. (2014) and ESCF (2017) definitions were used to classify professional knowledge and skills as sport specific (i.e. netball related); sports science (physical and psychological) and coaching methodology (pedagogy). Inter-personal skills were identified as the communication skills necessary to establish the coach-athlete interaction and underpin the philosophies and coaching behaviours encouraged; and intra-personal skills indicate the open-mindedness of coaches, the use of reflective practice, capacity to have empathy with others and the use of emotional intelligence. The balance between these three elements also gives an indication of the degree to which countries have engaged with the extended role of the coach being more holistic and goes beyond just netball and sports science components.

Australia, for example, provides specific encouragement for the development of coach intra-personal skills through their Coach Approach and use of G.R.O.W. (Goals-Reality-Options-Will), a model designed to raise self-awareness and encourage coaches to take responsibility for their own learning (Doc A2; Whitmore, 1992). Coaches are also encouraged to "seek continual improvement through performance appraisal and ongoing coach education and be open to other people's opinion" (Doc A5). This combination of competence-based work with practical work outside of the accreditation activities directly suggests Australia are looking to capitalise on coach use of different learning types and are encouraging coaches to address knowledge and skills that go beyond just the netball and sports science specific ones. There is a particular focus on the intra-personal skill development that would support coaches taking responsibility for their own learning and encourage lifelong learning. Similarly, the New Zealand's Community Coach 1 award demonstrates the spread of knowledge within their formal qualification (see Table 15).

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Table 15 Content analysis of the topics covered in professional – interpersonal and intra-personal knowledge and skill sets within New Zealand’s Community Coach 1 award.

Award	Professional Knowledge & Skills			Inter-personal skills	Intra-personal skills
	Netball specific	Sports Science	Coaching Methodology		
Community Coach Award Level 1 (Technical) <i>No formal assessment</i> <i>Share practice in each module</i> <i>Ongoing activities from each module</i>	Introduction to rules module relating to the game – sanctions; playing the ball; held ball; out of court; footwork. Offside, obstruction, contact. Attacking fundamentals Ball & movement skills Ability to pass from left and right side of body Passing and catching elements Concept of attack and what skills are required to execute attacking play effectively Defence 1 Phases of defence How to intercept pass or create intercept while marking one on one Shooting Sequential steps in shooting Implement steps to improve performance Roles of GS & GA Movement requirements for shooters, creating attacking options and rebounding	Physical literacy Growing Physical capability module Fitness programme SHEILART preparation, warm-up, cool down, movement , training and injury management Skills Analysis module FMS in netball Understand physical requirements for netball at foundation level FMS to enhance performance and minimise injury risk Basic principles and processes of biomechanics	TGfU Plan and implement fitness programmes Principles of VARK Planning module Plan for season, a practice and game day Review and evaluate Observation & video analysis Analyse a variety of skill components and develop activity to enhance performance Skill correction Selecting module Selection policy Player selection processes Player profile L.E.A.R.N.S. model	Player centred coaching Building Effective relationships module Principles of communication Feedback and questioning to get best out of players Team Culture module Dynamics of group/team stages within a team Whom and what makes a team Fundamentals of creating a team culture	Reflective approach to games Philosophies of NetballSmart Review & evaluate Explain, demonstrate and reflect on how players learn and make decisions when on defence

New Zealand's modular system provides coaches with a diet of content that extends knowledge beyond the netball and sports science specifics which is another indication of the strong Maori culture that Savannah highlighted is embedded within NZ netball, referring to values such as *whanaungatanga* (relationships and connection), *mana* (prestige and respect), and *kotahitanga* (unity). This strong value driven approach that encourages teamwork, respect and team unity is evident within the NZ Rugby culture as well as the netball (IRB, 2013) but within netball is seen as an opportunity to develop strong female leaders. This indicates a real appreciation for building relationships that Jowett (2017) highlights as being at the heart of effective coaching.

However, there is variation in the degree to which coaching courses across these nations have built in the full range of knowledge and skills into their curriculum. For example, Table 16 below indicates the spread of knowledge and skills addressed in the content of the South African Level 2 course (Doc SA9 & 10). Here there appears to be a far more traditional curriculum content to this course, so coaches moving from one of these nations to another may have experienced a very different training approach. The differences between inclusion of inter and intra-personal knowledge and skills is very marked from NZ to South Africa. However, when the competences that are assessed within the Level 2 Coaching practical task for South Africa are considered (see Table 17) this difference is less marked, and there does indeed seem to be efforts to assess across a broader range of skill sets than Table 16 might have first indicated. These differences reinforce Susan's comments about the challenge for system managers to access complete enough information to do due diligence to decision making over parity of awards. The competences included within the inter-personal skills within Table 17 give a clear indication of South Africa's desire to encourage more positive attitudes, create positive learning environments, encourage the rewarding of positive behaviours and engage with a confidence, competence building coaching approach that moves away from the focus on error detection and correction so would be in keeping with our current understanding of building positive motivation (Deci & Ryan, 1985; Vallerand, 1997) and movement towards more positive pedagogy (Light, 2017).

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Table 16 Example content from South Africa Level 2 course, classified into professional, inter and intrapersonal knowledge and skills

	Professional knowledge and skills			Inter-personal knowledge	Intrapersonal knowledge
	Netball	Sports Science	Coaching Methodology		
Level 2 Coach (Doc SA9)	Application of rules Additional games Skill – movement Ball drills Attacking skills Defending skills Shooting – step and shoot Rebound Vision Team tactics – centre passes; goal circle play; throw-in	Testing Video & stats Nutrition & hydration Training plan – netball fitness Setting goals Warm-up; warm-down. Ensuring safety – strapping; finger, knee, ankle Recovery – hot; cold	Supportive systems to coaching-organisational group formations. Code of conduct and ethics		

Table 17 Example of competences assessed across professional, inter and intra-personal skills within the South African Level 2 course.

	Professional knowledge and skills			Inter-personal knowledge	Intra-personal knowledge
	Netball specific	Sports Science	Coaching methodology		
Level 2 – Coach (Doc SA3)	Develop movement fundamentals (skills) Use game activities to promote learning.	Use appropriate activities to prepare participants for the session. Maintain safety of coaching environment during the session Introduce and develop fundamentals of movement (agility, balance, coordination)	Work from a prepared comprehensive session plan that covers physical, emotional, cognitive and social development. Check safety of venue and any equipment to be used. Check clothing to ensure safety and appropriate for the coaching environment and session. Check level of experience, ability and physical readiness to participate. Provide technically correct demonstrations when appropriate. Provide opportunities for the active involvement of all participants throughout the session. Structure the session and use delivery methods to motivate the participants. Observe participants' performance and behaviour Effectively conclude the session, summarising participants progress and achievement	Communicate the session goals and planned activities to the participants. Provide explanations appropriate to the participants. Create and maintain a positive learning environment and make sessions fun. Be enthusiastic, displaying a positive attitude. Conduct session in a way that promotes the welfare of the participants. Encourage and reward positive behaviour in a fair and equitable manner.	Use appropriate methods to evaluate all aspects of the coaching sessions. Accurately reflect on the progress made and whether the session goal and personal coaching goal were achieved. Identify way that it might be improved.
23	2/23 9%	3/23 13%	9/23 39%	6/23 26%	3/23 13%

In addition to the varying content across the levels of awards, there are also differences in the modes of delivery and assessment tasks. Coaches from different nations thus have quite different experiences as they progress through the qualifications, with varying exposure to a range of learning types as they go. Table 18 gives examples of Australia, England and New Zealand to highlight the range of delivery modes at coach level. These nations have moved to blended modes of delivery where online options have facilitated more of the theoretical aspects to be delivered, so that face to face sessions can focus on more personalised support for coaches within practical skills. Contrast that to Table 19 for South Africa and Singapore where delivery is via F2F sessions.

The comparison of assessments between nations brings further complication to those aiming to assess the equivalence of qualifications. To use the coach award level as an example, Tables 18 and 19 illustrate that each nation gives their coaches a similar timeframe to complete this level of award and encourages practical tasks as well as workbook style, written tasks. There is a clear difference in the degree of formality of assessment practically, with New Zealand operating a policy of no formal assessment at this stage in a coach's journey. Instead, there is an option of sharing practice and coaches involving themselves within the practical components of the modules rather than conducting an assessment per se. Involvement within modules and completion of tasks is an ongoing theme throughout the theoretical modules for NZ too.

Australia also recognise "grassroots coaches don't need to be brought in to be told they are good or bad, they just need help to get better....these people just need a little bit of guidance" (Corrie), and their solution is to encourage coaches to access feedback from peers, players and tutors to then complete a self-assessment of their practical coaching at Development level. More formal assessment occurs at Intermediate level, though coaches can retake the assessments as many times as they need, to reach the standard required of the competence list. England have demonstrated a recent shift in the focus of their assessments at Level 2. When the courses moved to blended learning (2021) England moved their level 2 practical assessment from one conducted at the course venue where coaches coached other course members to an assessment that was filmed and conducted in the coach's home training venue. Assessors could then assess against the competence criteria online, followed by a zoom call for a 'professional discussion' to complete assessment of competences and encourage the development of an agreed action plan for the coach.

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Table 18 Summary details of course level, modes of delivery and range of assessment tasks within Australia; England and New Zealand

Nation	Award	Modes of delivery	Tutor: coach ratio	Timeframes to complete qualifications	Assessment	
					Practical	Tasks
Australia	Development	Blended Online + 4.5 hours F2F	1:12	12 months	F2F assessment built into workshop. Practical – delivered in groups of 3 to 14+ years players 2-3 exercises from junior Knee programme +netball specific A/D skill, with opportunity to give feedback in gameplay	Online assessment questions Session plan- learning tool Self-Assessment using feedback from peers, players and coach developer. Checked & signed off by coach developer.
		After completion to progress: 40 hours of updating over 4 years OR another development course in 4 years				
	Intermediate	7 hour F2F	1:10	12 months	Active participation in workshop and discussion groups Practical coaching task Netball specific coaching skill to group of athletes (any level) 30-40 minutes Competency assessment but can retake as many times as needed	Complete worksheets to standard Session plan – learning tool and assessment
England	Level 2	Online & F2F		1 year	Practical tasks 4. Plan & deliver a series of linked coaching sessions (4) 5. Filmed coaching session in preparation for 30 minute professional discussion with assessor	Written tasks 1. Coaching philosophy, equitable coaching and safeguarding children 2. Coaching styles & learning preferences 3. Competition & drug awareness Health & safety checks & reviews
New Zealand	Community Coach 1	Modular 11 modules – 3 as pre-requisites			No formal assessment Share practice to add to value of each modules delivered.	Completion of modules & ongoing learning activities
	Community Coach 2	Modular 8 Tactical modules			No formal assessment Share practice to add to value of each modules delivered.	Completion of modules & ongoing learning activities

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Table 19 Assessments for Singapore & South Africa Levels 1 & 2

Nation	Award	Modes of delivery	Tutor: coach ratio	Timeframes to complete quals.	Assessment	
					Practical	Tasks
Singapore Doc S4;			Pre-course reading			
	Level 1	F2F 15 hours +28 hours sports science;	1:15	3 years	Practical coaching tasks 2 weeks after course; 15 minutes each	Session plan Discussion groups
					Sports Science module; Principles & values module	
			At least 1 year/season coaching after completion Level ½ years min level of school team U15 or above for 4 hours a week After completion – 30 hours in 3 years 50% coaching practice; 50%/15 hours coach education (12 attendance 3 self-guided)			
	Level 2	F2F 30 hours	1:10		Practical coaching task 2 coaching on drill of coach choice Assessed by 2 Australian assessors (Sebastian)	
			After completion: 60 hours in 3 years: 60%/36hrs coaching practice & 40%/24hrs coach education (12 attendance; 12 self-guided)			
			>1 year coaching at min, Superleague, National U21 or Opens level (within last 3 years) Successful completion of pre-screening Level 3 course (1 day) Endorsement by NS Technical committee			
South Africa (Shara)	Level 1 Coaching assistant	F2F			Practice coaching tasks 1 session for in-course assessment	Portfolio of 10 sessions +
	Level 2	F2F			Practical coaching 90 mins, or 60 mins if primary aged Performance based rather than participation 3 attempts; feedback given	Portfolio of 30 sessions delivered over the year Signed off by mentor

The assessment processes of Singapore and South Africa, though, provide a different approach and Table 19 provides a summary of their assessments at this level of coach. Included in tables 18 and 19 are the ‘Level 2’ qualifications for each nation to highlight that, although they are all called Level 2 and thus might be assumed to provide similar evidence of knowledge and competence as the England Level 2, this is clearly not the case. The South African Level 2 requires 30 sessions delivered across a season, which far exceeds the England Level 2 requirements of 4 linked sessions & 2 assessed sessions, so assumptions cannot be made that experiences in level 2 coaches from different nations are equitable. For Singapore, the learning is more directive with rules tests as part of assessments, theoretical sports science course assessment to achieve the full Level 1 and stipulated ongoing development targets for coaches to meet as they progress from one level to the next.

As coaches progress through the awards structure, naturally the assessments become more extensive and demanding. Table 20 indicates the assessments for more experienced coaches, that may equate to the Senior Coach award (ISCF, 2012). Here New Zealand again maintains its coach led and in-situ focus, with a minimum of 4 practical observations and a coach logbook completion. England Level 3 opts for two assessed practical sessions plus 8 delivered within the competitive season, with a variety of other tasks, including working to a periodised annual plan, similar to other awards. The focus on match play is covered in England by one of the written tasks, but in Australia at Elite level is the focus of the practical assessment. A unique feature of Australia, though, is its inclusion of a cross-sport session experience as part of the assessment process at the Advanced level. This idea of cross-sport experience being included within a senior coach award has now been adopted within the newly released Europe Netball Advanced Coach award (EN Advanced Coach Award, 2023).

The differences in assessments and the level of formality involved is clearly seen in Table 21 where the high performance assessment is compared between Australia, who adopt a process of formal task completion versus New Zealand where that learner-centred approach is so marked, with individualised performance plans and development programmes. The philosophy here is more of continued growth and the focus is very much on the learner to engage with the activities within the programme. Again, this reinforces the different journeys coaches have as different nations enact their philosophies. With these challenges in mind and recognising the difference between education and learning there is a need to be sure coaches ‘can do things’ as well as ‘know about them’. The competences present the best measure of this.

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Table 20 Assessments for Australia, England and New Zealand at more experienced levels of coach accreditation (potentially senior coach)

Nation	Award	Modes of delivery	Tutor: coach ratio	Timeframes to complete qualifications	Assessment	
					Practical	Tasks
Australia	Advanced	29 hours F2F +assignment work	1:10	2 years	Active participation in workshops and discussion groups Written task 3 2 x coaching session video – one on A and one on D 12 months to complete Practical coaching task Team training environment 60 mins (not including warm-up) Min, 10 players 14 years +; association/ regional/ academy/ representative standard Competence based assessment 2 assessors	Complete written assignments 1. Game Analysis – analyse team and plan to play opposition. Within course 2. Cross-Sport placement – analysis of another sport coaching session 3 months to submit
		After completion to progress: 80 hours of updating activities over 4 years OR another Advanced coaching award within 4 years				
	Elite	As required	1:15	2 years	Active participation in workshops and discussion groups Practical coaching task Competitive environment – one full game – League, Championship/State level. Practical assessment form - competency 2 assessors	3 written assignments uploaded onto MyNetball learning platform 1. Match day coaching – ability to analyse opposition strategy; plan tactical response and plan for participation in tournament including player welfare and sport science information 2. Development and review of periodised plan 3. Recovery workbook Assignments completed before practical task 2 years to complete
		After completion to progress: 100 hours of updating activities in 4 years OR another Elite coaching award in 4 year				
England	Level 3	Online & F2F		3 years	Practical tasks – scenario based 9.Filmed session, internally assessed 10.live assessed coaching session delivery	Written tasks 1. Coaching behaviour and philosophy task 2. Manage a safe and effective coaching environment 3. Benchmarking players 4. Planning an annual training programme 5. Detailed phase of competitive season – 8 sessions 6. Match play task 7. Evaluating annual coaching programme 8. Managing and developing coaching practice
New Zealand	Performance	Modular Blended learning Mix of workshops and e-learning 5 modules		3-4 years	Proficient in key areas of Coach Development plan Practical observations (minimum 4) RPL available	Completion of modules and assignments Coaching log book (annual plan)

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Table 21 High Performance assessment comparison Australia and New Zealand

Nation	Award	Modes of delivery	Tutor: coach ratio	Timeframes to complete qualifications	Assessment	
					Practical	Tasks
Australia	High Performance	Phase 1 4 day F2F Phase 2 Mentoring & coaching practice Phase 3 2 day F2F	1:6	2 years	Active participation in workshops and group discussions Practical Training session assessment task in specialist area of court – individual, group and team. 2 assessors – Mentor + independent coach Match Day assessment – game analysis, teaching and communication. 2 full games 2 assessors – both independent Competence based assessment form (can present as many times as need to)	Written assignments & workbooks 1 Year periodised plan - Report on analysis of match using tools provided in course - Report on application of Relationship pyramid with your team OR report on creation of agreed values and behaviours with your team - Report on elite training session other than netball - Presentation of self-reflection of achievement mentoring and learning journey - Report on use of umpire at training - Complete NA's Integrity requirements for high performance Coaching
		After completion and to progress: 120 hours of updating activities over a 4 year period				
New Zealand	High Performance	Formal & informal development programme Individual and group forum opportunities			Individual development performance plans Learner-centred approach	Active engagement within programme of development opportunities Work collaboratively for development

Just as classification of knowledge into professional, inter and intra-personal knowledge could provide a benchmarking approach to compare content and knowledge gained in one qualification to another, so too could evidence of mastering the demands of coaching and ensuring competency at the end of each award course levels be valuable as an indication of minimal levels of quality in coaching at different stages of coach development (Duffy et al., 2010; ENSS, 2007; Lara-Bercial & Mallett, 2016). Normally these competencies are assessed through formal assessment, but as mentioned above, Australia has introduced self-assessment within earlier awards where candidate coaches can access feedback from peers, players and mentors to support decisions over whether they are competent or not. This may reduce pressure of the more formal assessments that other nations still adopt even at lower levels of coaching expertise. New Zealand, though, do not use the word ‘competent’ or indeed include formal assessment, adopting a more formative, developmental, approach to growing coaching practice, where coaches can resubmit as many times as they need to work towards the standard expected, then be signed off by their zone coach developer. This leads to a very different experience for coaches working through award schemes and presents another challenge to those looking to assess equivalence – what is learnt; what a coach can do and how they have learnt or been assessed all need consideration to manage expectations of coaches who do move from one nation to another.

Table 22 gives an example of England’s assessment of competences across different levels of awards and within the different skill sets identified within Côté and Gilbert’s (2009) model of professional, inter-personal and intrapersonal skills. Potentially a comparison and matching of competences in this manner could provide a mechanism for assessing equivalence of what coaches ‘can do’ within qualifications. When combined with the previous analysis of what they know, could provide a detailed representation of capabilities as well as competence and certainly an opportunity to analyse the range of knowledge and skills (Baker et al., 2017).

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Table 22 Summary of England's competency assessment in relation to Professional; inter-personal and intra-personal skills

	Professional skills			Inter-personal	Intra-personal
	Netball/Sport specific	Sports Science	Coaching Methodology		
England Level 1 (27)	Knowledge of coaching points Develop skills in progressive way Select Sheilall side game activities (3) 11%	Appropriate warm-up Appropriate cool down (2) 7%	Session plan Safe organisation (2) Emergency procedures (3) Clear & accurate demonstrations Appropriate positioning Establish and maintain control of group Time manage Code of conduct Clear up area (12) 44%	Welcome participants Outline objectives Provide constructive feedback Clear communication Build rapport interact with group Positive motivation Encourage fair play Treated all equally with respect Technically sound information given (9) 33%	Ask for feedback + <i>Self evaluation form after practical sessions</i> (1)3%
England Level 2 (33)	Observe and analyse S & W and take action Sufficient coaching points Develop skills in progressive way Knowledge of tactical situations Adapt practices Select and modify game situations Outline and work to rules (7) 21%	Use appropriate activities to warm up (1) 3%	H & S (6) Modify plans to reach individual needs Ensure active involvement of all Behaviour management (2) Organisation Timing and pace (2) (13) 39%	Communicate H&S Welcome Share goals Check readiness Motivate & encourage Build rapport Provide technically correct instructions and demonstrations Information for future sessions Appropriate coaching styles Take responsibility in own learning Generate & provide feedback (11) 33%	Seek feedback + <i>Self evaluation form after practical sessions</i> (1)3%
England level 3 (33)	Demonstrate knowledge of appropriate coaching points Progress skills Knowledge and integration of tactical situations Modified/full game form to enhance learning Analyse player performance s & w Use activities to enhance decision making (6) 18%	Warm-up and cool down Progress activities in line with developmental needs Deliver session with appropriate pace and intensity (3) 9%	Modify to minimise risk Modify plan to meet individual needs Observe and analyse to give feedback Conclude sessions and provide information for future Ensure environment organised at end of session Use appropriate intervention strategies Select and use appropriate activities to develop performance Realistic timings Organisation Behaviour management (10) 30%	Explain H & S; Check players readiness Share goals and activities Provide technically correct explanations & demonstrations (2) Select and use questioning to enhance learning Generate & provide feedback to ind and group (2) Allow players to reflect by using review and questioning Select and use appropriate coaching style Motivate and encourage; Built rapport Ensure active involvement of all Encourage and reward positive behaviour (14) 42%	<i>Self evaluation Form</i> + <i>Reflective tasks within portfolio</i> (0)

4.5.1 Summary of section

Framework analysis of the content and modes of delivery across nations highlighted the following similarities and differences (see Table 23). The similarities present opportunities for core experiences that could support transferability of qualifications, and the differences present potential anomalies, that might require coaches to adopt some upskilling or provision of alternative evidence to support claims of equivalence.

Table 23 Summary of similarity and differences found within documentation and system manager analysis for content and modes of delivery

	Similarities	differences
Documentation	Content • Balance of F2F delivery with practical • professional, inter and intra-personal skills developed • Performer centred approach • Relationships building important Modes of delivery and assessment • formal learning supported with other forms of learning • competence based • practical assessments combined with tasks	Content Degree of integration of development opportunities with formal elements content included at different stages Modes of delivery and assessment • increasing use of online delivery and assessment • programme of support • degree of integration development with education • changing focus of practical F2F delivery and coaching practice assessments
System managers	• Formal content & assessment updates • Development of other learning opportunities around formal	• Details of inclusion within syllabus • Types of assessment at each level • Use of formal assessment versus reflective or developmental opportunities • Changing nature of F2F delivery • Movement to online and blended learning

4.6 Integration of other learning opportunities within the formal learning offer

Although the focus of this research is the formal learning and qualification of each nation, as the basis for judging equivalence of qualifications, Artes et al. (2016) has highlighted that formal learning only constitutes 10% of a coach's learning so this section reports how NGBs have extended that formal learning offer with the integration of non-formal and informal opportunities for coaches to learn. As Coombs & Ahmed (1974) suggested there is a difference between 'education' and 'learning' and the changes NGBs have made to the structure of their courses indicates a determined effort to diversify the learning opportunities offered. Australia, for example, has adopted a three-pronged approach to coach development which emphasises (1) the accreditation, i.e. competency-based aspects of learning, (2) encouragement for coaches to invest in their own development within and outside accreditation and (3) coaching practice (Doc A2). The clear distinctions made by Nelson et al. (2006) and Werthner and Trudel (2009) between formal, non-formal and informal learning and Moon's (2004, 2013) differentiation between mediated, un-mediated and incidental learning are becoming blurred within netball as NGBs move towards a more coherent and integrated learning offer that adopts more adult learning principles within its formal course offer. This has implications for the judgement of equivalence of qualifications, as to whether that judgement is based on the competence-based aspects of learning only in Australia's model or whether judgements seek to incorporate the individual investment in development demonstrated by each coach and their resulting coaching practice.

It is worth noting that empirical evidence from Stodter and Cushion (2017) found that soccer coaches exhibited a number of learning 'filters' that effect whether coaches take on board and put into practice ideas presented to them on courses, so it cannot be assumed that all coaches following courses have indeed adopted the ideas presented. As a result, consideration will need to be given to whether decisions about judging equivalence of qualifications should be focused on the programme or the individual coach. Empirical evidence from North's (2016) critical realist approach, provides an option of utilising programme theories as a mechanism for mapping formal courses against each other if netball wishes to purely work off programme comparisons. This programme theory approach has been adopted within Europe to support decisions about comparability of awards and utilises ISCF (2013) to match each programme's ability to prepare coaches for their identified roles and responsibilities at each level of development, though does not break down the knowledge and skill sets into

professional, interpersonal and intrapersonal. To explore the feasibility of developing a coach centred approach, which would be commensurate with current learner-centred approaches to coach development, the degree of integration of other learning opportunities within and around the formal courses are now reported.

The extent of integration of adult learning principles to support coach buy-in to messaging within formal courses and the degree of support around the formal content is varied across nations, suggesting coaches receive a very different experience on their development journey. Table 24 gives an indication of how Australia, England, New Zealand and Singapore have diversified their learning opportunities within their award programme delivery to encourage coaches to engage in a range of learning activities.

Table 24 Learning opportunities used within and integrated with the formal course delivery

Country & award	Non-formal mediated learning	Development of self-directed & incidental learning
Australia All courses		Access to online course resources E-learning portal
Development	Coach developer checks and sign-offs	Self-reflection and assessment forms
Intermediate		Self-reflection and assessment forms Active participation in workshops and group discussions
Advanced	X- sport observation & reflection task	Self-reflection Active participation in workshops Talk to peers
Elite		Active participation in workshops
High Performance	Work with others – mentors; umpires Minimum no. hours practical agreed with mentor Work within another sport	Self-reflection and mentoring journey presentation Integrity task
England All courses		Access to online course resources E-learning portal
Level 1	Assist other coaches	
Level 2		Self-evaluation form
Level 3	Work with mentor (since 2020) Work with other coaches	Coaching philosophy task Evaluate coaching programme
New Zealand All courses		Access online resources and modules
Foundation, CC1 & CC2	Ongoing informal workshops after courses	Share practice to add to the value of the module
Performance	Work with mentor – netball or outside Extension workshops – Zone Performance & SNZ Advanced	Action learning in coaching practice Coach Development plan driven by coach Reflection with mentor to guide
High Performance	HPSNZ Annual High Performance workshop Engage collaboratively in development X-Code collaboration	Ongoing engagement with elite athletes in high performance pathway Coach drives direction of development – Individual Time to think/reflect/share Development Performance Plans Individual coach development plan

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		Individual and group forums to support development
Ongoing learning	Coach campaign Leadership programme	Coach Accelerator programme
Singapore Pre-course & Level 1		Access and compete pre-course workbooks Discussion groups Self guided learning
L1 Ongoing learning 30 hrs over 3 years	Attendance at continuing Coach Education 12 hours Mentoring working with others	Self guided learning 3 hours Coaching practice 25 hours
L2 Ongoing learning 60 hrs over 3 years	Attendance at CCE 36 hours	Self guided learning 12 hours Coaching practice 36 hours
L3 Ongoing learning 100 hrs over 3 years	Attendance at CCE 12 hours	Self directed learning 18 hours Coaching practice 70 hours

One of the marked differences between the systems adopted within these nations is the differing levels of support for coaches as they progress through the pathway and the extent of diversification of learning opportunities within each stage of learning for the coaches. As Table 24 indicates, use of online resources is encouraged and a bank of resources is provided for coaches to access within the online learning platforms that Australia, England and New Zealand now use. Access was clearly necessary to complete the online components, but the use of e-learning platforms can also encourage self-directed searching for other information too. A notable difference between nations is the level of guidance given for ongoing learning, with Singapore being the most overt with their stipulation of percentage time on workshop-based activities within their Continuing Coach Education programme and percentage time in self-directed learning activities. Higher levels of awards require an increasing number of hours and, also, a change in the relative use of those hours to encourage more emphasis in self-directed learning as coaches progress. Other differences include access to coach developers and mentors, cross-code or cross-sport work and the degree to which participant coaches are encouraged to involve themselves in their own development.

New Zealand exhibits the most sophisticated integration of learning opportunities and support to their coaches with an early learning outcome at Community Coach 1 level being to contact the zone coach developer. Savannah and Selina emphasised that New Zealand coaches experience support throughout their journey from local coach developers within their zone, coupled with less formal assessment of capabilities to coach at each level of award. Susan, on the other hand, professes that England has no support for coaches as they progress through their awards beyond the tutoring and assessor team. Susan and Sophie highlight that the most

recent EN Level 3 courses have been allocated mentors from the tutoring team, but this is more aimed at helping candidate coaches through their assignment tasks rather than mentoring in its full capacity. Saskia, Sophie and Scarlett also report that since 2019, one coach developer has been employed, working full time for England Netball, to support Superleague and pathway coaches. Other nations integrate mentoring within awards more extensively through their pathway, with Australia at Advanced level, South Africa at Level 2 and the use of peer support and feedback within Singapore's Level 1 and 2.

Other forms of learning within the formal programmes include the communities of practice at the high-performance level, though Saskia, Scarlett and Sophie highlight the challenges that getting the superleague coaches together in a community of practice is presenting them, given the coaches are competing with each other. Cali reports one of Australia's ambitions is to work towards a coach developer and mentor in each club, whilst Saskia and Scarlett suggest England are working hard to develop that sense of connection and support with their coaches. Crystal, though, reports how reliant coaches in Trinidad & Tobago are on self-directed learning and even a reliance on what is available online from other countries. However, the cross-sport opportunities Crystal has been given with the TT Olympic committee have been a helpful development at high performance level, though this was only accessible once an elite level of coaching was reached. These findings indicate that high performance coach development within netball follows a similar pattern of extended learning experiences to those reported by Callery et al's (2014) empirical work from a range of sports.

As table 24 demonstrates that these nations are adopting practices within their formal learning that provide coaches with a greater range of learning types, not just at high performance level but all the way through their stage coach development but they are also introducing other resources to support coaches to continue that learning after completion of courses, including non-formal workshops. For example, England's Game Sense online workshop; and England and Australia's use of recorded technical and practical coaching examples for coaches to access online. However, Sheila and Scarlett raised concerns about the consistency of messaging across the private providers of online resources and whether they are supporting messaging given through NGB awards or providing mixed messages to that coaching workforce.

4.6.1 Summary of section

All system managers reported other learning opportunities are provided in and around the formal courses, but differences were found in the:

- Level of integration with formal courses
- Supplementary learning via workshops, clinics, conferences
- Online resource development
- Access to Mentoring & coach developers
- Access to other learning
- Encouragement to lifelong learning via re-accreditation and CPD requirements
- Support in match play coaching
- Reliance on self-directed learning

To further understand the impact of these increasing learning opportunities on coaches, their perceptions of their learning journey are now explored.

4.7 Coach perceptions of their learning journey

Figure 10 gives a summary thematic map of coach perceptions of their learning journey to date, including challenges they have faced.

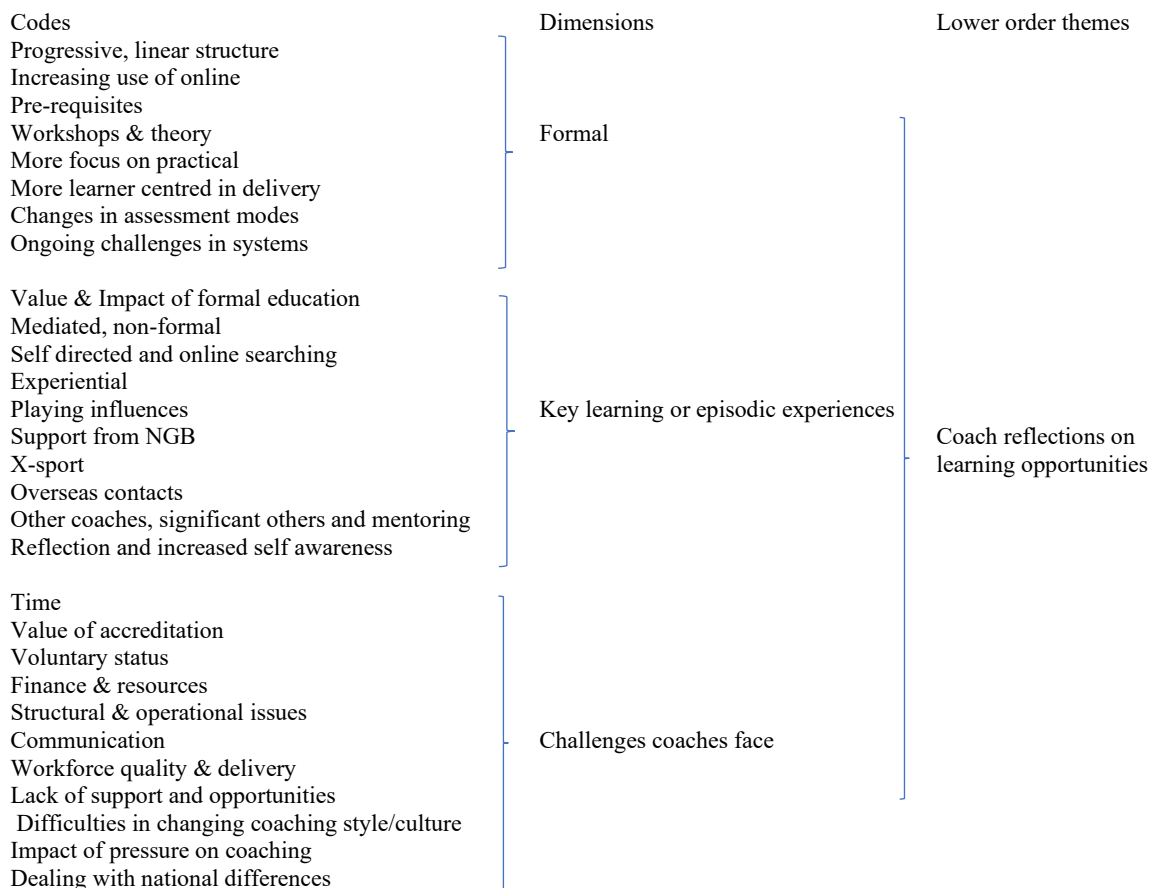


Figure 10 Coach reflections on their learning opportunities and challenges faced to date.

Having worked their way through each of their NGBs formal coach education system, coaches were aware of the linear nature of those pathways, the structure of workshops, home learning and the pre-requisites required. Coaches recognised the changing nature of provision, through increased use of online learning, more learner centred delivery with a greater focus on the practical elements within F2F sessions and ongoing changes to assessments. This recognition reinforces the dynamic nature of coach education and development within netball which presents challenges for developing portability of qualifications as it is not just course content that evolves, but its delivery, so mechanisms

developed to assess equivalence will need to accommodate such a pace of change. Coaches also demonstrated an awareness of the ongoing challenge that each system experiences.

Contrary to many research studies (Abercombie, 2015; Cushion et al., 2003; Cushion et al., 2010, McCullick et al. 2009; Nelson et al., 2006 and Lyle et al, 2010) all coaches interviewed highly valued their formal qualifications, though there was a recognition that is very dependent on the quality of the workforce delivering the courses. Charlotte recognised the negative impact that poor delivery on courses can have on participants, with Cassa and Caitlin highlighting the challenges that the number and motivations of coaches on the course present. The following quotes give a flavour of how coaches have been impacted by their formal courses:

“It’s amazing what just getting that piece of paper does” (Coleen)

“Gave me a good structure to understand...broadened my understanding of what a coach does” (Corrie)

“I really valued working through the accreditation system...courses highlight where you can grow...opportunity to learn from other coaches” (Ciji)

“Coaching courses made me think” (Claire)

“Confidence that you are actually on the right track” (Caitlin)

“Network and discussion on these courses is a massive part of evolving the game and learning” (Cara)

“amazing coaches during the formal course” (Ciji)

“you certainly learn things from it, there’s no doubt about it” (Coleen)

The sentiments expressed by coaches and their thirst for learning mirror Oldridge et al.’s (2016) findings in their biographical narrative of a track and field coach which emphasised the rich mix of early experiences, a lifelong hunger to learn and experience within formal courses. Lemyre et al.’s (2007) empirical evidence from coaches across a range of sports, though, laid more emphasis on the impact of experienced based learning and support systems, suggesting formal courses should develop mentoring and reflective practice. Callary et al. ‘s (2012) qualitative exploration of Canadian female coaches from a variety of sports reminds us of the idiosyncratic learning journeys coaches experience and their identification of a range of ‘episodic experiences’ that had impacted coaches including mentoring, critical incidents and personal challenges. Table 25 summarises the content analysis of incidents

identified by coaches within this research that they considered to be ‘episodic experiences’.. These provide support for Moon’s (2004; 2013) suggestions of the value in learning opportunities across the range of learning types and suggests coaches are going above and beyond their formal courses to develop themselves. The range of mediated, non-formal and informal incidental learning examples supports the idiosyncrasy of coach learning reported by Callary et al (2012), further highlighting the need to consider whether a system developed to judge equivalence of qualifications should, or could, accommodate consideration for this individuality of learning.

Table 25 Content analysis of the number of incidences reported by coaches as episodic experiences to them within their coaching journey so far

Learning type	Examples	No. of mentions from coaches
Mediated, formal	Readiness for next award High performance coaching programme course delivery by coaches from other countries assessment focused on growth not pass/fail NROC Amazing coaches during formal EN performance course L3 programme ongoing CPD requirements	9
Mediated, Non-formal	Other coaches/CoP Observations of other coaches Coach taking time to talk with me Other sports Support from AIS/NNz/OC State development events Mentoring Courses/workshops/conferences On-line resources On-line training companies psychologist, HP manager Other countries’ methods International competitions groups buddy coach scheme Coach consultants Assistant coach roles Global programmes Lack of support Leadership programme Loss of mentoring Coach developer forums Coaching website Key people eg. Sports Netball family – talk netball Opportunity to mix with age	91
Self-directed	Book searches Source learning everywhere Watch netball	8
Un-mediated; informal	Overseas experiences Coaching other sports Parent On-court sessions	6
Incidental, internal	Impact of good & bad experiences Realisation of differences in reading game influences Trial & Error learning Trust own style of development Importance of reflection Early discovery & playing Failures/Knockbacks	19
Total number of specific episodic experiences identified by coaches		133

Experiential learning was reported by many of the coaches as a powerful source of learning, particularly their failures, so the inclusion of practical coaching tasks within the formal

programmes is important to encourage continued application of learning back at home after completing the course components (Turner et al., 2012). Coaches reported very different levels of support, though, with these out of course learning opportunities that are so powerful. Cara reported how much she had liked being watched and given feedback on formal courses, finding that good learning for working as a performance coach where you are often watched, and particularly enjoyed the exchange of ideas and support with other performance coaches as “coaching is quite a lonely job” (Cara).

Coaches reflected on the value of a whole range of learning opportunities to support their development. Mediated, non-formal learning opportunities were important for coaches who reported seeking out a range of workshops, conferences, coach development programmes within netball but also leadership programmes from outside of netball and cross-sport global programmes to supplement their learning. This was either as a voluntary, self-driven interest or as a compulsory part of required CPD hours (Cali, Corrie, Coleen, Ciji, Claire, Charlotte, Catherine, Cassa, Chinue, Chun and Crystal). Work with ‘other coaches’ was reported as a popular support network to observe or to bounce ideas and receive feedback from (Cali, Corrie, Ciji, Claire, Charlotte, Catherine, Caitlin, Chow, Cassa). There were differences in the extent to which coaches reported having access to coach developers or mentors around their formal courses which provided some with challenges, particularly when they were struggling with early efforts to enact course content back at home or they needed support through their own failures. Coaches from New Zealand reported feeling well supported and the Australian coaches reported good connections with the Australian Institute of Sport, but Singapore and England reported less official support for development and Crystal found support from the Olympic committee helpful.

Being mentored, and mentoring themselves, was a positive and powerful learning opportunity for all coaches with the recognition of the importance of a critical friend and individualised learning (Cassa, Chinue) and coaches that take time to talk with you, especially where these support people are local (Catherine, Cyndie). Other key people that had impacted coaches were partners coaching different sports (Charlotte); parents (Coleen); coaching consultants (Cara) and sports psychologists (Ciji). Previous experiences both as a player and a coach, positive and negative also impacted coaches and certainly encouraged the development of coach reflective skills that coaches recognise are so important in their own growth (Cali, charlotte, Catherine, Cyndie, Cassa). Negative experiences and knockbacks were identified as important to develop the resilience to cope with the high-performance environment (Caitlin,

Cara). Other reflective experiences reported included the realisations of differences in reading the game (Claire) and finding “overly assertive and yelling traditional coaches are horrible” (Cyndie). These reflective experiences were recognised as important opportunities to facilitate change and to help coaches form their own identity (Cali, Coleen, Charlotte, Cassa, Chinue, Chun and Chow).

Having the opportunity to shadow or observe higher level coaches was found particularly helpful along with working as an assistant coach (Claire, Charlotte, Catherine, Cyndie, Caitlin, Cassa and Chad), though communities of practice were also useful (Chun, Chow and Crystal) as was the buddy coach system adopted in South Africa (Cassa). Contact with ‘other coaches’ seemed particularly powerful when these interactions involved overseas contacts (Corrie, Chun, Chow, Chinue, Chad and Crystal) or involved exchanging ideas with coaches from other sports (Cali, Corrie, Coleen, Ciji, Charlottte, Cyndie, Cara, and Crystal). It was notable the extent Crystal had gone to, in order to access information, largely by self-directed methods without any formal courses running, so perhaps World Netball could consider the degree of inclusivity they would like their portability mechanism to reach and whether there could be opportunities to include those coaches who have not had access to formal coach education, but have nevertheless developed coaching expertise through other learning opportunities.

The implications here for the development of any portability system is the need to consider not just the straightforward exchange of formal qualifications but the extent of learning opportunities coaches have accessed around their formal components, as well as considering how to support coaches coming from nations without formal courses available, to see where they might fit in. Also needing consideration is the ability to take account of how much coaches have embraced and enacted course content within a formal qualification as well as recognising the growth a coach may have gained since completing a qualification, given the encouragement to engage with ongoing, lifelong learning. Table 26 summarises the similarities and differences in coach perceptions of their learning opportunities.

Table 26 Summary of similarities and differences in coach perceptions of the impact of different learning opportunities

Similarities	Differences
Learning from formal education • Progressive experiences through levels • Changes in structure of NGB system • Changes in coaching methodology over time • Value of formal education • Changes in delivery modes and nature of F2F sessions	• Content at each stage of award • Balance of theory to practical • Modes of delivery • Introduction of pre-requisites and CPD expectations • Connections with other countries and other sports • Level of support integrated or around formal programmes
Other learning opportunities beyond formal courses • Personal experiences • Experiential learning • Importance of working with other coaches • Value of workshops; clinics; conferences • Proactive, self-directed learning • Value of cross-sport opportunities • Value of ideas from other countries • Learning from other professions	• Impact of good and bad experiences • Availability of mentors; CoPs; opportunities to work as an A/C • Ability to personalise support for coaching journey • CPD structure – degree of formalisation • Extent to which x-sport is facilitated • Methods of access to international ideas.

4.7.1 Challenges coaches face

Coaches reported a range of challenges they faced in progressing through their coaching journey so far. Time and juggling other commitments was reported as an ongoing concern (Cali, Corrie, Chun and Chow), which is particularly a problem when balancing taking on voluntary commitments with the need to generate income and the problem that gives commitment (Ciji, Chloe, Caitlin, Cara, Cassa, Chad) and the resultant high expectations on volunteers (Ciji). Costs of certifications was raised (Chun) as were budget cuts for coaching (Chow); finance limitations (Cali, Cyndie, Chloe, Caitlin, Cara), differences in finance between netball and other sports (Cassa) and the negative impact of politics (Chloe). A challenge that coaches reported that is of particular concern is the need for formal qualifications to be valued more, coaches expressing a concern that players are getting coaching roles over those that are in the coaching pathway (Coleen; Chloe), that

qualifications should be a pre-requisite for jobs (Coleen, Chloe) and that as a result there is a lack of desire to obtain qualifications and invest in ongoing improvements to coaching skills sets (Caitlin).

Challenges were also reported with structural and operational issues within the NGB current systems, despite the changes coaches recognised have been taking place. These challenges range from issues with the balance of content and course requirements within some qualifications, assessment difficulties and the need to look at overall structure of qualifications framework (Charlotte, Catherine, Chloe, Cara and Chun); access and availability of modules and courses (Chun and Chloe) to selection issues for roles (Cassa), the need for more open communication between departments and links with the competitive structure (Charlotte). Gender issues, cultural sensitivities, load sharing, lack of structure and role clarity, and lack of self-drive were all challenges encountered, as was ongoing communication issues, with a perceived lack of sharing and inconsistencies in messages from different coach developers (Chloe, Cassa and Chad).

Many of the challenges coaches reported facing related to a lack of mentors and support for their development outside of courses (Catherine and Chun) which Claire highlighting a particular difficulty for the current young coaches as they are making their mistakes in the public eye, rather than older coaches who were able to make mistakes and learn from them away from the eye of social media. There is also a perceived lack of CPD opportunities (Catherine); opportunities to become coach developers (Chinue) and lack of opportunities for male coaches (Chad) with parent attitudes also presenting coaches with challenges. Similar to Cushion (2003); Harvey et al., (2010); Jarrett and Harvey (2013), challenges were also reported by coaches when enacting the more interactive coaching methods that courses were exposing them to once they were back at home, finding the use of TGfU and questioning approaches difficult to start with and having a lack of self-confidence to use problem solving approaches, not knowing which questions to ask at first (Chun, Chloe). Stepping back and letting players learn was found to be challenging too (Chun). These challenges can be compounded when players or other coaches are resistant to coaches working within a wider range of coaching styles (Chun; Cyndie).

Similar to Jarrett and Harvey (2013), Light and Roberts (2010) and Morée et al., (2020) who highlighted the impact that contextual factors have on the uptake of game-based approaches, coaches reported the impact of pressures on their coaching, where pressures to win are at

odds with the desire to focus on development (Chun; Chad). Such pressure to win produces a negative impact in schools and is leading to negative communication for a number of coaches, particularly where these pressures to win impact selection to better schools (Cassa, Crystal, Chow). Parent behaviours need managing (Cassa) and the Asian culture for work: play balance gives coaches issues as well (Chun). Coaches also experience challenges when they are dealing with national differences, managing the playing and training of players who are home based versus those that are overseas in the same squad when you already have limited time with that squad (Chinue). Table 27 summarises the similarities and differences found in the challenges coaches report and suggests that netball is facing similar problems to other sports in the challenges of enacting behaviour change in their coaches particularly where the habitus or. cultural history within a nation provides dissonance between what coaches are being introduced to and the methods they are used to using (Jarrett & Harvey, 2013; Whitley et al 2018) despite the variety of methods utilised by different nations to overcome this, via increasing the ranges of support and learning opportunities provided and encouraged.

Table 27 Summary of similarities and differences of challenges reported by coaches

Similarities within challenges coaches face: • Qualifications being valued • Support opportunities • Changing attitudes • Using game sense approach & questioning • Quality and consistency of workforce • Competitive structure • Finance & politics • Balancing commitments, time and expectations	Differences in challenges faced: • Motivations of coaches on courses • Pre-requisites for jobs • APL • Kick back on methods • Parent attitudes • Winning versus development approach
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4.7.2 Coach suggestions moving forwards.

The thematic analysis findings for coach suggestions moving forward are summarised in Figure 11 below. Coaches clearly like the clarity and standards of their coach education system where high standards are perceived (Corrie, Coleen, Charlotte and Chloe); and coaches are positive about the evolving delivery. They are enjoying the changes in workshop deliveries and face-to-face sessions being more interactive (Corrie; Caitlin). They enjoy a variety of experiences which they would like to see persist, whether that be their own learning journey, a mentoring programme followed, the mindset of those on courses or the range of people to learn from (Claire, Charlotte, Cyndie, Caitlin and Chun). Cyndie also recognised the importance of building good team culture.

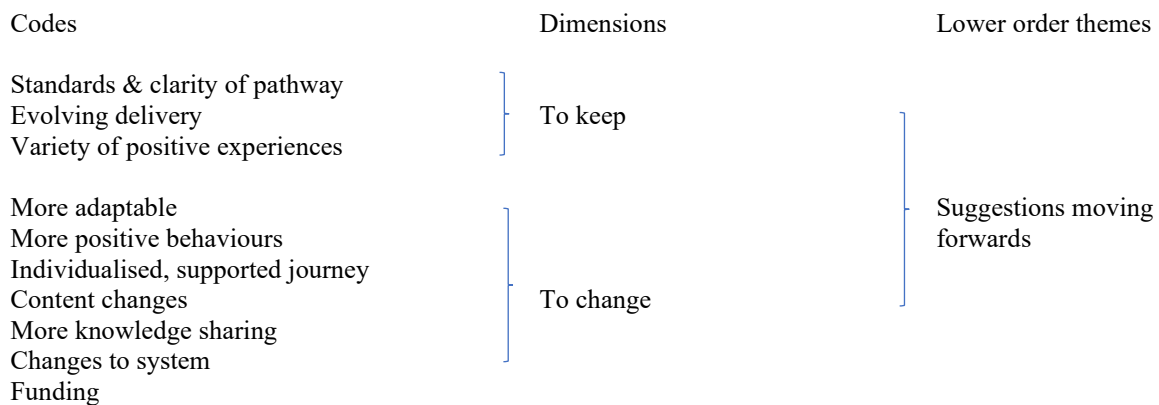


Figure 11 Thematic analysis findings of coach suggestions moving forwards.

The changes coaches would like to see include more funding for CPD, greater exposure for netball with increased sponsorship and better facilities to support developments as part of the bigger picture developments of netball (Catherine, Cassa, Crystal). Coaches would like to see a more individualised and personalised journey for their professional development (Cali, Coleen, Claire) with more support earlier in their programmes (Coleen, Cyndie). Access to mentoring and expertise and more opportunity for exposure to a range of role models was important to coaches (Cali, Cara, Chinue). To achieve this, coaches would like to see a more adaptable system, with a more extensive workforce to support development around the courses, more adaptability within the frameworks and closer links between the coach development and superleague franchises (Catherine, Cyndie). Part of this development would

need to encourage more positive behaviours towards coaches, within sideline behaviours particularly and to build the desire to improve in coaches (Cyndie, Crystal) with patience in making changes (Chad). More exposure to conferences and more supportive and challenging opportunities for coaches were also important (Chad, Crystal).

Coaches were keen for the changes to the content of their formal courses to continue to evolve with more emphasis on communication and leadership skills earlier and throughout (Cali, Cara, Chun); continued help with working from a range of coaching styles and with game-based approaches particularly (Chun, Cassa). Coaches would like to see courses reflect the community they are intended for more closely and give a better preparation for moving from amateur to professional coaching. For example, training around performance analysis; working with support staff; pressurising activities and understanding politics and the demands of working at the top level (Cali, Coleen, Catherine, Cara, Cassa, Crystal). To help this, coaches suggest there should be more knowledge sharing whether that be within workshops that bring coaches together, working with other sports; exposure to other countries and have more observational and informal learning earlier, as well as raising greater awareness of what good coaching is (Claire, Charlotte, Caitlin, Cassa, Chad, Crystal). There also seemed to be some IT issues that need solving with the online modules (Caitlin). Table 28 provides a summary of the similarities and differences reported by coaches.

Table 28 Summary of similarities and differences in coaches' ideas for moving forwards

Similarities	Differences
Moving forwards: • Quality experiences and high standards • Development of online resources and learning • Evolving changes in course delivery • Keep evolving structure and content of courses • Increase support network • Keep developing competitive infrastructure • increased sharing of ideas • More focus on communication skills and leadership	• Ensure quality of workforce • Formal education structure • Level of coach development support, especially mentoring • X-sport and x- nation access to and sharing of information • Understanding of good coaching

Coach experiences as they work through their NGB learning pathway and their desires for future changes raise the issues of just how flexible a mechanism for enhancing portability of qualifications will need to be. As NGBs continue to evolve their learning offer, and coaches continue to grow and develop their access to learning support, experiences will be different for different coaches, the challenge will be to develop a system of judging equivalence that can accommodate or recognise such differences. The contextual and situational challenges each nation experiences in the planning and delivery of their NGB coach education system are now explored.

4.8 Contextual factors

This section reports the contextual and situational challenges outlined by system managers within their interviews and thus responds to Callery et al., (2014), Stodter and Cushion (2014) and LaraBercial et al. (2017), who recognised the importance of considering the contextual factors influencing coach development systems. Figure 12 summarises the thematic analysis findings, highlighting two key areas to consider: the size & quality of workforce and the situational constraints experienced.

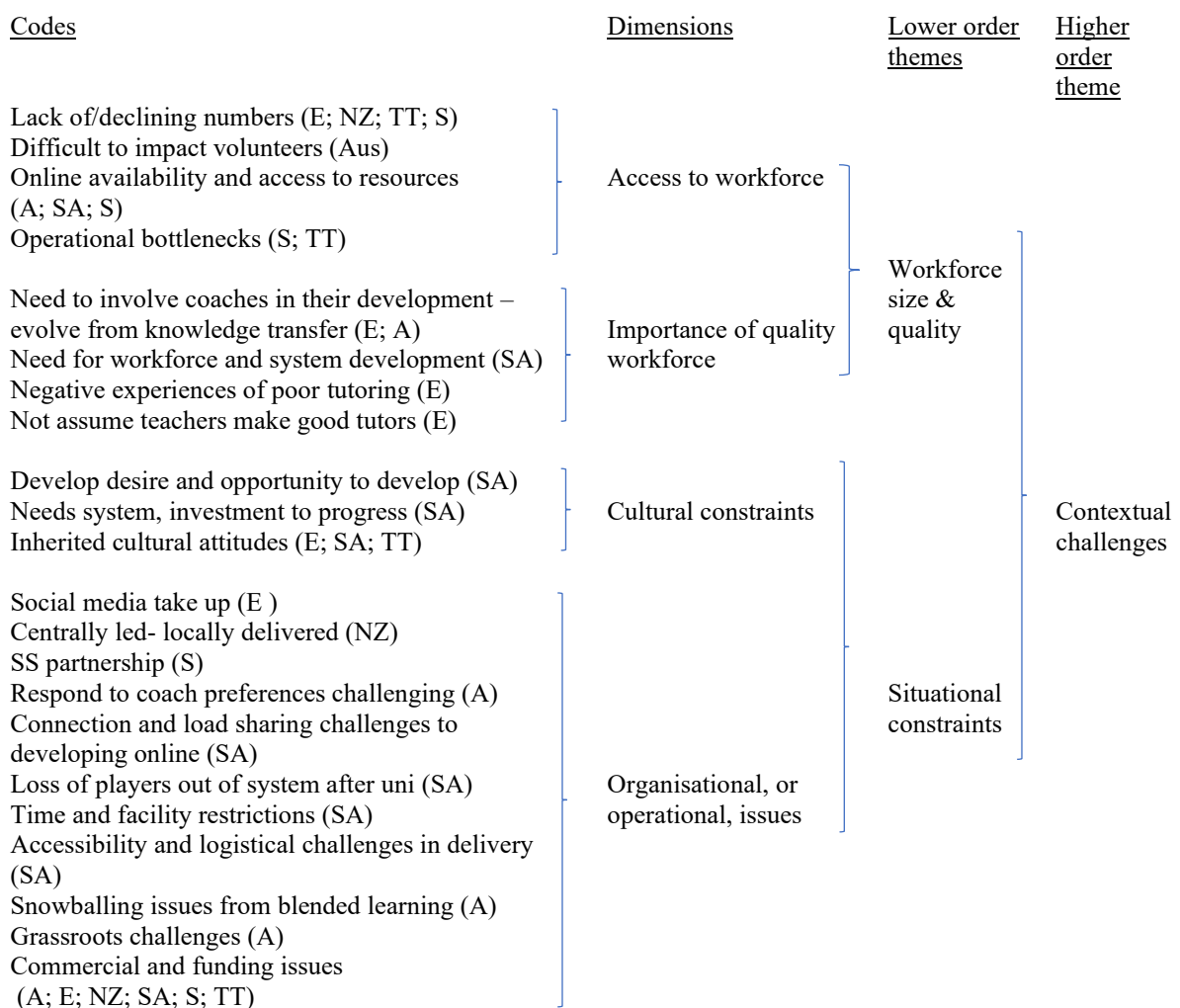


Figure 12 Thematic analysis of system managers' contextual challenges.

4.8.1 Size & quality of workforce

System managers expressed concern over the numbers of coaches presenting for formal coach education and development. Whether that was a lack of people coaching at all (Shanice); or a lack of volunteers (Sebastian) or the limited impact of coach development and formal education because so many were volunteers (Sheila). Falling numbers attending, or completing, courses were reported by England (Susan); and Australia (Sheila) recognise coaches are ‘time poor’, with a concern expressed over the high ‘churn rate’ at the community level of coaching. Australia recognises that “coaching is the single most significant influence at club level for retention and participation” (Sheila) and highlight the value mentoring might have to support coaches and perhaps reduce this churn rate that has been identified (Sheila). Conversely, Shara reports healthy growth in the number of coaches registered within South Africa from 700 in 2011 to just under 6,000 in 201), though emphasise the need for not just workforce development but also the development of the system supporting that process. Shara identified a need to address the club infra-structure to permit coach development pathways, though recognise this will take investment. Equally, Selina reports small numbers on courses within New Zealand and highlights that NZ are busy “encouraging more people to get out there” (Selina).

The quality of delivery within the formal coach education and other coach development learning opportunities is crucial to address declining numbers enrolling on courses (Sophie), encourage greater completion rates (Saskia, Sophie, Susan), and provide consistency of messaging across providers of coach development work. Just as coaching is striving to rid itself of poor, or even toxic, coaching practices, Garner et al. (2020) is advocating the importance of interpersonal skill sets not just for coaches when working with players, but for educators and developers who support coach growth. Just as there are assumptions that ex-players will make good coaches, so too is there an assumption that teachers will make good coach developers and educators (Susan, Sophie). Though Australia suggests it is difficult for those without teaching skills to facilitate learning and engage performers and that helping coaches learn to develop skills within game sense activities is a higher-level skill for the educator (Sheila), Susan and Sophie suggest it cannot be assumed that teachers who excel within a children’s environment are necessarily blessed with the same skill set when working with largely adult populations.

New Zealand, on the other hand are “very proud of our coach development system” (Selina) having invested in a centrally led-locally delivered system with 60 coach developers around the country who have received international training to upskill and refine training delivered in the past (Selina). Australia highlighted their movement from ‘presenters’ to ‘facilitators’ as an indication of their change in focus for their coach educators and developers (Sheila) and England are working hard to highlight adult learning principles or andragogy rather than pedagogy with their tutors (Susan, Scarlett). These comments reflect the move towards a more constructivist approach to the delivery of coach education programmes reported by Culver et al. (2019) whose empirical work within the Canadian coach education programme. highlighted the vital role that coach developers play within the delivery of coach education programmes, importance of the coach developer’s capacity to facilitate learning rather than deliver teaching and their ability to balance the needs of delivering content of learning programmes with the needs of the learners within the programme. Culver et la. (2019) do however, recognise coach developers are only one actor in a complex system. NGBs found it “a real concern and embarrassing situation” when course delivery is found lacking (Susan), even if that is balanced with good reports from external verifiers (Scarlett) and emphasise the need for encouraging and building coach confidence and competence within the delivery and assessment of formal courses. This is highly pertinent as female coaches often lack the confidence to “put their hands up and take opportunities that are there” (Saskia). This is particularly pertinent in the use of assessment within the qualification framework, where poor inter-personal skills of assessors can be particularly damaging to coaches and their desire to engage with any further development opportunities. New Zealand’s focus on formative assessment, Australia’s move to self-assessment and England’s recent move to professional discussions are all efforts to address this.

Although the growth and expansion of coach development learning opportunities, whether they are integrated within formal course provision or provide ongoing CPD opportunities are welcomed, system managers expressed concern over consistency of messaging and quality of delivery. Sophie reported, for example, that coach development workshops can be guilty of the very ‘knowledge transfer’ delivery that coach education and development are trying to move away from, as workshops are often nothing more than demonstrations of practices that encourage ‘session stealing’ without being real coach development opportunities where coaches are given the chance to develop their understanding of the game and formulate their own session plans (Sophie). Equally the growth of private providers, particularly through

online media, can often reinforce the ‘presenter’ message rather than the ‘facilitator’ one (Sheila, Sophie) and are thus likely to miss the opportunity to achieve that deeper learning that Moon (2001) suggests can be achieved when courses adopt problem solving approaches to learning and build in that all important time for discussion and reflection. Culver et al (2019) highlighted the need for training of CDs so they are equipped to adopt a learner-centred approach, but currently there is no requirement for such underpinning training for those that release coach development materials online. This presents a potential mismatch for coaches who on the one hand are being encouraged to adopt PBL within their coaching, work through scenario, game based activities with athlete centred approaches, yet on the other hand are receiving messages through one of their coach development activities that are seemingly incongruent with such an approach. The opportunity to model PBL for coaches is potentially being missed within some of the coach development opportunities currently provided, which compounds the challenges of developing coach confidence in moving away from a predominantly transactional leadership styles utilising drill-based activities and embrace a wider range of approaches to encourage learner centred, game based coaching.

4.8.2 Situational constraints

“People don’t take easily to change” (Shanice)

The thematic analysis findings reported in Figure 11 suggest the day-to-day situational constraints that system managers operate within fall into two broad categories – cultural constraints and organisational, or operational, issues. The cultural constraints are historical and often well ingrained. Shanice’s comments are indicative of Hassanin & Light’s (2014) findings that attitudes are hard to change particularly surrounding coaching style and appropriate communication skills where these adaptations create dissonance with the underlying socio-historical culture, or habitus, that coaches have grown up with. Netball coach development thus experiences similar challenges to those reported within the development of rugby coaches where coaches might enjoy game application of practices but do not necessarily understand the underpinning pedagogy of Game Sense fully so the degree of adoption of game sense principles is variable (Light & Evans, 2013; Light & Robert, 2010). Sebastian, Sade and Shara also highlight the ‘win orientation’ that predominates within

Singapore and South Africa and the conflict that provides with the long term developmental and person-centred learning models.

Other strong historical cultural challenges include the work: play balance within Singapore that Sebastian suggests impacts on the availability of volunteer coaches, and the historical and cultural gender roles, be that the lack of opportunities or confidence within female coaches suggested by Saskia, Susan, Scarlett and Sophie or male- female attitudes still endemic within a system. Shara and Shanice indicate these attitudes are still prevalent in South Africa and Trinidad & Tobago respectively and are indicative of the gender struggles that MacLean et al. (2022) highlight is particularly prevalent within netball, whilst Lavoie and Dutove's (2012) systematic literature review suggests the combination of gender and race related attitudes is particularly problematic and provide key barriers to female sport coach development. This is further complicated within South Africa where Sade and Shara highlighted the post-apartheid legacy still provides ongoing challenges for females in their efforts to be involved with sport that Hargreaves had highlighted in 1999. Sade and Shara emphasised the efforts being made to level up opportunities within different areas of the country and diversify the delivery and access to formal courses to accommodate different languages, literacy levels and accessibility issues,

Countries also report that historically there have been opportunities to coach without qualifications i.e. without investing in developing coaching skills and that this practice is still evident. Sebastian, Sade and Shara report that whilst coaches are winning, they see no need to attend courses and where coach motivations for being on the course are because they 'have to be' rather than 'want to be' there provides challenges for the delivery of courses (Sebastian; Shara). Other cultural issues surround the value that is attached to obtaining formal qualifications – where these are pre-requisites to coach at certain levels of performance that produces a very different culture to where coaches can coach without a qualification (Sade; Sheila). The opportunities for ex-players to move into top coaching roles without investing in their coaching skill development first also runs the risk of devaluing the whole system and sets up a knock-on effect for lack of completion rates on higher level courses, despite the value that ex-players clearly bring to the coaching world (Scarlett). The International Judo Federation recognise this and even World Champions need to work from the IJF Level 1 upwards, in recognition that they will need to learn other nation's systems before coaching at national level of performance (Kozsla and Galea, 2023, pers. comm.). Top level of performance from one country is not deemed sufficient to enter coaching at this level until

knowledge of all approaches is gained. Care thus needs to be taken by World Netball in the consideration of how far they go with APL supporting the transitioning of ex-players into coaching, to ensure the system adopted supports rather than undermines the value attached to working through formal qualifications.

System managers reported a range of organisational, or operational, issues they work with on a day-to-day basis that constrain either the effective provision of the formal coach education programme or the efficiency of delivery. New Zealand site three main challenges, their “biggest challenge being funding and resources for communicating with coaches” (Savannah), as the move to online systems costs and there is a need for more commercialisation. Writing quality resources has been more time consuming and costly than expected, so Savannah suggested Netball New Zealand are trying to be more strategic rather than operational in their approach. Their second challenge is “to get more people out on the field....more coach developers working side-by-side with the coaches they are coaching” (Selina) to build a sustainable system for coach support within the community Their third challenge is the continual refinement of the coaching framework to be more attractive and meaningful. The aim is for more coaches to access courses, adopt a more user-friendly approach (Savannah) and be supported by a member management system. “One of our biggest challenges is what is a quality experience” (Selina) and every year NNZ are trying to refine their KPIs to become more meaningful and include exit interviews to develop a more empathetic approach to this reflection.

Other nations similarly site financial support as a real constraint. Australia highlighted the costs involved of putting courses and resources online and the challenges that presents for easy access of information, particularly now much of their courses are delivered online (Sheila). Though costs are reduced for venues and travel, the easier access to online parts of courses has resulted in bottlenecking of coaches wanting to access the face-to-face sessions to complete awards (Sheila). This was exacerbated by funding being redirected to SSN in 2016, putting coaching on the backseat again (Sheila). Sebastian also reports the bottlenecking of coaches within the Singapore system as they work through the sports science components of Level 1. Sade reports South Africa is further frustrated in their efforts to develop online resources due to load shedding which makes the use of online events unreliable and presents difficulties to coaches trying to access both resources and webinar type activities. A tradition of ‘fun and play’ rather than chasing funding also limits Trinidad & Tobago’s movement towards a sustainable programme (Shanice) and a withdrawal of external deliverers of

courses has created 150 coaches at Level 1 with no level 2 to progress to (Shanice). Table 29 summarises the key similarities and differences within the constraints that system managers reported.

Table 29 Key similarities and differences in system manager constraints

Key similarities across nations include:	Key differences between nations that need consideration:
• Cultural & operational challenges • Managing legacies • Dependency on government policies • Funding limitations • Workforce capacity • Quality of delivery • Building sustainability	• Equal opportunities – gender, race • Catering for cultural diversity • Operational bottlenecks • Time pressures for coaches & teachers • Voluntary versus paid workforce • Lack of volunteers • Online access • Access to workshops • Logistical issues • Objective and fair selection system

4.8.3. Critical reflections and aspirations for growth

The critical reflections and aspirations for growth indicated by the system managers give an insight into likely changes within the ongoing development of coach education systems for these nations. Any system developed for increasing portability of qualifications would need to be flexible enough to work within these likely changes. Figure 13 provides a summary of the thematic analysis findings.

Codes	Dimension	Lower order theme
Culture shift needed (E;NZ;S;SA;TT) Issues with current system	Critical reflections on current system	Contextual challenges
Review & develop structure, content and assessment of current courses (A; E; NZ; S; TT) Elevate status of coaching (E;S;TT) Wider range of coach development opportunities (A, E, NZ, SA) Embrace IT (A; E; NZ; TT) Extend involvement (A; S; TT)	Aspirations for the future	

Figure 13 Summary of thematic analysis findings for system manger reflections on their current system and their aspirations for the future.

Several critical reflections reported from system managers relate to the content and structure of current systems as well as the balance between theory and practice, indicating that these are ongoing issues and reinforcing the need for time referencing to any system put in place to ease transfer of qualifications. Where gaps were identified in either leadership training (Sheila) or strength & conditioning particularly (Saskia) these could potentially be highlighted as needs for coaches to update their knowledge in transferring from one system to another. Where coaches are looking to work within different contexts, knowledge of player ages, stages of development and appropriate loading might be particularly pertinent to highlight too (Saskia). But the differences in support outside of the courses is marked, ranging from Sophie highlighting the lack of support for English coaches once home, to Savannah and Sophie's reports of how well supported coaches within the NZ system are, particularly their use of communities of practice at HP level. This reinforces the need to take

note of how coaches have learnt, as well as what they know and can do within any coaching passport developed.

As a result of their critical reflections, system managers reported a range of aspirations for where they would like to take their systems in the future, including continued growth, collaboration, cultural change and embracing technology (see table 30). There are differences in how each nation intends to address each of these aspirations, relevant to the situational and operational constraints outlined above. Any system that is developed to enhance portability needs to consider how adaptable it could be to accommodate these developments, so the mechanism is sustainable as different systems evolve.

Table 30 Summary of the similarities and differences with system managers reported aspirations and vision for ongoing development.

Similarities	Differences
Vision & Aspirations Continued growth	- Strategic development nationally and internationally - National identify cascaded through system - Clarify what good coaching is - Diversify coaching offer - Structure of formal qualifications - Balance of F2F with other learning opportunities - Extend opportunities to support formal qualification system - Workforce development, including Coach developers and mentors - Develop athlete management knowledge - Review competition structure and player loading - Develop objective coach selection system - Coach licensing system
Collaboration	- International access to coach development and training trainers - Community networks - Links with private providers - Develop international qualifications
Cultural change	- Increase profile of coaching - Increase profile of sport, coaches and activity levels nationally - Develop a desire to share ideas and work collaboratively - Adopt more participant and development focus - Work:play life balance adjustments - More coaches via parent and teacher involvement
Embrace digital technology	- Greater use and access to online learning - Online learner management system to support coach journey

4.9 System Manager reflections on their needs to ease the judgement of equivalence of qualifications

“I just think it is criminal that coaches have come to England from foreign countries with a high level of qualifications from their home country but we cannot recognise it because....we can't map it so they will have to go on a Level 2” (Scarlett)

System managers were asked what help they would welcome to ease the challenge of assessing equivalence. Thematic analysis of their responses is presented in Figure 14 below.

Codes	Dimensions	Themes
Uk equivalence for some levels (Aus) Singapore licence so similarities (Aus) E/A/NZ Level 2 more knowledgeable than TT (TT)	Perceptions of equivalence from experience	Help with judging equivalence
Want credibility and recognition (Sing) Internationally recognised system (Sing) Need global criteria (Eng) Need global qualifications (TT)	Global system needed	
Border agency understanding of netball qualifications limited (Eng) Evidence visa applications (TT)	Border and visa issues	
Know each others' systems (TT) Understand standards we are at (Aus) Increase accessibility to resources (Aus; NZ) Share information (NZ)	Increased communications and resources	
Mapping equivalence of competences (Aus) Need to be able to cross reference qualifications across nations (Eng) Comparison of core learning, philosophies and competences (Eng) Identify what typical journey is for coaches (Eng)	Cross-reference different systems	
Need to find out the person not just the competencies (Eng) Holistic view of person, not just qualifications (NZ)	Holistic approach	
Have RPL system (NZ) Panel to support assessment process (NZ) Currently cannot give due diligence to understanding cross referencing (Eng)	Support system to judge	
Challenge of different focus of qualifications meeting local requirements (Eng) Manage system viability in different countries (Sing)	Viability of different systems	

Figure 34 Thematic analysis map of system manager opinions of help with judging equivalence of qualifications.

Scarlett was not alone in the expression of frustration in efforts to judge equivalence of qualifications and these responses from the 11 system managers interviewed in Fig.14 provide a variety of suggestions, some of which will help develop a mechanism to support portability of qualifications and some that are issues that need addressing with whatever system World Netball decide to adopt. From the outset, Sheila, Saskia, Susan and Scarlett all highlight the need for system managers to be able to cross-reference qualifications across nations and to be able to trust the equitability and perceptions of equivalence within the system that is developed. Sebastian reports there is “no international standard of coaching” to help manage the variability in systems and Saskia, Scarlett and Sophie suggest global criteria should be agreed, not a qualification, but an agreement that still recognises each country’s individuality. Other sports have addressed similar challenges with Equestrian, Snowsports, Judo and Golf looking to adopt International systems tailored to the needs of their sports, with differing degrees of involvement with Tertiary education and alignments with NQFs; whereas World Rugby used their comparative analysis (IRB, 2013) as a basis for constructing a matrix of qualifications equivalence that was widely communicated to build confidence and transparency in their system. A system that could provide greater clarity could help in dealings with border agencies too, as Saskia reported “ One of the biggest challenges for me is working with the UK Border agency on their understanding of where netball is in their journey...they try to compare us to football, or rugby league and union from a visa perspective we have got nothing to cross compare what a Level 3 coach from Australia is compared to us...provides a real challenge” and highlights the difficulties faced, not just by system managers but by employers more generally, given employers are liable for their employees’ actions and need to avoid negligent hiring (Sharpe, 1993).

The suggestion for mapping different systems to allow cross-referencing checks of what coaches know, can do and their underpinning philosophies supports the discussions within this report to categorise knowledge skills and behaviours at different levels of coaching expertise, or indeed different coaching contexts (ISCF, 2013; Navin & Vinson (202); North et al., 2012). World Netball would, though, need to agree which approach to mapping would be most helpful, the level that such mapping might happen - international, regional or individual nations and the balance there might be between these levels of organisation. This would help information flow and understanding of other systems, their nuances, viability and develop more accurate perceptions of other courses and their equivalence, though this is not without problems as North et al (2016) highlighted national variations within a global system within

Soccer coach qualifications. Experiences within wider educational qualifications transfer (Petry et al., 2006) highlight the difficulties of aligning to different countries' HE structures and NZQF/EQF Technical report (2016) reminds us of the challenges of mapping systems from one world region to another. Susan suggests, though that agreeing and developing a reliable, transparent system is necessary to give confidence to those making decisions, particularly when time pressed. There are operational decisions that could be made to support system managers, but there are also more strategic considerations, particularly given the organisation of World Netball, with regions and then individual nations. World Netball could consider which level is best placed to give a lead on portability as some system managers (Shanice) asked whether a global template might be helpful. Or the regional level could take the lead, particularly given recent course developments within Netball Europe, Americas Federation of Netball Associations and efforts to define the responsibilities of coaches at different stages of their development within Oceania Netball (2022). Their use of the 6 core beliefs that underpin coach and official development (Confidence, Competence, Connection, Caring, Character and Contribution) could be a system that other regions might simulate. Or other regions might design their own systems, but in a manner that makes comparisons more easily identifiable.

In keeping with the growth towards a learner centred approach within coaching, or indeed coach development, system managers suggest that judging equivalence should take a more holistic approach and put the coach at the centre of judgements, which would go beyond the programme mapping against roles and responsibilities of coaches at each level of development suggested by Lara-Bercial et al. (2016) and North et al. (2016) and adopted within Europe. This would require decisions to be based on more than just the qualifications and would permit consideration of what coaches know and can do, but also how they learnt and developed their expertise which might go some way to address Day's (2010) concerns that professionalisation of coaching needs to maintain a place for recognising the 'craft' of coaching, often developed outside of the formal courses. Consideration of the coach's philosophy, beliefs, values and leadership capabilities could then indicate likely behaviours and approaches adopted to practice. The advantage of this approach would be the capacity to consider recognition of other learning and its transferability to coaching, as several of the coaches interviewed had teaching qualifications, or leadership; strength and conditioning experience, spiritual or holistic coaching qualifications, or even coaching experience within other sports that would be helpful to consider for their transferability to netball coaching. For

example, Saskia noted that strength and conditioning is paid more attention to in Australia and New Zealand than England, so exploring the use of APL from other qualifications coaches might have could be considered. This would be in line with Singapore's efforts to encourage lifelong learning within their coaching workforce and their stipulation of ongoing CPD that require coaches to undertake a range of learning sources and present themselves for reaccreditation as part of their coach licencing scheme (Koh & Chew, 2015). It would also support the growing body of literature within sport coaching emphasising the value of different modes of learning (Callery et al. 2014; Cassidy, 2009; Cushion et al., 2003; Nelson et al 2006), as well as encouraging coaches to utilise their preferred learning types as part of their professional development (dosSantos et al., 2010). World Netball would need to consider how they might strike the balance between accrediting evidence from a range of learning opportunities and meeting standards of performance as part of the professionalisation process that might support more formal assessment methods.

These comments raise the need to differentiate between purely a comparison of qualifications, judged solely on direct comparison of what coaches should know and be able to do versus the more holistic approach which considers the broader picture of the range of skills and experience a coach might bring to the table. There may need to be more than one approach to meet each need as a result, particularly as system managers deal currently with queries about present and past awards that they need help with; but looking forwards a different system could be developed that is easier to manage. Perhaps a central resource with worked examples of movements from one nation to another at different levels, with the implications for upskilling clearly identified could assist system managers as well as coaches wishing to apply for jobs in countries that are different from where they trained. System managers would also welcome increased knowledge and resources about other countries' systems, whether that be an electronically accessible central point of contact or a more open access to qualification details and resources on NGB websites.

The suggestion of a holistic viewpoint would support mapping exercises that took into consideration all aspects of knowledge and learning (Coté & Gilbert, 2009). Lara-Bercial et al. (2017) suggest there are 3 key areas to address:

- the learning theories underpinning the knowledge and competences demonstrated at different stages.

- clarification of coach roles, functions and tasks that align with different coaching contexts.
- clarification of what coaches can do at each award to help with deployment and regulatory issues and support the identification of minimum standards of deployment and alignment with NQFs.

There are opportunities here, given the level of agreement between nations studied, to identify core knowledge and skills at each level of experience, like Oceania's current thinking as a template, yet still encourage the individuality needed for each nation to manage their contextual and situational constraints. Table 31 provides a summary of similarities and differences in the system manager responses; the similarities could form the basis of common core of information and the differences are the potential anomalies that comparative systems would need to take account of which present World Netball with several challenges to overcome.

Table 31 Summary of similarities and differences in system manager responses

Similarities in responses	Differences
• Understand standards we are at • Understand others' system applying to move into • Increased access to information on websites • Understand knowledge differences at levels of qualifications • Evidence for visa applications and insurance • Easier access to visa systems • Experts/panel to support assessment process	• Dynamic nature is a challenge • Manage system variability across nations • Share information • Map equivalence of competences & capabilities in qualifications • X-code/sport referencing • Identify core characteristics globally • Level of engagement with SS and medicine in coach expertise, especially S & C • Existence of RPL system already • Not enough capacity to do due diligence • Credibility & recognition • Internationally recognised qualification

Chapter 5 Key implications for enhancing the portability of qualifications.

5.1 Introduction to chapter

This chapter reflects on the findings outlined in chapter 4, bringing together the different themes to provide an overall picture of the netball coach education and development within these six nations, as representatives of the wider global netball coaching community. Key questions are identified for the World Netball Advisory Panel to consider in the development of a mechanism to enhance the portability of coach qualifications and a potential tool for mapping the knowledge and skills expected on completion of an award is presented.

Consideration is given to the degree of similarities between systems that will transfer easily and the differences, or anomalies, that might present barriers to judging equivalence of qualifications are highlighted. A worked example is then presented to test the suggested mapping tool across two nations (Australia and England) at the Coach level of qualification.

The issues that arise from this process within the worked example are explored, with particular attention being given to whether the philosophy and coaching behaviours used could be included within the mapping tool, as seen in other professions (GMC, 2019).

Options and suggestions are then included for the World Netball Coaching Advisory Panel, in consideration of the system they would like to develop. A conceptualised model of the process that could be adopted is included and suggestions are made for increasing the availability and flow of information about equivalences of qualifications within the netball community. Finally, limitations of the research are identified.

5.2 Reflections on key findings

This research has adopted a triangulated approach to examine national netball coach education and development systems across six nations, each a representative of World Netball's geographical regions. Formal course documentation has been analysed to identify the structure, content and assessment of qualifications and gain an initial feel for the philosophy and coaching culture being encouraged and the learning opportunities provided for the developing coach. Similar challenges were experienced to Rui et al's. (2014) work within Volleyball where there were differences in the availability of documents from different nations. Given there was only limited amounts of documentation available within this

research from South Africa and none from Trinidad and Tobago, this research also explored the lived experiences of each nation's system managers (N=11) and the reflections of coaches (N=17) who have worked, or are still working, through their national coach education system. It is clear from the findings that netball coaching displays similar historical stories to those described more generally within sport coaching by Duffy et al. (2010) and Lara-Bercial et al. (2017), with different learning journeys being available to netball coaches in the different nations, so echoes Lara-Bercial's (2020) findings of the degree of disparity in coach education and development systems globally. All nations researched here still rely heavily on volunteer coaches to support the overall development of netball and none of the nations explored here require graduate entry into netball coaching roles. Despite this, Netball is following a similar journey to coaching within other sports, demonstrating growth towards greater professionalism and professionalisation through the continued evolution of their coach education and development systems, as well as the underpinning philosophies and coaching methodologies adopted as a result (Abercombie et al., 2015; Lara-Bercial et al., 2017). Evidence has been presented of continued work, particularly within South Africa, Singapore and Trinidad & Tobago, to move away from overly corrective and negative, even punitive approaches towards more positive encouraging environments. This suggests the professionalisation process is encouraging a similar shift in attitudes and the adoption of a wider range of both leadership and coaching methodology theories applied to practice, as Kerr and Stirling (2015) reported happening within teaching during its professionalisation.

There is a spine of formal coach education qualifications at the heart of each system investigated in this research, and an enthusiasm to return to this point within Trinidad & Tobago. These formal qualifications are considered necessary for the ongoing professionalisation of the sport, from a quality assurance perspective (Debanne & Fontane, 2009; ENSS, 2007, He et al., 2018), and findings from coaches within this research would support Maclean and Lorimer's (2016) suggestion that coaches believe these formal qualifications should be mandatory. Netball coaching, therefore, is in a good position to build a mapping process around these formal qualifications, similar to the processes adopted elsewhere by Al-Busafi et al. (2012), ENSS (2007), Gould & Mallet (2021), Lara-Bercial et al. (2017) and North et al. (2016). The degree of buy-in to coach licencing is variable across nations, though, and there is not yet any link between nations at master's level, and only minimal links to HE evident within Australia, which North et al. (2016) and ENSS (2007) suggested to be an important element of the professionalisation process. Findings also

provide evidence for variations across nations in the degree of integration of different learning opportunities in and around the formal learning journey for coaches, which need consideration in developments towards a system to enhance the portability of these formal qualifications globally. This is particularly important to consider given the increasing body of literature suggesting that much of a coach's learning comes from outside the formal courses and indeed such learning opportunities are often reported as preferred methods of learning for coaches for their continued professional development (He et al., 2018; McLean & Lorimer, 2016; Nash & Sproule, 2012; Nelson et al. 2006; Oldridge et al., 2016; Schempp & Mullick, 2010).

The formal coach education programmes were for the most part delivered by the NGB, except for Singapore where Sport Singapore took responsibility for delivering the sports science component in partnership with Netball Singapore. Commonality was found across nations, where their formal coach education was currently active, with a system of workshops and practical activities utilised to combine formal learning with more informal learning in the shape of reflective practice and in some cases mentoring. Efforts have thus been made to respond to Nelson et al. (2006) and Day's (2013) identification of the value of coaches gaining access to a range of learning opportunities. Marked differences were found, though, in how these learning opportunities were balanced and the amount of support available to coaches outside of the formal course deliveries. The evidence presented here from system managers and coaches has demonstrated that key netball nations are working to address Nelson et al.'s (2006) and Taylor and Garrett's (2010) criticisms of more traditional, somewhat didactic delivery of formal courses and are addressing the level of content and delivery style of courses as well as integrating other learning within and around formal elements of course content. Where ongoing learning is encouraged, or stipulated, nations are demonstrating the encouragement of a lifelong learning approach advocated by Deek et al. (2013).

The ongoing reviewing and updating of not just the overall structure of qualifications, but also the content, modes of delivery and assessment found here, across all three phases of the research, suggests netball has embraced the drive to strengthen internal activities and focus on developing the quality of provision that sport coaching is looking to achieve in its move towards greater professionalism and accountability (Chelladurai, 1986; Gill, 2012; Gould & Mallett, 2021; Lara-Bercial et al., 2020). It is evident within this research that nations have

approached these developments with the help of partnerships with their national sports organisations, Ministries of Education and Olympic organisations, as well as links with National Qualification Frameworks, but to varying degrees. However, netball has not yet adopted the direct links with Higher Education suggested by Chelladurai (1986) as being part of a truly ‘professional’ identity, with only Australia including reference to a Diploma in Sports Coaching as part of their elite programme (Docs A8 & 9) and the inclusion of a Bachelor degree in sports coaching as a recognised source of CPD points for re-accreditation within their 2023 Netball Australia Accreditation document.

Different nations report different balances in volunteer coaches compared to those that are paid, or career coaches, so netball is still developing the strength of its professional identity within a blended model (Duffy et al., 2011). This dependence on a voluntary workforce places netball in a different position from other more professional sports such as football, golf, judo, skiing, and equestrian. The options available for facilitating portability of qualifications are thus likely to be different and netball will certainly need to adopt Nash et al. (2012), Nash and Sproule (2011) and Abercombie’s (2015) suggestion to be mindful of developing a system that will treat all coaches with respect and as professionals, not just those working at the top levels of performance. Although Koh et al. (2011) suggested that coach education programmes tend to be less well developed within Asian countries, evidence here from Singapore would refute that. Their licencing with Netball Australia, keenness to develop a system with credibility and adoption of Sport Singapore’s National Register of Coaches is taking them closer to a fully licenced system than some other nations.

The spine of formal coach education found here within each nation currently provides a linear progression for coaches, with higher levels of qualifications relating to working with higher levels of performers and demonstrates a similar historical pattern within netball to that reported by Day (2013), relying on a mix of theory and practical sessions to deliver their formal coach education programmes. New Zealand draws the distinction between Community and Performance qualifications, Australia stipulate age group related outcomes for their first awards and England have generated mediated, non-formal workshop opportunities for coaches wishing to work with more diverse, or more specific, populations. Despite Navin & Vinson (2020), England Netball’s (2018-2021) netball strategy suggestions, the 4 x 4 Coach development model (ISCF, 2013) and the call from Cali that “we need more quality coaching at grassroots”, none of the countries provide the opportunity for progressive

extension in the mastery of coaching skills through formal qualifications within participation environments. All nations focus on more senior coach awards working with higher levels of performance. This presents netball with an opportunity to consider adopting North et al.'s (2012) approach to classifying the needs and skill sets of coaches for different levels of participation and performance within football and move towards the identification of more contextualised skills sets to meet the needs of different participation and performance groups. Netball could also consider adopting the equestrian approach of focusing on High Performing Coaches, irrespective of the context they are working in, through greater focus on the inter and intrapersonal knowledge and skills sets (Fuller, pers. comm., 2023; British Equestrian, 2022).

Within performance coaching contexts, commonality was found with a greater degree of individualised support available for coaches working at higher levels of performance and a greater degree of emphasis on other forms of learning. New Zealand demonstrated a strong focus on communities of practice and more non-formal mediated learning through conferences and workshops, whilst England utilised more generic coach development programmes involving working with coaches from other sports and, since 2019, an individualised support programme for coaches within the Roses programme by a full-time coach developer. Similar to Callery et al (2017) and Koh and Chew (2015), the degree to which access to coach developers and mentors was facilitated throughout the coach development journey was found to be variable and indicates a need to consider not only what is learnt at each stage of development but how that learning has occurred. Commonality was also found in the encouragement for coaches to adopt a lifelong learning approach to their development, as advocated by Deek (2013) and Lara-Bercial and Bales (2020), with guidance, and in some cases requirements, to engage in development opportunities post-qualifications. Reaccreditation within stipulated time periods was indicated within Australia, New Zealand, Singapore and South Africa and guidance is given to encourage coaches to access a range of learning activities. More specific stipulations are evident from Singapore regarding the percentage use of different learning types within their licencing scheme and Netball Australia (2023) now also include a wider range of learning activities within their upgrade guidance notes for CPD points.

Netball has embraced the expansive growth of systematic, scientific approaches to coaching and sports performance and adopted an increasing use of sports science knowledge to

underpin their training of sports coaches, as suggested by Woodman (1991) and Kubayi et al. (2021). Netball has joined other sports on the move away from coaching being merely transactional, coach-centred, utilising more drill-based practice structures and is embracing a more athlete, or player, centred approach to coaching (Kidman, 2010). All three phases of the research have provided evidence that coaches are being encouraged to adopt a wider range of communication and leadership styles to involve and empower their participants and adopt a more game-based approach to their practice structure (Harvey & Light, 2015; Light, 2004; Passos et al., 2008; Vella et al, 2013). More emphasis is being given to problem solving, decision making and the use of questioning to facilitate the development of thinking players that share responsibility for their learning and development. Coaches are being encouraged to adopt a game sense or decision training approach within Australia, New Zealand and England particularly, along with Kidman's (2010) encouragement to put the learner at the centre of the coaching process. This is particularly evident within New Zealand where a player centred module is a pre-requisite to entering the formal coach education framework and the integration of the LEARNS model throughout the learning programme. Thus, there is evidence that netball is embracing Côté and Gilbert's (2009) suggestion of the importance of developing inter and intrapersonal skills alongside the sport specific and sports science knowledge and skills set. Intrapersonal skill development is a particular focus within Singapore through their addition of a principles and values modules as a pre-request module for entry into their coach education pathway.

There are differences, though, in the degree to which these ideas have been fully embedded within each nation, as well as the degree to which the NGB structure and delivery of formal education models such an approach within their coach learning. The move from the use of a predominantly autocratic, transactional leadership style to a more empowering, transformational or servant style was reported by many of the coaches interviewed here. However, switching to a game-based approach did provide challenges and the message from coaches and system managers alike is that coaching within an autonomous, supportive environment that Conroy & Coatsworth (2007) proposed, cannot yet be assumed, particularly where contextual constraints such as the need to win to promote school marketing opportunities within Singapore and South Africa provide pressure to adopt more traditional coaching methods (Morbée et al. 2020). Cali's comments, though, about needing to use autocratic leadership methods at some points, despite preferring to use a more democratic or empowering approach normally, supports Lara-Bercial and Mallett (2016) suggestions that

Serial Winning Coaches have the capacity to use whichever leadership style best suits the situation. Coach development, therefore, needs to equip the coaching workforce with the range of skills to work across the spectrum appropriately to the needs of the group and situation rather than being limited to the more traditional transactional approach. Although there is some contradictory evidence regarding the extent of link between a coach's philosophy and the coaching behaviours they exhibit (Grecic & Collins, 2013; Collins et al., 2015; Partington & Cushion, 2024), WN might wish to consider how best to take account of the coaching behaviours adopted to create the enhanced confidence, competence, connections and character that both Côté & Gilbert (2009) and Langan et al. (2013) suggest is an indication of an effective coach. Or indeed whether to include Netball Oceania's (2023) proposed extension of this model to include 6Cs and add Caring and Contribution.

The inclusion of system managers and coaches' lived experiences within this research has highlighted some of the contextual and socio-historical factors effecting sports coaching that North et al. (2019) recognised as important to consider in any analysis of sport coaching. The appreciation of netball as a safe haven for girls within South Africa as well as netball's role in reaching out to all communities as part of SA Government's post-apartheid policy (Sade; Shara; Cassa; Chinue, Whitley et al. 2018) and the strong Maori traditions evident within the New Zealand approach (Savannah, Selina, Cyndie, Chloe; Caitlin) are two examples cited here of the need to understand and be aware of cultural factors influencing the philosophies adopted within systems of coach education and development (Stodter & Cushion, 2014). There is clear recognition of the understanding of the more holistic role of the sports coach which needs representing within any 'coaching passport' or 'template of equivalence' developed.

Contrary to some other researchers (Abercombie, 2015; Cushion et al, 2010; and McCullick et al., 2009), Section 4.7 highlights that coaches within this research valued their formal coach education part of their development and reported the positive impact of courses on them. There was, however, recognition that this is dependent on the quality of the workforce delivering the programme of learning, a sentiment echoed by system managers. Coaches also reported an extensive range of 'episodic experiences' within their learning journey, many revolving around work with other coaches, particularly those that provide mentorship, or contact with coach developers, reinforcing Day's (2010) suggestion that the craft of coaching is developed from exposure to a range of learning environments. NGBs have recognised the

value of learning beyond formal courses, as suggested by Nelson et al. (2006) and Moon (2004 & 2013), which represent a vital part of the overall coach learning journey and have increased the range of other learning opportunities provided beyond courses to support that, despite the reported constraints around costs and finance. In some cases, these extended learning opportunities are evident through the inclusion of experiential learning tasks within the assessment process or the provision of mentoring and working with coach developers, particularly within New Zealand and Australia. Changes have also been made to the delivery of formal coach education courses, with blended learning enabling the delivery to be more spread out and capitalise on the advantages of more distributed learning and time for coaches to enact the content between sessions highlighted by North et al (2016) within football coach development. This was particularly important within NZ and Australia where system managers and coaches alike suggested the model adopted in the past gave too much content in each training weekend and the use of online modules has enabled the more theoretical components to be given online and thus frees up the chance for more reflective practice (Knowles et al., 2001) and individualised feedback to coaches within the practical components.

Changes have been made with coach assessments, within Australia to move assessment to self-assessment within some levels of qualifications, within New Zealand where formal assessment has been replaced by an ongoing formative approach and within England where the use of a professional discussion has been adopted more recently, utilising video analysis of session delivery from the coach's home training rather than using fellow course members for assessment. These assessment changes would refute Rui et al's (2014) findings from volleyball assessment and testing. However, this is only partially true as there are still tests administered within Australia and Singapore. However, evidence from the system managers and coaches suggest these advances in the delivery of formal courses and movement away from knowledge transfer is very dependent on the individual facilitator, so cannot yet be assumed. Hence netball faces similar challenges in enacting coach behaviour change through the use of formal education as outlined by Cushion et al (2010), McCullick et al (2009) and Glen and Lavelle (2020).

The integration of other learning opportunities within and around the formal courses and the variability between different nations with the provision found within this research suggests there is now an increasing need to examine not just the course content and knowledge base

gained when judging equivalence of qualifications, but also the learning culture coaches have been exposed to and the degree to which each coach has engaged with adopting ideas suggested within courses. This would allow the varying impact of different learning opportunities on coaches highlighted by dosSantos et al (2010) and Mallet et al., (2009) to be taken into consideration. Further consideration might also need to be given to how attention can be paid to the increasing use and prescription of ongoing learning after completing a formal course as coaches engage with lifelong learning.

Similarities were found here between nations in their aspirations for their coaching workforce to engage in an athlete centred, game based approaches which mirrors changes within other sport coaching and skill acquisition literature (Cushion, 2013; Jones et al., 2010; Harvey et al., 2010; Williams & Hodges, 2005), though there were differences found in the degrees of which each nation had these ideas fully embedded within their systems and it cannot be assumed all coaching from each nation does indeed exhibit such approaches as much as each nation would like. Changes have also been evidenced here to the delivery of formal coach education to move away from the more traditional knowledge transfer approach to a more learner-based approach, though there were differences found between nations here in the degree of change in formal coach education delivery as well as the extent of support via mentoring and coach developer support in and around the courses.

Any system developed to judge the equivalence of qualifications might therefore need to consider how flexible it could be to recognise such differences, particularly as many of the constraints on adopting these ideas more extensively stem from national historical and contextual differences, as well as individual differences within those national systems. Netball's unique history, reported by McLean et al. (2022) as female dominated, or female led, has been reflected in lack of opportunities for accessing coach education courses within some nations, challenges of male attitudes towards females, equity of opportunities for those from different ethnic and geographically distributed groups, with literacy and language difficulties and challenges with load shedding impacting the use of technology to support the delivery of both formal and non-formal learning opportunities. The degree to which these constraints can be accommodated within the system of the 'template for equivalence' that is developed, but this needs to be balanced with the requirements of a reliable system that meets the needs of an increasingly professionalised sport and can accurately assess competence, or expertise to meet professional standards of employment, as Brockman et al., (2011) and

Maandag et al, (2007) outline has also been the case within other professions. As Mallett et al. (2021) pointed out it is often these cultural and language differences that provide the biggest challenges to effective transfer of experience across nations.

5.4 Key questions identified for World Netball Coaching Advisory Panel

This research has generated several questions for World Netball to consider in support of increasing the portability of qualifications which are represented in Figure 15

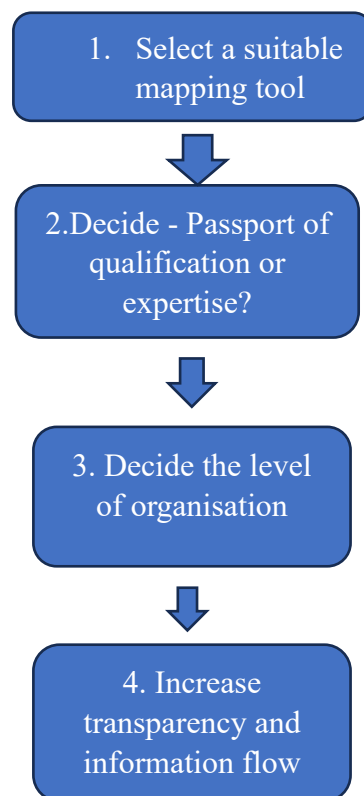


Figure 15 Summary of questions identified for World Netball

Firstly, the development of a suitable tool to map the knowledge and skills that coaches should gain within each qualification is crucial. This tool needs to give an accurate representation of the knowledge and skills that coaches should have acquired by the end of their qualification. The degree of similarity between different qualifications can then be agreed, to form the basis of effective transfer of qualifications. The differences found

between systems generate any ‘top-up’ learning needs to support the smooth transition of coaches from one nation to another. Such a system needs to be flexible enough to manage both current and historical qualifications but also cope with future changes as each nation evolves their systems of formal coach education.

Secondly, World Netball needs then to consider whether the portability of qualifications is sufficient as a baseline measure for easing transfer of coaching skill sets across nations, or whether a system of coaching passports could more accurately reflect a coach’s current expertise. This would give the opportunity for coaches to demonstrate their underpinning philosophy, and the coaching behaviours they exhibit as a result, which could more accurately reflect the degree of application of course content to practice and facilitate attention to be paid to the ongoing continuous professional development that coaches have undertaken since the completion of their formal courses could therefore be included too.

Thirdly, from a strategic and operational perspective, the World Netball Coaching Advisory Panel will need to consider whether the driving force overseeing the mapping tool is a centralised, more global one, or driven at a Regional or national level. With recent developments of courses within Netball Europe, Americas Federation and Netball Oceania, the balance between these levels and ownership might need consideration.

Lastly, system managers wanted a greater information flow and transparency around equivalence of qualifications and the implications of that for moving from one country to another. This would develop confidence in the decision-making process, so how that information flow might be generated needs consideration.

Each of these questions are now explored, together with potential solutions for the World Netball Coaching Advisory Panel to consider.

5.3 The development of a suitable mapping tool

Two systems are proposed here to facilitate the direct comparison between qualifications across nations. Firstly, similar to Rui et al.’s (2014) work within volleyball and the IRB (2013) comparative study within Rugby, the ISCF (2013) and ESCF (2017) is proposed to provide an opportunity to benchmark qualifications to the different levels of coach roles identified, i.e. Assistant Coach, Coach, Advanced Coach and Master Coach. This system is

proposed as a better match with the systems currently in place within these nations, particularly within England and Australia, rather than the Canadian system which differentiates between instructor awards and coaching ones (Gill, 2021). Course learning outcomes gave an initial indicator of which award sits in which of the coach categories identified within ISCF (2013) (Al-Busafi et al, 2012; Lara-Bercial et al., 2017), though not without challenges.

Secondly, Lefebvre et al.'s (2016) suggestion to adopt Côté & Gilbert's (2009) definition of effective coaching, as a mechanism to classifying coach learning was adopted. This highlights the professional, interpersonal and intrapersonal knowledge and skills of coaches and uses these to categorise both course content and competences. This would provide a similar approach to comparing qualifications to the transfer policy proposed within Netball officiating (Europe Netball Officiating, 2024), other sport coaching qualifications (British Equestrian, 2022; IGEQ, 2023) and occupational frameworks (BASES Sports Science accreditation, 2023). This system of mapping qualifications can be across all coaching levels, which would respond to the challenge that system managers reported in assessing equivalence of qualifications at community and grassroots level. At the High-Performance level (see section 4.5), where Australia overtly aligned their HP award to ISCF (2013) guidance, others were less overt, adopting a more individually tailored HP programme of development wherever possible, and New Zealand operates a community of practice with their carded coaches. New Zealand's system provides support for Stoszkowski & Collins (2015) suggestion of the importance of peer discussion to coach learning but provides challenges for any mapping tool that is aiming to look for similarities of experiences, given the individual nature of such a learning journey.

An important element of developing a suitable mapping tool is the identification of the differences across nations, or anomalies, that might provide barriers to portability. From a system perspective, differences found between nations that could provide potential anomalies included:

- Partnership links and their impact on structure of national system
- Reaccreditation and ongoing CPD requirements vary.
- Extent of mentoring and work with coach developers
- Australia – inclusion of Diploma in Sports Coaching
- Differences in assessments and evidence for competence

- Pre-requisites stipulated vary across nations
- Differences in inclusion in content and degree of focus on inter and intra-personal skills

Further details are included in Appendix 7.

Benchmarking against the ISCF (2013) & ESCF (2017) in section 4 of this report, provided the opportunity to explore these potential anomalies at each level of coaching award (see Appendix 7). The list of potential anomalies is long, so despite the benefits that Lara-Bercial et al. (2017) offers as a potential mapping tool to classify each nation's qualifications, the structure of the netball coach education systems analysed here still provides a series of challenges to the recognition of equivalence of qualifications. To overcome these anomalies, Côté & Gilbert's (2009) components of effective coaching i.e. professional, interpersonal and intrapersonal knowledge and skills sets are proposed here as a mechanism to facilitate more detailed analysis of the knowledge that coaches should have and the skills they should be equipped with, or competences, on completion of each qualification. It is recognised, though, that New Zealand do not use the term 'competence' and focus on learning outcomes of the modules and courses instead (Bennie & O'Connor, 2015; Lefebvre et al., 2016). This stage of analysis permitted more specific differences or potential anomalies to be identified within coach knowledge and skill sets (see Appendix 7). Within the professional knowledge, for example, potential anomalies within the coaching methodologies included differences in the levels of adoption of game sense, constraint led practice, athlete-centredness and the balance between win-orientation with whole person development. Australia's 7 Step skill development is a uniqueness that would need attention too.

When this analysis is combined with the analysis of the interpersonal and intrapersonal knowledge and skill sets, the mapping tool can adopt Garner's (2020) and go beyond the more traditional sport specific and sports science related aspects of sport coaching. This would build in the opportunity for reflection on communication and leadership skills, philosophies and likely coaching behaviours encouraged so that the 'match' of one set of qualifications to another could be more exacting and be driven from a more holistic perspective (Rieke et al, 2008; Rowold, 2016; Vallee & Bloom, 2005; Vella et al, 2010 & 2013). Direct comparison can then be made between qualifications in relation to similarities and differences analysed. Where similarities exist, these could be assumed as equivalent;

where differences are highlighted, decisions will need to be made as to whether the degree of differences are:

- small enough to agree that nations are prepared to see the qualifications are equitable.
- relatively small, so nations could agree that mentoring in role to assist transfer would be acceptable.
- larger, so that the missing elements could be identified as either ‘suggested’, or ‘required’ ‘top-up’ opportunities for coaches wishing to transfer their qualifications across to other nations. Alternatively, other relevant experience could be considered as suitable APL.

Consideration could also be given to underpinning national unique pre-requisites, for example the player centred coaching module in New Zealand, the KNEE programme in Australia and NZ and the Principles and Values module in Singapore. These might be automatic ‘top up’ needs for any coach wishing to transfer into these nations, whatever level they are intending to coach at. This potential approach to mapping of qualifications is now tested out to explore its feasibility for accurately mapping qualifications and a worked example is now included.

5.5 Worked example of mapping qualifications at ISCF (2013) ‘Coach’ level of qualifications between Australia and England

This section tests the feasibility of the approach to mapping qualifications suggested here. The worked example provided here was selected to:

- Respond to System manager E2 who reported the challenges of judging equivalence of community level qualifications and having the confidence that coaches can work independently and thus be insured to work within the England Club netball set up.
- Compare Australian qualifications to English ones as the Chair of World Netball Coaching Advisory Panel reported coach mobility issues are often found between these two countries (Navin, pers. comm., 2023)

- England has only one qualification at this level (Level 2) and Australia have potentially three qualifications so matching up where the England Netball Level 2 might sit alongside the Australian qualifications is a challenge.
- Sheila reported the old Australian Level 2 award was commensurate with England Level 2, which would now be the Advanced award. However:
- A coach award title of ‘Advanced’ would be more commensurate with the Senior Coach classification found in the ISCF (2013) and ESCF (2017) rather than the Coach level, so clarity in benchmarking is needed here too.

The complexity of these potential transfers of qualifications provides a challenge to the proposed approach and thus a suitable first test of how useful the approach suggested here might be. From a systematic perspective, sections 3.1 – 3.3 identified that both Australia and England have their own idiosyncrasies within their overall coach education systems that coaches wishing to move from one country to the other might find helpful to upskill on. Whether these are desirable or obligatory would be a matter for agreement between countries. Figure 16 identifies these for coaches wishing to move from England to Australia, and vice versa.

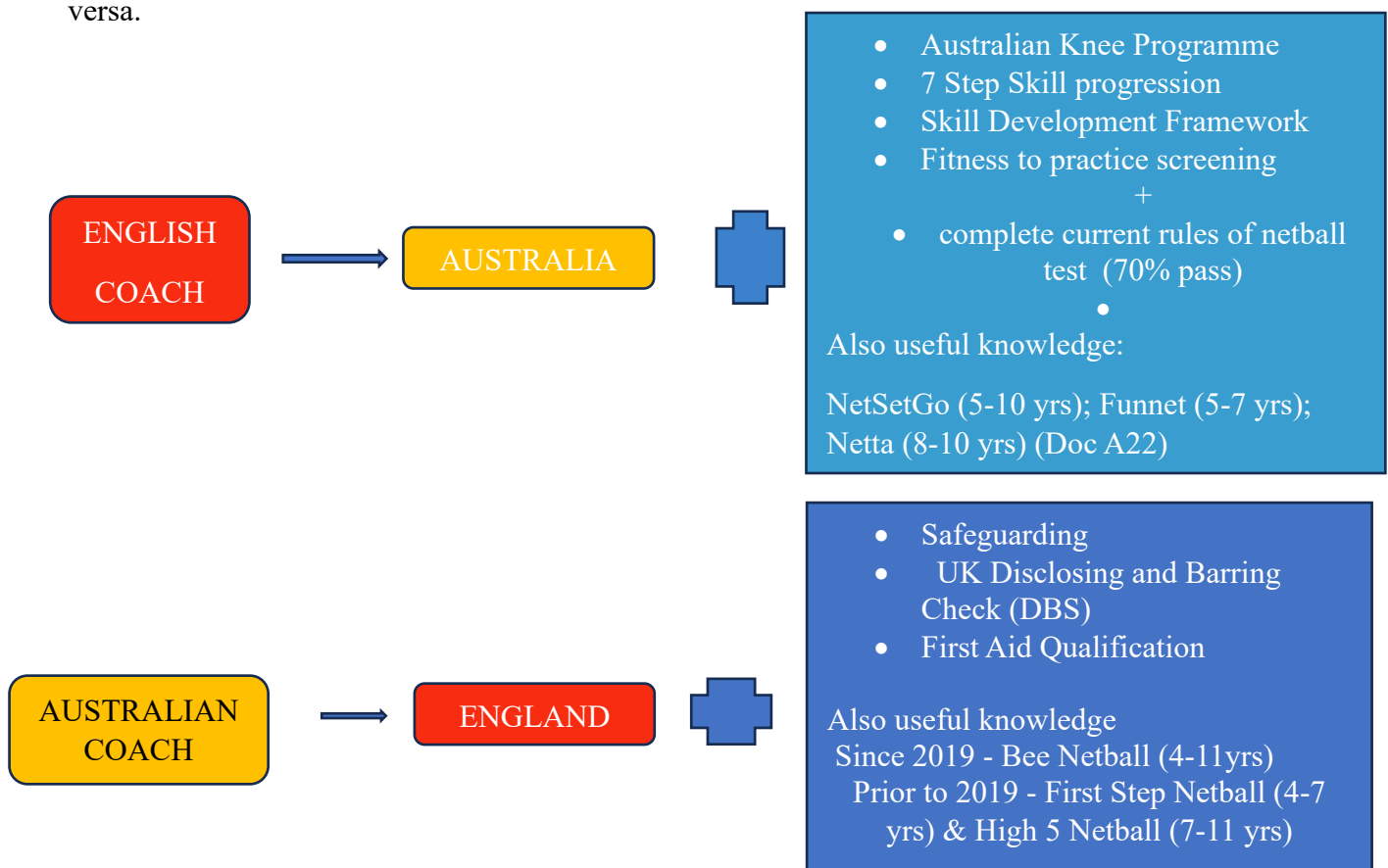


Figure 16 Identification of top up needs for coaches moving between England and Australia at Coach Level

As Section 4.3 demonstrated, Australia have potentially three qualifications at the Coach Level: The Development, Intermediate and Advanced awards. All of these are considered within this worked example to explore the potential matches and mismatches with an England Level 2 award. The identified target groups for each award, course lengths and delivery modes are outlined in Table 32 below to give a first indication of their comparability and where a Level 2 coach from England might sit alongside their Australian counterparts.

Table 32 Coach Level – comparison of target outcome groups for coaches; lengths of courses and modes of delivery

	England L2	NA Development	NA intermediate	NA Advanced
Desired outcome target groups	Club, team, school	Club, Association & regional	Representative, talent ID & state League	Representative, talent ID & state League
Lengths of courses & modes of delivery	Pre-2020 – 5 days Since 2020 – 4 online workshops + 2 day F2F	4.5 hours online	7 hours; blended	29 hour + coursework F2F
Time to complete	1 year	1 year	1 year	2 years

As Table 32 indicates, England’s Level 2 course, pre-2020, was considerably longer than both the Development and Intermediate awards from Australia. The post 2020 blended learning model is also more closely matched to the Australian Advanced course in length, rather than the Intermediate or Development ones. This would support Sheila’s suggestion of historical equivalence between these two awards. The move to blended learning delivery of the England Level 2 award including some face-to-face work also more closely matches the delivery of the advanced course. However, there are differences in the desired completion rates.

The classification of knowledge into professional, interpersonal and intrapersonal (Côte and Gilbert, 2009) and comparisons between coaching awards are highlighted in Table 33 where the professional knowledge is broken down into netball specific; sports science and coaching methodology and Table 34 where the inter-personal and intra-personal knowledge is outlined.

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There is a degree of agreement between the courses but there are also differences. Differences are particularly apparent within the professional knowledge, sports science component, where all Australian courses are supported by the underpinning KNEE programme which gives coaches consistent messaging on suitable warm-ups, cool downs and exercises to prevent knee injuries together with guidance on appropriate intensities of physical work. This supports System Manager E1's concern that England Netball coaches have less strength & conditioning knowledge than their Australian counterparts at this stage in their development. However, England Netball Level 2 does have more focus on introducing coaches to psychological elements and goal setting.

Table 33 Summary of professional knowledge coaches should have acquired within each award.

Knowledge type	Summary of comparison
Professional Netball specific	EN L2 - Movement skills; Attacking invasion principles; 1 and 2 handed catching contested and uncontested; Ball handling rules; Passing; key coaching points; Shooting – step back and to side technique; rules ; Shooter court craft – rotation and holding.; Stages of defence & common errors; Centre pass defence Development – Safe teaching, identification and correction of faults :Ball handling skills; Movement & footwork; Attacking & defending skills; Goal shooting/circle defence skills; Simple Game day team goals and strategies. Apply basic techniques/skills into relevant court situations. Positional and team play into basic court strategy Intermediate - Intermediate techniques & skills relevant to positions Advanced - Analyse rules of netball in skill sessions and game related strategy
Professional Sports Science	ENL2 - Learning v performance; Practice types; Warm-up & cool downs; Principles of training; Demands of different positions on training; Support for injured player perceptual factors; Psychology 4Cs – confidence, connection, competence & character Goal setting; Drug awareness Development - Safely teach and apply KNEE programme Intermediate - Concepts behind error detection and correction Advanced - Analyse athlete performance and provide technical correction. Analyse matchplay styles and systems. Safely programme and monitor conditioning training

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Professional Coaching Methodology	ENL2 – Roles & responsibilities for Lead coach; Managing behaviour; Player versus coach led sessions and impact on learning; Actions of successful sports coach; What to coach v how to coach skills; Game centred approach to coaching; Planning for progressive and purposeful sessions; Phases of training year; Instructions; demonstrations; Questioning to empower; How to observe, analyse and generate feedback; Concluding a session; Planning for competition; Roles when coaching in competition – pre; during; post competition. Health and safety requirements for netball related activities and competition. Development - Group management; First 5 steps of 7 steps of skill progression; Steps for skill progression within practical environment/activity; Progress skills into dynamic situations Intermediate - Teaching methods & coaching styles to develop intermediate skills of netball. Plan, organise, conduct, control skills session; Awareness of safety – equipment & players. Sequential skill progression; Able to use ‘coachable moment’; Provide appropriate and relevant feedback in practical sessions Advanced- Teach and develop advanced skills of netball; Plan and prepare training sessions that complement yearly plan; Risk management policies; Adapt practices, programmes and activities to cater for individual needs of all players, including those from special populations; X-Sport coaching.
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A key difference in the knowledge base of Advanced Coach award to the England Netball Level 2 within both the sports science and the coaching methodology elements of professional knowledge is the degree of focus on competition and yearly programmes. The most recent edition of the England Netball Level 2 (2023, Doc E8) does now include more awareness of annual programmes, where previous versions did not, but there is still a difference in awards in the degree of focus on coach understanding around yearly planning and competition management. Coaches within the England Netball system meet more depth of information around competition and annual programmes within the England Netball Level 3 course, gaining only an introduction to each at Level 2.

The coaching methodology element of professional skills indicates a reliance on a progressive skill development approach within the Netball Australia system, particularly within the Development and Intermediate Netball Australia levels, whereas England Netball Level 2 encourages more of an understanding of game sense approaches. As a result, the philosophical stance of the coach under consideration might need exploring to see where their best fit is. Reflective skills are encouraged at all levels (see Table 34), across both nations and effective communication strategies are encouraged within Development and Intermediate awards. More attention is paid to building relationships within England Netball Level 2 and taking care of player well-being within Netball Australia Advanced awards. Each nation

would need to agree whether these differences were small enough to be able to accredit equivalence of qualifications, large enough to require top up knowledge before transferring. or whether coaches could be supported, for example through mentoring, in the early stages of working within another nation.

Table 34 Summary of inter and intra-personal knowledge coaches should have acquired within each award

Knowledge type	Summary of comparison
Inter-personal knowledge	ENL2 - Developing a club ethos; How to build positive relationships. Development - Effective communication strategies Intermediate - Effective communication strategies Advanced - Assess & monitor development and wellbeing of athletes; Appropriate communication to meet needs of situation; Active participation in workshops and group discussions
Intra-personal knowledge	ENL2 - Coaching philosophy; Lifelong love of learning; Experiential learning model (Race, 2019); Self-Reflection Development - Use 4 of the self-reflection methods to evaluate and improve quality of coach management, teaching and communication (player feedback; peer feedback; self-awareness; video analysis and mentor coach developer) Review coach education pathway and update opportunities Intermediate - Understand role of mentor coach and establish practical strategies to enhance individual coaching Advanced – none identified directly though implicit within practical coaching and training programme planning and evaluation

Each nation has developed their own mechanism for finding out what their coaches should know and be able to do by the end of the learning programme for each award. Table 35 summarises the assessment tasks and activities that each award uses. Similar to the comparison of knowledge, the assessments for England Netball Level 2 are more extensive than either the Australian Development or Intermediate awards and are more closely aligned to the Advanced award. However, differences are found in:

- Australia's use of Self-evaluation in more recent versions of their Development and Intermediate awards
- Although Australia's Advanced award includes a practical coaching session of 60 minutes as does the EN Level 2, the England Level 2 only requires the candidate

coach to deliver 20 minutes of that session for assessment via a professional discussion with their assessor.

- Australia's inclusion of another sport placement
- Australian submission of filmed sessions, one focused on attack and another on defence
- Greater emphasis on game day coaching within Australia's Advanced course, where England Netball Level 2 focuses on getting their coaches to plan and deliver linked sessions and complete written tasks.
- EN Level 2 requires their candidate coaches to show evidence of their ability to focus sessions on both attack and defence within their 6 submitted coaching session plans. Since 2020, the Level 2 has also required the recording of the practical assessment so coaches can review and reflect on their performance prior to their professional discussion

Table 35 Assessments for England Level 2 and Australian Development; Intermediate and Advanced awards

Award	Assessments
England Level 2	Written tasks 1. Coaching philosophy, equitable coaching and safeguarding children 2. Coaching styles & learning preferences 3. Competition & drug awareness Health & safety checks & reviews Practical tasks 4., Plan & deliver a series of linked coaching sessions (4) Filmed coaching session in preparation for 30 minute professional
Australian Development	Online assessment questions Session plan- learning tool Self-Assessment using feedback from peers, players and coach developer. Checked & signed off by coach developer. F2F assessment built into workshop. Practical – delivered in groups of 3 to 14+ years players 2-3 exercises from junior Knee programme +netball specific A/D skill, with opportunity to give feedback in gameplay
Australian Intermediate	Active participation in workshop and discussion groups Complete worksheets to standard Session plan – learning tool and assessment Practical coaching task - Netball specific coaching skill to group of athletes (any level) 30-40 minutes Competency assessment but can retake as many times as needed

Australian Advanced	Active participation in workshops and discussion groups Complete 3 written assignments 1. Game Analysis – analyse team and plan to play opposition. Within course 2. Cross-Sport placement – analysis of another sport coaching session (3 months to submit) 3. 2 x coaching session video – one on A and one on D 12 months to complete Practical coaching task (A11) Team training environment 60 mins (not including warm-up) Min, 10 players 14 years +; association/ regional/ academy/ representative standard Competence based assessment 2 assessors
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A cross-mapping of competences was also conducted to gain a feel for similarities and differences for what coaches from each award should ‘be able to do’ once they have completed their award, particularly in recognition of Lemyre et al.’s (2007) suggestion that within youth sports coaches they may have the knowledge but not necessarily the competence on field yet, so consideration for both is useful for reliable comparisons. These competences were again broken down into professional, interpersonal and intrapersonal skills. Australian terminology was used in the first instance to identify competences that candidate coaches should acquire during the course, and those that they were directly assessed, or self-assessed, at each of the three programmes. Then the EN Level 2 competences were matched to these to identify similarities and differences. An example of part of this process is included within Table 36, using the intra-personal skills competences, chosen to demonstrate how this cross-mapping approach can highlight similarities and differences to help judge equivalence, though it needs to be emphasised that this is only one section of the overall award competence comparison.

Table 36 Exert of cross-mapping competences – Intrapersonal skills

Key: Blue = competences assessed generally.

Black = competences assessed within practical coaching

Australian competence terminology		Aus Dev	Aus Int	Aus Adv	England Level 2 competences matched to Australian terminology
Intra-personal skills					
Review	Employ four of the self-reflection methods to evaluate and improve the quality of coach	X			Reflect on learning
	Seek feedback from players and others and use self-reflection techniques to evaluate: 2 strengths + 2 areas of improvement in coaching competence	X			Monitor and evaluate coaching sessions and personal practice Seek feedback from participants on the content and delivery of the session
	Seek feedback from players and others and use self-reflection techniques to evaluate the practical coaching session.		X	X	
Self-awareness	Review coach education pathways and update opportunities	X			
	Understand the role of the mentor coach and establish practical strategies to enhance individual coaching		X		
					Describe your coaching philosophy Share preferences for learning Understand motivations for coaching

Similarities exist within these intra-personal competences in that all awards encourage their coaches to be competent at reviewing their planning and delivery and seek feedback from others to support that process. The Intermediate & Advanced awards require a more wide-reaching review and reflection than the Development award, similar to the England Netball Level 2. Australia have given this process a stepwise approach to support the growth of their coach reflection skills across these awards. Differences are seen in the self-awareness where the England Netball Level 2 encourages coaches to understand their motivations for coaching and be in tune with their coaching philosophy, whereas Australia want their Development level coaches to be aware of the coaching pathway and opportunities within that, and Intermediate coaches to be aware of the value of a mentor for their personal growth.

When used across the whole spectrum of competences, or skills, that coaches are expected to ‘be able to do’ at the end of each award, this information gives a clear picture of what coaches who wish to use their qualifications in another country might need to add into their repertoire for the host nation to be comfortable their experiences and capabilities are ‘equivalent’ to a home-grown coach. When put together with the knowledge, underpinning learning from pre-requisites and from within the course, it is now possible to identify what coaches would need to address to overcome the anomalies identified as potential barriers to the portability of these

qualifications. Figures 17 and 18 summarises these needs when considering the potential movement of coaches with different qualifications across these two nations.

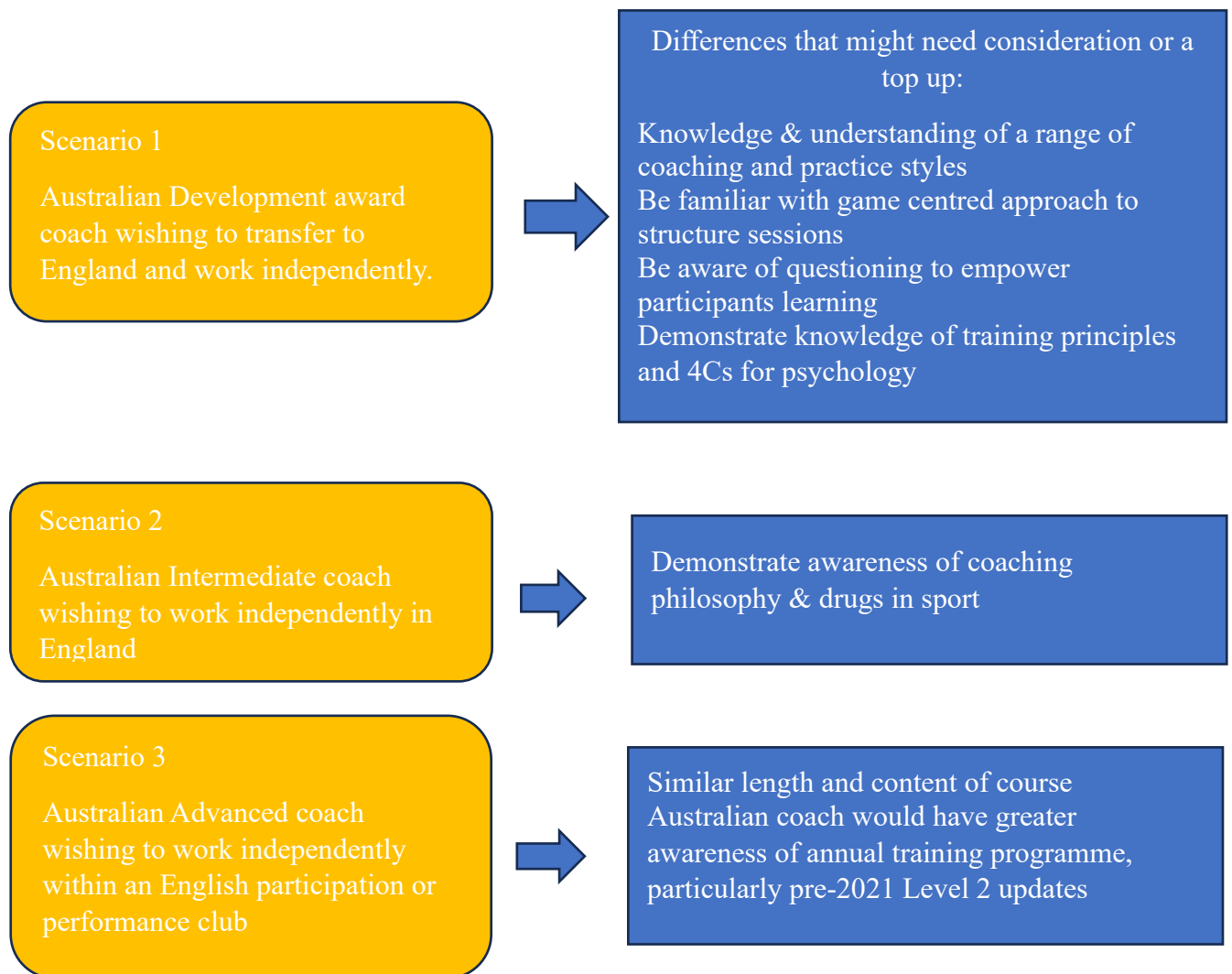


Figure 17 Summary of comparisons for Australian coaches wishing to move to England

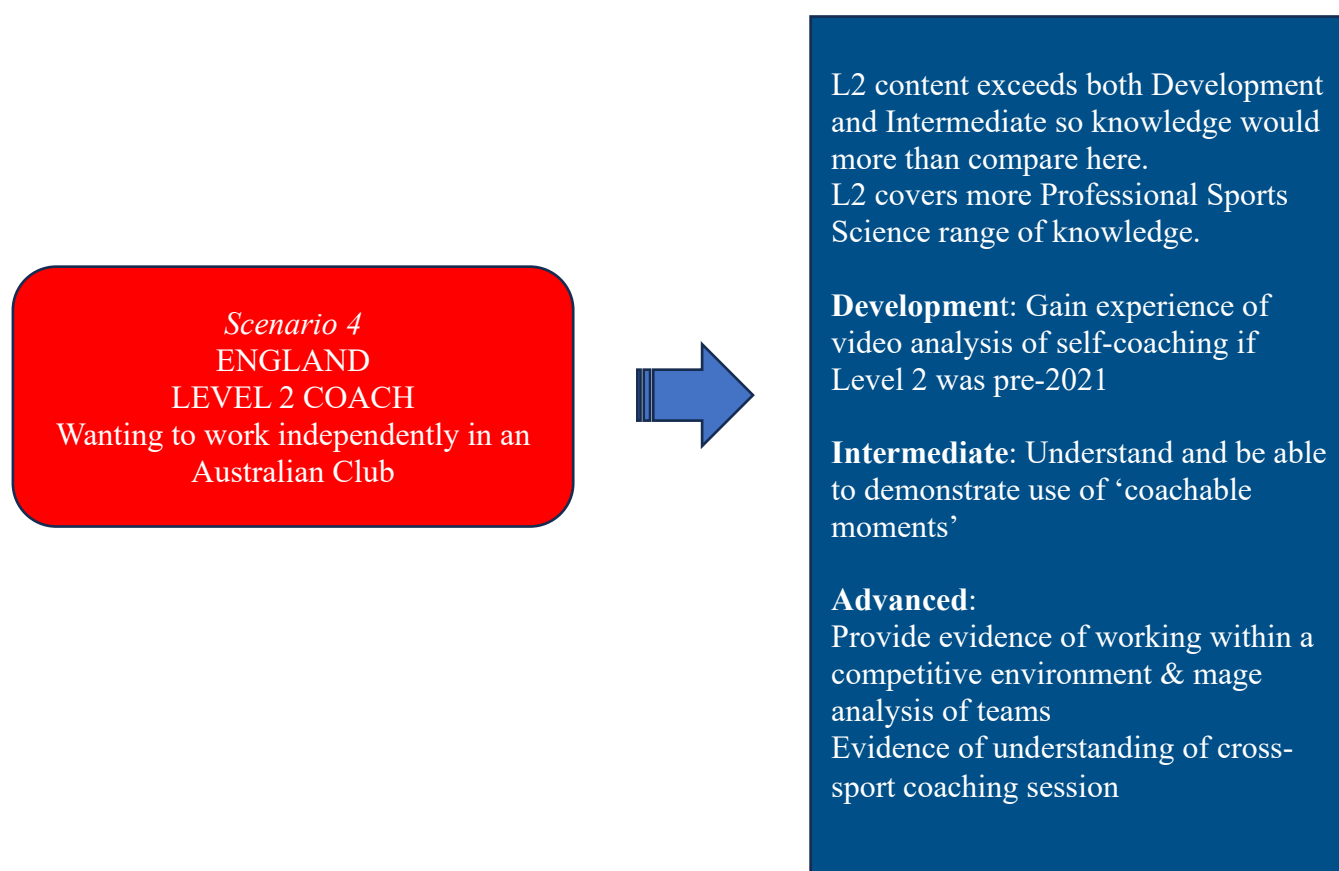


Figure 18 Summary of comparison between 'Coach' Level awards Australia v England knowledge and likely top up needs.

An England Netball Level 2 coach wishing to work out in Australia would thus be well prepared to work in situations where Australian Development or Intermediate coaches are working. When wanting to work alongside an Advanced Coach role, though, this match-up is less clear. Course lengths and competences are a good match, but anyone judging applicants would be well advised to check the England Level 2 coach knowledge of annual training programmes and might need evidence of coaching within the competitive environment. To ascertain the degree of direct transferability of qualifications might therefore require either the consideration of alternative knowledge and skills that could be given APL or there might need to be agreement between nations as to what level of support a coach might need on arrival. Alternatively, the comparative study method adopted could embrace the learner-centred philosophy encouraged within both the coaching culture being encouraged and the

coach learning culture within the formal coach education process and place the individual coach at the centre of any decision of transferability rather than the qualifications per se (LeDuc et al., 2013). This might need to include a practical assessment to check for capabilities and competences, similar to the medical professionals which require a practical examination of their medics in addition to the mapping of qualifications, and the netball officiating which may ask for a practical assessment from officials to consolidate their decisions on transfer of qualifications (Europe Netball Officiating, 2024).

5.6.1 Mapping equivalence of coaching behaviours or expertise

This section explores the possibility of including a focus on coaching philosophies and behaviours and just how the softer skills of coaching can be included within the mapping process, as suggested by LeDuc et al (2013). This would give the added benefit of examining the portability of coach expertise rather than merely the knowledge and skills expected from the completion of formal qualifications. Côté & Gilbert (2009) highlight the desire for coaches to impact their players positively in the 4Cs i.e. Confidence, Competence, Connection and Character and Oceania Netball have added Caring and Contribution (2023), so there are opportunities to explore the inclusion of the coaching behaviours that coaches adopt to facilitate such impact on their participants.

From a philosophical approach, section 4.1 has highlighted that netball is mirroring other sports coaching developments by encouraging their coaches to move away from relying so heavily on the more traditional, transactional approach to coaching, and move towards greater use of a greater range of leadership and coach-athlete interaction skills associated with a more autonomous, supportive and empowering coaching culture (Kubayi et al., 2021; Reike et al 2008; Rowold, 2006; Vella et al. 2013b). Player, or athlete, centred approaches to coaching are being widely encouraged within most nations in this research, rather than coach-centred ones (Kidman 2005; Kidman et al 2010). Increased use of more game related approaches to practice structures are evident with greater use of a range of leadership skills and questioning to empower learning rather than just checking for knowledge and understanding (Light, 2017; Lara-Bercial & Mallett, 2016). Coaches are being encouraged to facilitate performers to take responsibility in their own learning within some nations, but this philosophical approach is not consistent across all. Section 4.7 also reported challenges coaches experience in adopting and enacting a more athlete centred approach and the journey they had gone from more

autocratic approaches at the start of their career to their more empowering approach nowadays (Light, 2004; Rowold, 2006). So, it would be advisable to consider not just the award, but the impact of that award on the individual coach and where they are in the development of their own coaching philosophy and the behaviours they adopt as a result. This would help maintain a focus on the craft of coaching which Day (2010) highlighted is more likely to be developed in other forms of learning outside of courses. Credit could then be given at high performance level of coaching to assessment on the job and cross-sport experiences as Callery et al. (2014) recommended. Reference could be drawn directly from Lara-Bercial & Mallett's (2016) here, to ascertain the range of behaviours adopted by coaches, whether they are predominantly operating at a traditional or transactional leadership style or are able to move along the full range of leadership styles continuum effectively to meet the situational or group needs at any given point in time, as suggested by Lara-Bercial et al. (2017).

Given the encouragement for ongoing learning rather than awards being an endpoint per se, it is also important to consider the journey an individual coach has gone on, both during the timeframe of completing a qualification as well as since completion. There is also a need to recognise that learning sources change as experience is gained and perhaps the mapping system developed here could accommodate those changes (Trudel & Gilbert, 2013). This would enable notice to be taken of how coaches have learnt as the support available to coaches is so different between nations, in the delivery of course material, the support and mentoring outside of the course workshop sessions and the learning opportunities coaches are encouraged, or required, to complete to re-accredit. For example, the record keeping that Singapore and Australia are already encouraging for coaches continuing professional development could be included within the coaching passport or template of equivalence to evidence access to the full range of learning opportunities, much as the BASES accreditation requires sports scientist to attend a range of learning experiences and reflect on the impact they have had on their practice (BASES re-accreditation guidelines, BASES website). As coaches are being encouraged to adopt a more player centred approach, and NGBs are putting their coaches more at the heart of their learning programmes, it would make sense to put the coach at the centre of portability issues rather than the qualification per se and thus adopt a more holistic and inclusive approach to assessing equivalence.

Coaches could be encouraged to keep records of examples of how they have applied their knowledge and skills to enact these positive impacts, similar to BASES Sports Science

accreditation, to reflect on how CPD opportunities have impacted practitioner's work (BASES, 2023). Mindful of the number of netball coaches that are volunteers, particularly at community level, this evidence gathering needs to be easy to use and low maintenance in the first instance. As coaches aspire to become higher performing coaches, though, evidence gathering could become more elaborate with increasing experience and more professional roles. Records could be linked more directly with job descriptions which could support contextualisation of coaching passports too, so more could be made of Navin & Vinson's (2020) findings regarding coaching expertise in different contexts and a similar approach adopted to North et al.'s (2012) work within football where the desired coaching expertise to work with different age groups has been identified. World Netball could consider the adoption of a coaching passport, or template of equivalence, similar to IGEQ, so that at the end of formal courses coaches could be provided with a coaching passport identifying the knowledge and skills set they have gained on the course, demonstrated within their assessments and used to enact the 4, or 6, Cs. Section 5.7 now suggests a conceptualisation of such an approach, with the coach at the centre of the decision-making process.

5.7 Summary of proposed mapping tool

This section proposes a model (see Figure 19) to summarise, or conceptualise, the process of mapping the equivalence of qualifications and/or coaching expertise and then outlines suggested approaches for each step.

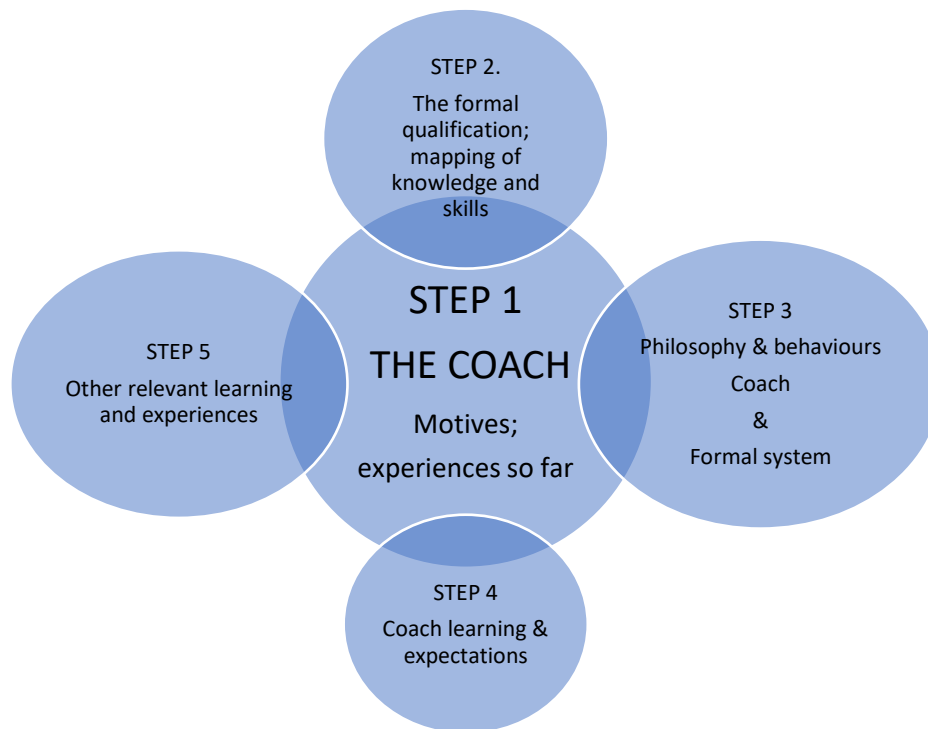


Figure 19 Proposed model for assessing portability of qualifications.

Step 1 of any assessment of equivalence would put the coach at the centre of decision-making, taking note of their individual motives and experiences to date, including insight into their learning journey up to that point. Step 2 would focus on the qualifications per se, i.e. what they know and ‘can do’ from the mapping exercise outlined here which would permit straight forward comparisons so system managers have a reliable reference point to underpin their decisions. Step 3 would then be a consideration of the impact of that qualification and learning experiences to date on the coaches’ philosophies and their likely use of coaching behaviours. This could be explored by coaches drawing examples of how they have used their learning opportunities to utilise coaching methods, or coaches could provide examples of how they have impacted their participants in each of the 4, or 6, Cs. Step 4 would check how coaches have learnt and the degree of access they have had to interactive approaches, mentoring and communities of practice to help manage expectations of coaches once they transfer. This could guide employers for incoming coaches who might need support when settling into working within a different nation. Finally, Step 5, would explore ‘other learning’ that coaches might bring, that may compensate for differences in their formal qualification knowledge base or competences, if taken into consideration. An APL system could operate here, similar to how NZ and NA operate currently. For example, an English Level 2 coach

wishing to work alongside Australian Advanced coaches, in the example provided here, may have a strength and conditioning qualification alongside their netball specific qualifications to help with knowledge base around injury prevention exercises that might provide equivalent experience; or an Australian Advanced coach wanting to work independently in England may have some sports psychology expertise, or teaching, that might be considered commensurate with the missing psychology aspects of knowledge highlighted in the mapping exercise.

The recommendation to WN is that this approach be piloted between some of the more established formal coach education systems in the first instance, to identify the crossmatches and advice that might be needed for coaches wishing to transfer. This could adopt a scenario-based approach to test the system across both participation and performance coaching contexts. As a result, the developmental updates that are needed can be identified together with which online, or face to face, courses might be most pertinent to develop ‘updates’ for coaches transferring from one system to another. Agreement could be sought from the nations involved with transfer of qualifications so that information could then be posted on NGB websites to start the information flow. The pilot could then be extended to include examples of coaches from nations with less well-developed formal qualifications, who have relied so heavily on experiential learning and gaining access to international information via self-directed learning (Crystal). This would check the degree of inclusivity that might be feasible within the portability of expertise, where formal qualifications are limited, and the mapping exercise would need to be more flexible in its approach to assessing the equivalence of both knowledge and skill sets of coaches. The programme announced by World Netball (Nov. 2023) for endorsement of coach development opportunities could generate a range of endorsed programmes that can give assurances of quality and form a basis to refer other qualifications against, as World Rugby do. If the endorsement extends to other learning forms, such as webinars, these could also act to refer coaches to for ‘top up’ knowledge and skill development opportunities.

This mapping exercise would provide a guide in the public arena, that can underpin decisions for coaches wishing to work in a different nation from that in which they trained. Steps 1 and 2 in Figure 19 would provide the basic information for direct comparison of qualifications but Steps 3-5 would allow a wider remit for the developing coaching passport. Netball could adopt a similar approach to apprenticeships, where the focus is on the individual’s knowledge and skill set rather than solely on qualifications (Aptem, 2022). These knowledge and skills are then used as a basis to accredit prior learning and agree on an individualised learning

programme with their apprenticeships. Within netball coaching the ‘behaviours’ element could be addressed by evidence of the coach’s current philosophy and the coaching behaviours they are comfortable using at the point in time that any comparison of qualifications is being examined, similar to other professions (Maandag et al., 2007; GMC. 2019; Gift, 2023). Evidence of practical coaching could also be included where necessary, as seen in medical professions, or available within the new officiating transfer policy (EN, 2024).

5.8 Ownership of the mapping system

From an operational perspective, World Netball needs to consider any changes that could, or should, be made to the structural organisation of coach development to facilitate increased portability of qualifications and address the question of where the organisational driving forces should come from: individual nations; regions or at World Netball level. From a quality control perspective, Sebastian suggested that some sports find claims of international level qualifications actually transpire to be not much more than intermediate in reality, so system managers would like to trust the robustness of any comparative tool developed. Scarlett reported, though, that this is not just a concern at higher levels of performance, but the same challenge exists at club level where, for example, in England insurance is available to work independently once a coach has the Level 2 qualification. There is a nervousness about employing coaches from other nations at this level without a reliable system to compare knowledge and competence, with coaches likely to be told to complete the England Netball Level 2 whatever their qualifications at present (Susan & Scarlett).

The cross-mapping approach suggested here, similar to ESCF’s (2017) mapping tool, could be used to construct a matrix, as World Rugby have, to compare different awards, identify which elements are ‘core’ between each award under comparison and which elements are ‘different’ both in ‘knowledge’ and ‘can do’ skills. Then the host country could agree whether the differences were enough to request coaches to upskill on those elements or whether they could cope with accommodating coaches as they arrive. Within the worked example above, a ‘top up’ need for England level 2 coaches moving to Australia to work alongside their advanced coaches could require evidence of match play involvement, whether that be in person or recorded and submitted. Clearly identified advise, that is made available publicly, might answer the quality control queries raised by system managers, particularly if World

Netball, or regional organisations, were to endorse this type of guidance surrounding specific qualifications.

A more strategic element emerging from this research relates to where World Netball might want to move towards in the longer term, as netball and sport coaching progress towards greater professionalisation. There are a number of options that World Netball could follow: Firstly, World Netball could define their own netball specific International Coaching Framework, similar to Golf and the World Underwater Federation, identifying what World Netball considers global traits for effective coaching at each level of ISCF (2013), ESCF (2017) and CIMSPA (2018; 2022) coach awards within the UK and use this as a guide to manage portability, combined with quality control from World Netball endorsement of programmes. This would be an opportunity to utilise Navin and Vinson's (2020) identification of effective coaching within each participation and performance context to agree global criteria for each context as a baseline to benchmark against, similar to North et al.'s (2012) work within football where expectations for working with different age groups has been clarified. The mapping exercise presented here could be used to monitor knowledge and skill sets. Netball could adopt a system, similar to Equestrian sports, who have identified agreed minimum standards of qualifications internationally and now provide passports accrediting those qualifications that are accepted internationally by employers (British Equestrian, 2022; IGEQ Website, 2023). At the same time, World Netball could identify what is considered important within the training of coaches to identify the 'core' knowledge and skills that might help parity across nations but be sure to build in sufficient flexibility to encourage individuality and take note of historical and contextual differences within nations. World Netball could then consider whether it is possible, or sensible, to identify key learning theories for all to include in their coach education as Lara- Bercial et al. (2017) suggest or whether that would stifle national individuality.

World Netball could also consider the possibility of future developments in the overall structure of coach education and development internationally, whether or not it would be desirable to have an overarching international qualification, similar to Football, Skiing, Judo or Golf, that could provide a greater level of parity between nations at the top level. This might not be applicable at present, given Netball's current blended development model (Duffy et al., 2010), but may become more of a consideration once Netball reaches increased professionalism or becomes an Olympic sport. However, Netball would need to be mindful of North et al.'s (2016) findings of the high level of variation in diploma implementation and

operation across national associations within football, despite the aim of UEFA to provide greater parity between countries as well as the degree of standardisation they would want to replicate, given Judo and Golf's structure. This would also have implications for the fast tracking of elite athletes into coaching. World Netball would need to consider how to build in individuality and flexibility for all nations yet maintain that confidence in quality control. Adopting the holistic approach to judge equivalence suggested in Figure 19 could permit consistency of approach across all levels of award and so avoid the alienation of the grassroots coaches that Abercombie (2015) emphasised as desirable to any system adopted. Alternatively, World Netball might want to consider opting for an approach more like basketball, handball and judo which separates out the systems used at grassroots versus national level. Those adopted at high performance, or international level within these sports utilise direct links with Higher Education to provide international training for those coaches wishing to work at National level, normally linked directly with universities to underpin masters' level work at that higher level of coaching. This represents a very different system to the current one in operation within netball. Within basketball and handball this operates at a regional level, but with Judo at an international one. At present, netball still relies on an army of volunteers, so this may not be a realistic option in the short term, but it could be an option for World Netball to consider for the future.

Given the pace at which coach education and development systems are evolving, there are several other considerations for netball from this research. There is an increasing availability of coaching related studies at FE and HE level of education as well as the development of apprenticeships within sports coaching, so the ongoing development of systems for accreditation of prior learning would be welcomed. There are systems in place to APL and fast track ex-players within these nations currently, but figure 19 could provide a framework to further enhance this process.

Other issues arising from this research that may help within the bigger picture of netball coaching development would be the opportunity to encourage greater consistency in the adoption of terminology to help accuracy of perception across nations (Duffy et al., 2011). In this research, similar to Garner (2020), the use of player/ athlete/ learner - centred and coach centred approaches would benefit from greater clarification as would TGfU, Game Sense and Game intelligence within the different games based approaches to practice structure (Jani et al., 2017; Jarrett et al., 2014; Jones & Turner, 2006; Vickers, 2003). Listening to coaches within the interviews of phase 3 here also raised the issue of what we say and what we

understand and apply in practice might be different, so a ‘netball’ understanding of more theoretical concepts would be particularly helpful to support coach development, especially where English is not necessarily the first language of the learner. Given the expanding nature of netball, Netball might also need to consider the provision of translating information and resources into different languages, as Handball and Judo currently provide.

5.9 Improving the information flow around the equivalence of qualifications and expertise

“To grow the game of netball we need to grow together instead of isolated” (Savannah).

In response to both system managers and coach comments, particularly regarding wanting to know where their system is in comparison with other nations (Sheila), World Netball could consider the degree of sharing information each nation/region is happy to do and on what forum that information is shared. Adopting the World Rugby matrix approach with a centralised store of information on the World Netball website might be a good start, to give an overview of award comparability as a guide. This could link directly to World Netball’s endorsement scheme launched in November 2023. Perhaps the World Netball Coaching Advisory Panel, or co-opted ‘experts’, could endorse the suggested comparative analysis as a guide in the first instance, though there are clearly going to be individual differences that would need to be considered too. Individual nations could also adopt the approach of the English Cricket Board and post on their websites their current qualifications and the other nations’ qualifications that they endorse as equivalent, identifying any ‘top up’ requirements clearly, where appropriate, along with information about historical awards and their equivalence. This could then include reference to the ISCF (2013) and ESCF (2017), as well as reference to NQF equivalence, though this too might need mapping across different systems (NZQF Technical report, 2016; SASCOC, n.d.), including CIMSPA specifications within the UK. In response to system managers and coaches’ desire to have more information available, Netball can also consider how far they would like to go with information availability. The suggestion for increased access to national resources by others would be a start (Sheila, Susan, Savannah) though there are clearly academic ownership, copyright and funding issues involved with these decisions. Exploring greater information flow to help system managers thus needs discussion.

World Rugby have a series of online workshops available on their website, so if World Netball were to mirror this mechanism, they could provide guidance on what coaches would need, or benefit, from upskilling before coaching in a different country and a series of online workshops could provide a mechanism to achieve this. Given that countries have reported the cost of providing online resources as prohibitive of their progression, a collective approach here might help spread the costs, or coaches could be directed to resources that already exist, for example the Game Sense online workshop within the EN provision of webinars or the KNEE programme in Australia. Historical qualifications could be included within this system, though it would be reliant on individual nations to release information of historical awards and would require NGBs to provide updated material as courses develop in the future. At higher performance levels, this analysis might also address Susan's concerns and provide support for visa applications and evidence to employ coaches from overseas, where appropriate.

5.10 Limitations of the research

Although this research has utilised three sources of information to obtain triangulation of data, key limitations include the different levels of information available from each nation. Documentation was only available from some nations and the level of detail within the documentation that was accessed was variable across the six nations examined. The number of system managers and coaches that were included within the sample was also variable across nations. The purposive and snowballing sampling used here, along with the criteria for selection of coaches particularly, also need consideration. The identification of coaches that were considered ambassadors for the system they were working within presents a particular sample group quite deliberately, so any generalisations made from this sample need to be interpreted within this constraint.

The timeframe of this research was an additional limitation. Although developments within the timeframe of this research were incorporated as far as possible, for example the use of Australia's 2017, 2020 and 2023 editions of their National Accreditation guidance documents and the inclusion of England's changes in delivery and content of their level 1 and 2 courses pre and post-covid; this research still represents more of a cross-sectional approach than a

longitudinal study. Questions were included within interviews to ascertain reasons behind the current systems in each country and interviewees were asked to reflect on both historical and futuristic aspects of development to give some insight into a more longitudinal perspective, but this remains a limitation of the research.

Chapter 6 Conclusion & Recommendations for future research

This research set out to provide empirical evidence of the netball coach education and development systems across six nations to explore the feasibility of cross-matching qualifications from different countries. Findings suggested that national netball coach education and development systems within these nations share some commonalities in content, skills sets and desired ethos but the differences in structure, levels, assessments, stages of development and philosophical underpinnings provide challenges for judging equivalence of qualifications. Benchmarking qualifications against both ISCF and NQF are problematic due to the structural, contextual and situational constraints within the nations explored.

From an operational perspective, recommendations are made here to use Côté & Gilbert's (2009) identification of professional, interpersonal and intrapersonal knowledge and skills to provide a classification of each award that can facilitate comparisons between awards in different nations and support the benchmarking process with ISCF (2013) and ESCF (2017). It is recommended that this mapping exercise be used to develop a matrix of qualifications that are equivalent, as a general guide, along with advice for coaches on what they might need to top up their knowledge and skills with, when wishing to transfer from one country to another. It is suggested this information is made available on NGB and WN websites, potentially with suitable 'top up modules' identified to support coach transfers and that WN decide strategically how national, regional or international endorsement should support this process. When coaches do wish to migrate and work in a different country from where they trained, a holistic approach is encouraged to personalise decisions and coaches are encouraged to document their philosophies, likely coach behaviours and records of the range of learning opportunities accessed to provide a 'passport of coaching skills' or a 'template of equivalence' that could be submitted to a nation where coaches desire to move into. Figure 20 summarises suggestions for a plan of action for the World Netball Coaching Advisory Panel.

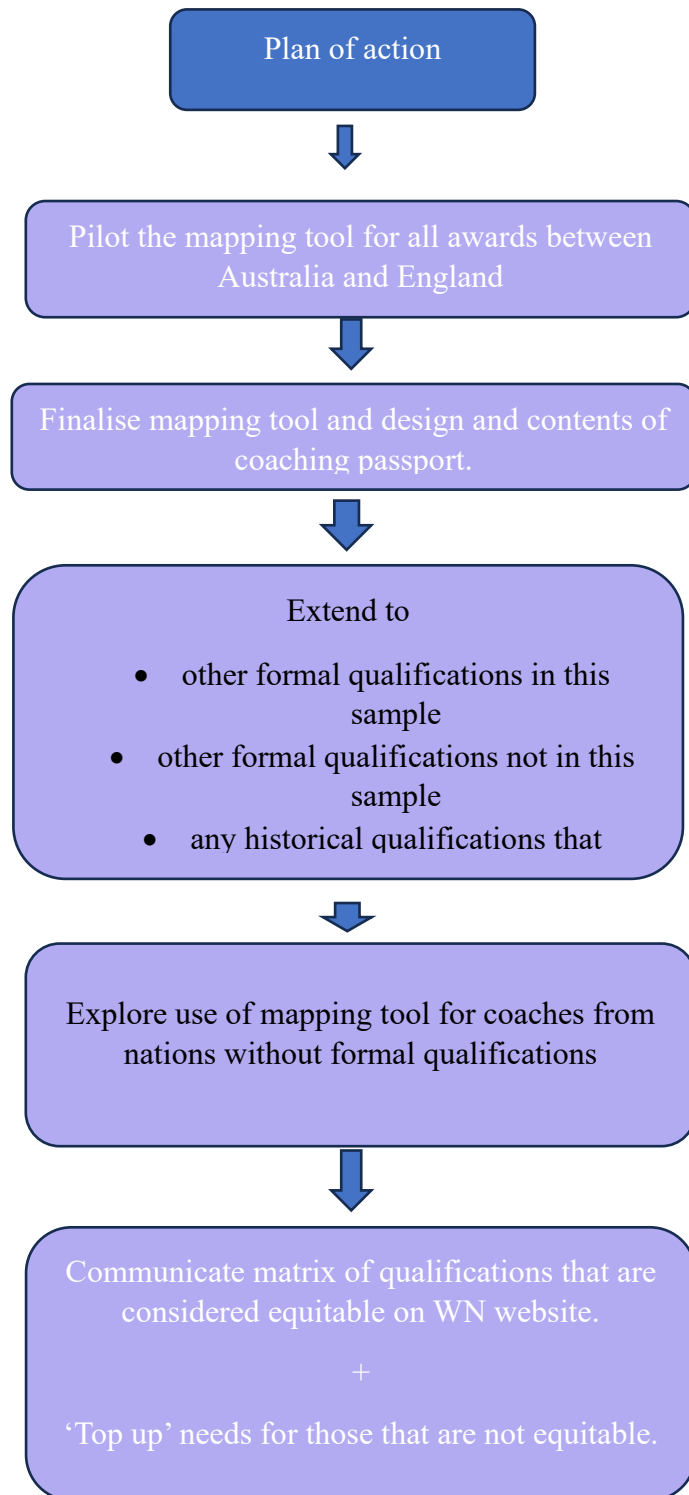


Figure 20 Summary of suggested plan of action for use of mapping tool within existing qualifications.

To progress through these stages with the current, and perhaps historical, qualifications will involve some key decision making and agreement for World Netball. The interpretation of whether the mapping tool does indeed give a suitable mechanism for highlighting the equivalence of qualifications is an important first step, as is the agreement of any suitable top up requirements for coaches to undertake where the equivalence between two qualifications is not quite such a good match. What the coaching passport or template of equivalence should look like needs agreement, from two key elements. Firstly, whether it will include coaching behaviours and examples of underpinning philosophies through coach reports of the application of their behaviours to impact participants positively within either the 4Cs of Côté & Gilbert (2009) or the 6Cs of Oceania Netball (2022). Secondly, whether the mapping tool can be applied to historical qualifications as well as current ones and would indeed be flexible enough to accommodate future developments too. World Netball and NGBs need to agree the publication of a matrix of qualifications that do match on the WN website and the extent of inclusion of information on NGB websites. A key decision is whether the coaching passport should be one of expertise or just qualifications as this will then impact whether the mapping tool can be extended to coaches who have not had the opportunity to attend formal qualifications.

The NGBs will need to agree the degree of support they provide to develop this mechanism at WN level by making sure their qualifications are clearly linked to the ISCF (2013), giving clear indications of which level of coach each award is targeting, as well as the level of NQFs, where feasible. NGBs could also progress this mapping exercise by indicating their willingness to participate and engage with other nations to agree equivalences. This might involve offering to pilot the system or at least support the advertising of information, which may include sharing of footage of coaches delivering the practical element of their course assessments. Suitable personnel to conduct these discussions need identifying within each nation and agreement is needed around the amount of information sharing that will take place.

At the end of this process, the ideal achievement would be national agreement of which qualifications each nation would accept as equivalent to their own nation and be happy to advertise that on their NGB website. Where necessary, agreement would be obtained between nations for how to manage differences in knowledge, skills and behaviours at each level of qualification, whether there would be top up requirements, whether APL could be applied, whether any mentoring whilst in post would be feasible, or indeed whether any evidence of

practical coaching might be required within the process. This would allow qualifications to be recognised when coaches are working in different countries and avert the need to be required to take a lower level of award again to be permitted to work. World Netball's inclusion of the matrix summarising this information on their website would increase transparency and ease of information flow. Coupled with the NGB advertising of the awards they are prepared to accept would increase transparency of the whole process.

As a result of this research, World Netball is also encouraged to consider their strategy for the longer term. Firstly, whether they would want to develop their own version of the ISCF that might more accurately represent the different participation and performance contexts, to build on Navin & Vinson (2020) identification of expertise within different contexts of coaching and North et al. (2012) similar approach within football. Guidance could then be given to coaches in their collection of evidence within their coaching passport and how directly the passports can be linked to differing coaching roles within the different contexts. Secondly, World Netball could also consider whether there is a need to develop international coaching qualifications, like Officiating and some other sports, or whether to maintain national identity and embrace the differences that offers long term.

6.1 Recommendations for future research:

Future research could revolve around four main areas. Firstly, attitudes towards portability of qualifications could be explored more extensively within the coaching workforce, together with more targeted sampling of coaches that have experience coaching across nations. Secondly, action research in the piloting of the use of the suggested system for assessing portability of qualifications. In the first instance this might focus on the transfer of qualifications between nations that have a more established formal coach education system, but this could then be expanded to test the inclusivity of the model to include coaches from nations with other learning journeys, where the mapping exercise would need adapting to include other sources of learning as formal sources are missing. The potential for expanding the mobility of netball coaching workforce could then be explored.

Thirdly, the style of the coaching passport adopted and the impact of this on both coaches and employers would also need monitoring. Of particular interest would be the confidence that could be developed within system managers who make decisions about the potential employability of coaches, as well as the impact on coach perceptions of usefulness and reliability. Attitudes towards mapping and transferring of coaching expertise versus just qualifications could also be unpacked. And, lastly, exploration of the effectiveness and confidence in judging equivalence of coaching expertise rather than just qualifications, and whether this changes, depending on whether coaches are working in participation contexts rather than performance ones.

Reference List

- Abercombie, B. (2015) An Analysis of the Professionalisation of Sport Coaching and UK wide coaching process. <https://www.academia.edu/15054247>
- Abraham, A. & Collins, D. (1998) Examining and extending research in coach development. *Quest*, 50, 1, 59-79. <https://doi.org/10.1080/00336297.1998.10484264>
- Adams, D., Cropley, B. & Mullen, R. (2016) Developing specialised Youth Soccer Coaching Qualifications: An Exploratory Study of Course Content and Delivery mechanism. *International Sport Coaching Journal*, 3, 31-45. <http://dx.doi.org/10.1123/scj.2014-0148>
- Al-Busafi, M., Ramadan, W.M., & Kilani, H. (2012) Analysis of Selected International and National Coach Education Programmes. *Science, Movement and Health*, Vol.XII, issue 2, 343-353.
- Allen, J., Bell, A., Lynn, A., Taylor, J., & Lavalley, D. (2012). Identifying excellent coaching practice along the sporting pathway. *SportsCoachUK publication*.
- Aptem (2022) Recognition of Prior Learning in Apprenticeships. <https://www.aptm.co.uk/recognition-of-prior-learning-in-apprenticeships>
- Armstrong, S. (2001) Are you are Transformational Coach? *Journal of Physical Education Recreation & Dance*, Vol.72, no.3 p.44-47 <https://doi.org/10.1080/07303084.2001.10605851>
- d'Arripe-Longueville, F., Fournier, J. F., & Dubois, A. (1998). The perceived effectiveness of interactions between expert French judo coaches and elite female athletes. *The Sport Psychologist*, 12(3), 317-332. <https://doi.org/10.1123/tsp.12.3.317>
- Artes, J., Jennings, C. & Heijnen, V. (2016) *70: 20: 10 Into Action*. The 702010 Institute.
- Arthur, C. A., Bastardo, N., & Eklund, R. (2017). Transformational leadership in sport: Current status and future directions. *Current Opinion in Psychology*, 16, 78-83. <https://doi.org/10.1016/j.copsyc.2017.04.001>
- Australian Sports Commission (2008) www.ausport.gov.au
- Baker, C., Loughren, E. A., Dickson, T., Goudas, M., Crone, D., Kudlacek, M., ... & Tassell, R. (2017). Sports graduate capabilities and competencies: a comparison of graduate and employer perceptions in six EU countries. *European Journal for Sport and Society*, 14(2), 95-116. <https://doi.org/10.1080/16138171.2017.1318105>
- Baker C, Cary AH, da Conceicao Bento M. (2021) Global standards for professional nursing education: The time is now. *J Prof Nurs*. Jan-Feb;37(1):86-92. doi: 10.1016/j.profnurs.2020.10.001. Epub 2020 Oct 19. PMID: 33674114; PMCID: PMC7571445. <https://doi.org/10.1016/j.profnurs.2020.10.001>

- Bales, J. (2006) Introduction: Coach Education. *The Sport Psychologist*. 20, 126-127.
<https://doi.org/10.1123/tsp.20.2.126>
- Bales, J., Petrovic, L., Lara-Bercial, S., Livingstone, K., Galvo, G. & Jorquera, X (2021) Report to the 2021 ICCE General Assembly for 2019-2021. *International Council For Coaching Excellence*.
- Bartlett, M. & Winslade, Z. (2017) Acknowledging biases: How can who you are affect what you see? In Pope-Rhodus, A., Robinson, S., & Fitzpatrick, S. (Eds.). (2017). *Excelling in Sport Psychology: Planning, Preparing, and Executing Applied Work* (1st ed.). Routledge. <https://doi.org/10.4324/9780203729649>
- Bass, B.M. (1990) From Transactional to Transformational Leadership: Learning to Share the Vision. *Organisational Dynamics*, 18, 3 19-31.
[https://doi.org/10.1016/0090-2616\(90\)90061-s](https://doi.org/10.1016/0090-2616(90)90061-s)
- Bass, B.M. & Riggio, R.E. (2006) *Transformational Leadership*. Psychology Press, Taylor & Francis group, New York, London. Second Edition. ISBN 0-8058-4761-8
- BASES (2023) British Association of Sport and Exercise Sciences Accreditation Guidelines
<http://bases.org.uk>
- Bayli, I, Way, R. & Higgs, C. (2013) Long Term Athlete Development. *Human Kinetics*. ISBN 10: [0736092188](https://doi.org/10.736092188) / ISBN 13: [9780736092180](https://doi.org/10.9780736092180)
- Bennie, A. & O'Connor (2015) Understanding Performance Coach development: Perceptions About a Postgraduate Coach Education program. *International Sport Coaching Journal*, 2, 3-14. <http://dx.doi.org/10.1123/iscj.2013-0036>
- Berliner, D.C. (2001) Learning about and learning from expert teachers. *International Journal of Educational Research*, 35, 463-482.
[https://doi.org/10.1016/s0883-0355\(02\)00004-6](https://doi.org/10.1016/s0883-0355(02)00004-6)
- Blaikie, N. (2010) *Designing Social Research*. Polity Press, Cambridge, UK 2nd Edition. ISBN-13:978-0-7456-4337-3.
- Bowen, G.A. (2009) Document Analysis as a Qualitative Research Method. *Qualitative Journal Research*, 9, 2, 27-40. <https://doi.org/10.3316/qjrj0902027>
- Braun, V. & Clarke, V. (2006) Using Thematic Analysis in Psychology. *Qualitative Research in Psychology*, 3;2, 77-101 <https://doi.org/10.1191/1478088706qp063oa>
- Braun, V. & Clarke, V. (2013) *Successful Qualitative Research: a practical guide*. Sage publishers Ltd. ISBN 987-1-84787-582-2
- Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative research in sport, exercise and health*, 11(4), 589-597.
<https://doi.org/10.1080/2159676x.2019.1628806>

- Braun, V. & Clarke, V. (2020) Can I use TA? Should I not use TA? Comparing reflexive thematic analysis and other pattern-based qualitative analytic approaches. *Counselling and Psychotherapy Research*, 21:37-47. <https://doi.org/10.1002/capr.12360>
- Braun, V. & Clarke, V. (2021) One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qualitative Research in Psychology*, 18:3, 328-352. <https://doi.org/10.1080/14780887.2020.1769238>
- Breuning, J., Dixon, M., Burton, L. & Madsen, R. (2014) Women in Coaching: The Work-Life Interface, in Potrac, P., Gilbert, W. & Denison, J. (2014) *Routledge Handbook of Sports Coaching*. Routledge Taylor & Francis. ISBN 978-1-138-86043-8.
- British Equestrian (2022) Coach continuous professional development and qualifications mapping: an Invitation to tender. www.britishequestrian.org.uk
- Brockman, M., Clarke, L., Winch, C., (2011) *Knowledge, Skills and Competence in the European Labour Market*. Routledge, Oxon & New York. ISBN: 978-0-415-55691-0 (pbk)
- Bryman, A. (2016) *Social Research Methods* (5th Edition). Oxford. Oxford University Press. ISBN 978-0-19-968945-3.
- Bryman, A. & Bell, E. (2007) *Business Research Methods* (2nd edition). Oxford: Oxford University Press. ASIN: B00NBN1ZO8
- Bunker, D. & Thorpe, R. (1982) Model for the teaching of games in secondary schools. *Bulletin of Physical Education* 18(1), 5-8
- Callary, B., Culver, D., Werthner, P. & Bales, J. (2014) An Overview of Seven National High Performance Coach Education Programs. *International Sport Coaching Journal*, 1, 152-164. <http://ds.doi.org/10.1123/iscj.2014-0094>
- Callary, B., Rathwell, S., & Young, B. W. (2017). Alignment of masters swim coaches' approaches with the andragogy in practice model. *International Sport Coaching Journal*, 4(2), 177-190. <https://doi.org/10.1123/iscj.2016-0102>
- Callary, B., Werthner, P., & Trudel, P. (2012). How meaningful episodic experiences influence the process of becoming an experienced coach. *Qualitative Research in Sport, Exercise and Health*, 4(3), 420-438. <https://doi.org/10.1080/2159676x.2012.712985>
- Campbell, S. (1992) Coaching Education Around the World *Sport Science Review*, 2(2), 62-74.
- Carlsson, A. (2021) *Becoming a Better Sports Coach: Development through theory application*. Routledge, UK. <https://doi.org/10.4324/9781003195153>
- Cassidy, T. (2009) Formal vs Informal Coach Education: A Commentary. *International Journal of Sports Science & Coaching*, 4(3), 339-341. <https://doi.org/10.1260/174795409789623883>

- Cassidy, T., Jones, R. & Potrac, P. (2015) *Understanding Sports Coaching: The Pedagogical, Social and Cultural Foundations of Coaching Practice*. Routledge, 3rd Edition.
<https://doi.org/10.4324/9780203797952>
- Cassidy, T. & Kidman, L. (2010) Initiating a National Coaching Curriculum: A Paradigm Shift? *Physical Education and Sport Pedagogy*, 15, 3, 307-322.
<https://doi.org/10.1080/17408980903409907>
- Chelladurai, P. (1986) Professional Development of Coaches, in Coach Education Preparation for a profession: Proceedings of the VIII Commonwealth and international Conference on Sport, Physical Education, Dance, Recreation and Health. E. & F.N Spon, London New York.
- CIMSPA (2018) *Coach Professional Standards version 1.0* <https://www.cimspa.org.uk>
- CIMSPA (2022) *Coach mapping template version 3* <https://www/cimspa.uk>
- Conroy, D. E., & Coatsworth, J. D. (2007). Assessing autonomy-supportive coaching strategies in youth sport. *Psychology of sport and exercise*, 8(5), 671-684.
<https://doi.org/10.1016/j.psychsport.2006.12.001>
- Coombs & Ahmed (1974) *Attacking Rural Poverty: How Non-Formal Education Can Help*. Baltimore, MD: Johns Hopkins University Press
- Cope, E., Partington, M., Cushion, C.J., Harvey, S. (2016) An Investigation of top level football coaches' questioning practice. *Qualitative Research in Sport, Exercise and Health*, 8(4), 380-393. <https://doi.org/10.1080/2159676x.2016.1157829>
- Côté, J., & Gilbert, W. (2009). An Integrative Definition of Coaching Effectiveness and Expertise. *International Journal of Sports Science & Coaching*, 4(3), 307-323.
<https://doi.org/10.1260/174795409789623892>
- Côté, J., Salmela, J.H., Baria, A. & Russell, S.J. (1993) Organising and Interpreting Unstructured Qualitative Data. *The Sport Psychologist*, 7, 127-137.
<https://doi.org/10.1123/tsp.7.2.127>
- Côté, J. Salmela, J.H. and Russell, S.J. (1995) The knowledge of High Performing Gymnastics coaches. *The Sport Psychologist*, 9, 65-75.
- Crisfield, P., Cabral, P. & Carpenter, F. (2003) *The Successful Coach: Guidelines for Coaching Practice*. Coachwise/SportsCoachUK, Leeds.
- Crowe, M., Inder, M. & Porter, P. (2015) Conducting Qualitative Research in Mental Health: Thematic and Content Analyses. *Australian & New Zealand Journal of Psychiatry*, Vol. 49(7), 616-623. DOI: 10.1177/0004867415582053.
- Cruikshank, A. & Collins, D. (2016) Advancing Leadership in sport: Time to take off the blinkers? *Sports Med.* <https://doi.org/10.1007/s40279-016-0513-1>

- Culver, D.M., Werthner, P. & Trudel, P. (2019) Coach Developers as ‘Facilitators of learning’ in a Large Scale Coach education programme: One Actor in a complex system. *International Sport Coaching Journal*, 6, 296-306 <https://doi.org/10.1123/iscj.2018-0081>
- Cushion, C.J. (2007) Modelling the Complexity of the Coaching Process: A Response to Commentaries. *International Journal of Sports Science & Coaching*, Vol, 2, No, 4, 427-433
- Cushion, C.J. (2011) Coach & Athlete Learning: A Social approach. In Jones, R.J., Potrac, P., Cushion, C. J. Ranglan (Eds) *The Sociology of Sports Coaching*. London Routledge. ISBN ebook 9780203865545.
- Cushion, C.J. (2013) Applying Game centred Approaches in coaching: a critical analysis of the ‘dilemmas of practice’ impacting change. *Sports coaching review*. 2:1, 61-76. <https://doi.org/10.1080/21640629.2013.861312>
- Cushion, C.J. (2014). ‘Ethnography’. In L. Nelson, R. Groom and P. Potrac (Ed.) *Research Methods in Sports Coaching*. London: Routledge, pp.171-180.
- Cushion, C. J., Armour, K. M., & Jones, R. L. (2003). Coach education and continuing professional development: Experience and learning to coach. *Quest*, 55(3), 215-230. <https://doi.org/10.1080/00336297.2003.10491800>
- Cushion, C. J., Armour, K. M., & Jones, R. L. (2006). Locating the coaching process in practice: models ‘for’ and ‘of’ coaching. *Physical education and sport pedagogy*, 11(01), 83-99. <https://doi.org/10.1080/17408980500466995>
- Cushion, C., Ford, P. R., & Williams, A. M. (2012a). Coach behaviours and practice structures in youth soccer: Implications for talent development. *Journal of Sports Sciences*, 30(15), 1631-1641. <https://doi.org/10.1080/02640414.2012.721930>
- Cushion, C.J., Griffiths, M. & Armour, K. (2017). Professional coach educators in-situ: a analysis of practice. *Sport*, DOI: 10.1080/13573322.2017.1411795.
- Cushion, C., Harvey, S., Muir, B., & Nelson, L. (2012b) Developing the Coach Analysis and Intervention system (CAIS): Establishing validity and reliability of a computerised systematic observation instrument. *Journal of Sports Sciences*, 30(2), 201-216. <https://doi.org/10.1080/02640414.2011.635310>
- Cushion, C. J., Nelson, L., Armour, K., Lyle, J., Jones, R. L., Sandford, R., & O’Callaghan, C. (2010) *Coach learning and development: A review of literature*. Leeds: Sports Coach UK.
- Cushion, C. & Partington, M. (2016) A Critical Analysis of the Conceptualisation of ‘Coaching Philosophy’. *Sport, Education and Society*, 21+6, 851-867, DOI: 10.1080/13573322.2014.958817.

- Davids, K., Chow, J.Y., & Shuttleworth (2005) A Constraints-based Framework for Nonlinear Pedagogy in Physical Education. *Journal of Physical Education New Zealand*, 38, 17-30
- Day, D. (2010) Coaching a Craft: A Forgotten Legacy. *British Society of Sports History Annual Conference*, 10-11 September at Wellcome collection, London.
- Day, D. (2013) Historical perspectives on coaching. In Potrac, P., Gilbert, W. & Denison, J. (Eds) *Routledge Handbook of SpotsScoaching* (pp5.15). Routledge. ISBN 978-1-138-86043-8 (pbk)
- Debanne, T., & Fontayne, P. (2009). A Study of a Successful Experienced Elite Handball Coach's Cognitive Processes in Competition Situations. *International Journal of Sports Science & Coaching*, 4(1), 1-16. <https://doi.org/10.1260/1747-9541.4.1.1>
- Deci, E.L. & Ryan, R.M. (1985) *Intrinsic motivation and self-determination in human Behaviour*. New York, NY:Plenum Press
- Deci, E.L. & Ryan, R.M. (2000). The 'what' and the 'why' of goal pursuits: human needs and self-determination of behaviour. *Psychology of Inquiry*. 11, 227-268. https://doi.org/10.1207/s15327965pli1104_02
- Deek, D., Werthner, P., Paquette, K.J. & Culver, D. (2013) Impact of a Large-scale Coach Education programme from a Lifelong-Learning Perspective. *Journal of Coach Education*, Vol. 6, Issue 1, 23-41.
- Denscombe, M. (2010) *Ground Rules for Social Research: Guidelines for Good Practice*. CPI Group, UK.
- Denzin, N.K. & Lincoln, Y.S. (Eds) *The Landscape of Qualitative Research*. Sage publications
- Dixon, M., Lee, S. & Ghaye, T. (2015) Strengths-based reflective practices for the management of chance: applications from sport and positive psychology. *Journal of Change Management*. <https://doi.org/10.1080/14697017.2015.1125384>
- Doody, O., & Doody, C. M. (2015). Conducting a pilot study: Case study of a novice researcher. *British journal of nursing*, 24(21), 1074-1078. <https://doi.org/10.12968/bjon.2015.24.21.1074>
- dosSantos, S.F.M., Mesquita, I.M.R., dosSantos Graca, A.B. & Rosado, A.F.B. (2010) What Coaches Value about Coaching Knowledge: A comparative Study across a Range of Domains. *International Journal of applied Sports Sciences*, Vol. 22, No.2, 96-112. <https://doi.org/10.24985/ijass.2010.22.2.96>
- Douge, B., & Hastie, P. (1993). Coach Effectiveness. *Sport Science Review*, 2(2), 14-29.
- Douglas, S., Vidic, Z., Smith, M., & Stran, M. (2016). Developing Coaching Expertise: Life Histories of Expert Collegiate Wheelchair and Standing Basketball Coaches. *Palaestra*, 30(1), 31-42.

- Dreyfus, H.L. & Dreyfus, S.E. (1986) *Mind Over Machine: The Power of human intuition and expertise in the era of the computer*. Simon & Schuster. ISBN 9780029080610
- Duffy, P. (2008). Implementation of the Bologna process and model curriculum development in coaching. *Higher Education in Sport in Europe. From labour market demand to training supply*, 80-108.
- Duffy, P., Crespo, M. & Petrovic, L. (2010) The European Framework for the recognition of coaching competence and qualifications – implications for the sport of athletics. *New Studies in Athletics*, 25:1,27-41.
- Duffy, P., Hartley, H., Bales, J., Crespo, M., Dick, F., Vardhan, D., Nordmann, L. & Curado, J. (2011) Sport Coaching as a “profession”: challenges and future directions. *International journal of Coaching Science*, 5(2): 93-123
- Dweck, C. S. (1986) Motivational processes affecting learning. *American Psychologist*, 41, 1040-1048. <https://doi.org/10.1037//0003-066x.41.10.1040>
- Dweck, C. S. (2006) *Mindset: The new psychology of success*. New York: Vallantine Books
- Dweck, C. S. (2009). Mindsets: Developing talent through a growth mindset. *Olympic Coach*, 21(1), 4-7.
- England Netball (2016) *Annual Report 2015-2016*. All England Netball Association Ltd.
- England Netball (2021) England Netball Adventure Strategy 2021-2031. www.englandnetball
- England Netball (2023) NSL2.0. www.englandnetball
- ENSS (2007) *European Network of Sport Science, Education & Employment Review of the EU 5-Level structure for the recognition of coaching qualifications*. www.ensee.de.
- Erickson, K., Côté, J., & Fraser-Thomas, J. (2007). Sport experiences, milestones, and educational activities associated with high-performance coaches’ development. *The Sport Psychologist*, 21(3), 302-316. <https://doi.org/10.1123/tsp.21.3.302>
- Erlingsson, C. & Brysiewicz, P. (2017) A Hands-on Guide to Doing Content Analysis. *African Journal of Emergency Medicine*, 7(3), <http://dx.doi.org/10.1016/j.afjem.2017.08.001>
- ESCF (2017) European Sport Coaching Framework Version 1.1: Enhancing Coaches’ Learning, Mobility and Employability in the European Union. *Project Coach Learn*.
- Europe Netball (2023) Advanced Coach award <https://www.europenetball.com/coaching>
- Europe Netball Officiating (2023) *Transfer Policy, Europe Netball*. <https://www.europenetball.com/officiating-policies>

- Gale, N.K., Heath, G., Cameron, E., Rashid, S. & Redwood, S. (2013) Using the framework method for the analysis of qualitative data in multi-disciplinary health research. *BMC Medical Research Methodology*, 13:117, 1-8. <http://biomedcentral.com/1471-2288/13/117>.
- Garner, P., Roberts, W. M., Baker, C., & Côté, J. (2022). Characteristics of a person-centred coaching approach. *International Journal of Sports Science & Coaching*, 17(4), 722-733.
- Garner, P., Tunnidge, J., Roberts, W. M., & Côté, J. (2020) How coach educators deliver effective formal coach education: A full range leadership perspective. *International Sports Coaching journal*. Vol, 8 Issue 1, p.23-33. <https://doi.org/10.1123/scj2019-0074>
- Gearity, B. T., & Murray, M. A. (2011). Athletes' experiences of the psychological effects of poor coaching. *Psychology of sport and exercise*, 12(3), 213-221. <https://doi.org/10.1016/j.psychsport.2010.11.004>
- General Medical Council (2019) Generic Professional Capabilities Framework; Working with Doctors; Working with Patients www.gmc-uk.org
- Giacobbi, P.R., Pocwardski, A. & Hager, P.F. (2005) A Pragmatic Research Philosophy for Applied Sport Psychology *Kinesiology, Sports Studies and Physical Education Faculty Publications*. Vol.19, issue 1, 18-31. <https://doi.org/10.1123/tsp.19.1.18>
- Gibbs, G. (1988) Learning by doing: A Guide to Teaching and Learning Methods. (Oxford, FE Unit Oxford Polytechnic).
- Gift, N. (2023) Qualifications for Teaching in South Africa. [Education – southafricanza.com](http://Education-southafricanza.com)
- Gill, A.J.G. (2021) *Foundations of Sports Coaching: Applying Theory to Practice* Routledge Taylor & Francis group, New York and London, 3rd Edition.
- Gilbert, W., & Côté, J. (2013). A focus on coaches' knowledge. *Routledge handbook of sports coaching*, 147-159.
- Gilbert, W. D., & Trudel, P. (2004). Analysis of coaching science research published from 1970–2001. *Research quarterly for exercise and sport*, 75(4), 388-399.
- Glen, J. & Lavallee, D. (2019) How do Coach Educators influence meaningful behaviour change in sports coaches? *Kinesiologia Slovenian*, 25 3, 16-30. ISSN 1318-2269.
- Gök, Y. & Aslan, M. (2023) The Comparison of the Coaching Education systems between countries: Germany, Belgium, the United Kingdom, Estonia, France, Finland, Spain, Switzerland, Italy, Portugal and Turkey. *Mediterranean Journal of Sports Science*, Vol 6 Issues 2, 374-405. DOI:<https://doi.org/10.38021/asbid.1223071>
- Gordon, S. (2012). Strengths-based approaches to developing mental toughness: Team and individual. *International Coaching Psychology Review*, 7(2), 210-22). <https://doi.org/10.53841/bpsicpr.2012.7.2.210>

- Gould, D., & Mallett, C. (Eds) (2021). *Sport Coaches' Handbook*. Human Kinetics, Champaign, Illinois. ISBN: 978-1-4925-1580-7
- Gray, D. E. (2014) *Doing Research in the Real World*. Sage. ISBN: 978-1-4462-6019-7.
- Grecic, D. & Collins, D. (2013) The Epistemological Chain: Practical Applications in Sports. *Quest*, 65, 151-168. <https://doi.org/10.1080/00336297.2013.773525>
- Hassan, Z. A., Schattner, P., & Mazza, D. (2006). Doing a pilot study why is it essential? *Malaysian family physician: the official journal of the Academy of Family Physicians of Malaysia*, 1(2-3), 70.
- Hassanin, R. & Light, R. (2014) The influence of cultural context on rugby coaches' beliefs about coaching. *Sports Coaching Review*, 3:2, 132-144. <https://doi.org/10.1080/21640629.2015.1013751>
- Hargreaves, J. (1997, March). Women's sport, development, and cultural diversity: The South African experience. In *Women's Studies International Forum* Vol. 20, No. 2, pp. 191-209. Pergamon.
- Harvey, S., Cushion, C. J., & Massa-Gonzalez, A. N. (2010). Learning a new method: Teaching Games for Understanding in the coaches' eyes. *Physical Education and Sport Pedagogy*, 15(4), 361-382.
- Harvey, S., & Light, R.L (2015). Questioning for learning in game-based approaches to teaching and coaching. *Asia-Pacific Journal of Health, Sport and Physical Education* 6(2), 175-190. <https://doi.org/10.1080/18377122.2015.1051268>
- He, C.H., Trudel, P. & Culver, D.M. (2017) Actual and ideal sources of coaching knowledge of elite Chinese coaches. *Sports Science & Coaching*, Vol. 13(4), 496-507. <https://doi.org/10.1177/1747954117753727>
- He, C., Trudel, P., & Culver, D. M. (2018). Actual and ideal sources of coaching knowledge of elite Chinese coaches. *International Journal of Sports Science & Coaching*, 13(4), 496-507.
- Hughes, C. (2022) Philosophy for coaching rather than philosophy of coaching: some conceptual clarifications. *Sports Coaching Review*, 11.1, 108-126 . DOI: 10.1080/21640629.2021.1995261
- Huisman, J., Adelman, C., Hsieh, C.C., Shams, F., and Wilkins, S. (2012). Europe's Bologna process and its impact on global higher education. In D.K. Deardorff, H. de Wit, J.D. Heyl, and T. Adams (eds.), *The SAGE Handbook of International Higher Education*, pp. 81-100. Thousand Oaks: Sage Publications.
- ICCE (2010) Building the Coaching Community across the World *International Council for Coach Education Strategy 2010-2015*
- ICCE (2014) *International Coach Developer Framework Version 1.1*. International Council for Coaching Excellence.

- IGCF (2013) *International Golf Coaching Framework*. International Golf Federation PGA alliance.
- IGEQ (2013) International Group for Professional Equestrian Qualifications <https://igeq.org>
- ISCF (2012) International Sports Coaching Framework version 1.1 *International Council for Coaching Excellence*. Human Kinetics, Champaign Illinois.
- ISCF (2013) International Sports Coaching Framework version 1.2. *International Council for Coaching Excellence*. Human Kinetics, Champaign Illinois.
- IRB (2013) *Coach Education in Rugby Union: Global Comparative Study*. November 2013. International Rugby Board
- Jacobs, F., Claringbould, I., & Knoppers, A. (2016). Becoming a ‘good coach’. *Sport, Education and Society*, 21(3), 411-430. DOI: 10.1080/13573322.2014.927756.
- Jackson, S.J. (2004) Reading New Zealand within the New Global Order: Sport and the Visualisation of National Identity. *International Sport Studies*, 26(1), 13-27.
- Jani, J., Salimin, N. & Shahril, M.I. (2017) The impact of Coaching module based on teaching games for understanding towards school netball players’ performance. *Journal of Fundamental and Applied Sciences*, 9 (6S), 1250-1257. <http://dx.doi.org/10.43414/jfas.v9i6s.93>
- Jarrett, K., & Harvey, S. (2013). Recent trends in research literature on game-based approaches to teaching and coaching games. *Contemporary developments in games teaching*, 87-102. <https://doi.org/10.4324/9780203797730-14>
- Jarrett, K., & Harvey, S. (2016). Similar, but not the same: comparing the game based approaches of teaching games for understanding (TGfU) and Game Sense. *eJRIEPS. Ejournal de la recherche sur l'intervention en éducation physique et sport*, (38). <https://doi.org/10.4000/ejrieps.900>
- Jarrett, K., Eloi, S., & Harvey, S. (2014). Teaching Games for Understanding (TGfU) as a positive and versatile approach to teaching adapted games. *European Journal of Adapted Physical Activity*, 7(1), 6-20. <https://doi.org/10.5507/euj.2014.001>
- Johnson, S. & Wolf, A. (2009) Qualifications and mobility in a globalising world: why equivalence matters, *Assessment in Education: Principles, Policy & Practice*, 16:1, 3-11. <https://doi.org/10.1080/09695940902734605>
- Jones, R.L. (Ed.) (2006) *The Sports Coach as Educator: Re-Conceptualising Sports Coaching*. Routledge Taylor & Francis group. <https://doi.org/10.4324/9780203020074> eISBN 9780203020074.
- Jones, R.L., Armour, K.M. & Potrac, P. (2002) Understanding the Coaching Process: A Framework for Social analysis. *Quest*, 54, 34-48. <https://doi.org/10.1080/00336297.2002.10491765>

- Jones, R., Marshall, S., & Peters, D. M. (2010). Can we play a game now? The intrinsic benefits of TGfU. *European Journal of Physical & Health Education: Social Humanistic Perspective*, 4, 57-64.
- Jones, R.L., & Turner, P. (2006) Teaching coaches to coach holistically: The case for a problem-based learning (PBL) approach. *Physical Education and Sport Pedagogy*, Vol. 11, No.2, 181-202. <https://doi.org/10.1080/17408980600708429>
- Jowett, S. (2017). Coaching effectiveness: The coach–athlete relationship at its heart. *Current Opinion in Psychology*, 16, 154-158. <https://doi.org/10.1016/j.copsyc.2017.05.006>
- Khan, T. H., & MacEachen, E. (2021). Foucauldian Discourse Analysis: Moving Beyond a Social Constructionist Analytic. *International Journal of Qualitative Methods*, 20. <https://doi.org/10.1177/16094069211018009>
- Kerr, G. A., & Stirling, A. E. (2015). Professionalization of Coaches to Reduce Emotionally Harmful Coaching Practices: Lessons Learned from the Education Sector. *International Journal of Coaching Science*, 9(1).
- Kidman, L. (2005) *Athlete Centred Coaching: Developing Inspired and Inspiring people*. IPC Print resources. ISBN-10 : 047601445X
- Kidman, L., Lombardo, B. J., & Jones, G. (2010). *Athlete-Centred Coaching: Developing Decision Makers* (2nd ed. ed.). Worchester: IPC Print Resources. ISBN 095650650X, 9780956506504
- Knowles, Z., Tyler, G., Gilbourne, D., Borrie, A. and Nevill, A. (2001) Developing the Reflective Sports Coach: a study exploring the processes of reflective practice within a higher education coaching programme. *Reflective Practice*, 2(2), 185-207. <https://doi.org/10.1080/14623940123820>
- Koh, K.T. & Chew, W.C.E. (2015) *Coach Education and Learning: Singapore's Story*. <https://www.researchgate.net/publication/284917567>
- Koh, K. T., Mallett, C. J., & Wang, C. K. J. (2011). Developmental pathways of Singapore's high-performance basketball coaches. *International Journal of Sport and Exercise Psychology*, 9(4), 338-353. <https://doi.org/10.1080/1612197X.2011.623466>
- Kubayi, A., Coopoo, Y., & Toriola, A. (2021). Bridging the gap between sport science and coaching: A qualitative analysis of perceptions of South African coaches. *International Sports Studies*, 43(2). <https://doi.org/10.30819/iss.43-2.03>
- Langan, E., Blake, C., & Lonsdale, C. (2013). Systematic review of the effectiveness of interpersonal coach education interventions on athlete outcomes. *Psychology of Sport and Exercise*, 14(1), 37-49. <https://doi.org/10.1016/j.psychsport.2012.06.007>
- Lara-Bercial, S. & Bales, J. (2020) International Coach Education and Development: A Case Study in Dieffenbach, K. & Thompsons, M. (Eds.) *Coach Education Essentials*. Human Kinetics, Champaign, Illinois. ISBN 978-1-4925-2107-5.

- Lara-Bercial, S., Bales, J., & North, J. (2020). Coaching Around the World: On becoming a profession. *Coaching for human development and performance in sports*, 93-121.
- Lara-Bercial, S., Bales, J., North, J., Petrovic, L. & Calvo, G. (2022) International Council for Coaching Excellence Position statement “Professionalisation of Sport Coaching as a Global Process of Continuous Improvement”. *International Sport Coaching Journal*, 9. 157-160. <https://doi.org/10.1123/iscj.2021-0097>
- Lara-Bercial, S., & Mallett, C. J. (2016). The Practices and Developmental Pathways of Professional and Olympic Serial Winning Coaches. *International Sport Coaching Journal*, 3(3), 221-239. <http://doi.org/10.1123/iscj.2016-0083>
- Lara-Bercial, S., North, J., Petrovic, L., Härmäläinen, K., Oltmanns, K., Minkhorst, J. & Petrovic, L. (2017). *European Sport Coaching Framework v1*. Coach Learn Erasmus+ Programme.
- Lara-Bercial, S., North, J., Petrovic, L., Livingstone, K., Oltmanns, K., Minkhorst, J., & Hamalainen, K. (2016). *Project CoachLearn-Report# 1* Qualification Frameworks and Employment and Mobility Tools in the European Union: Implications for Sport Coaching and the European Sport Coaching Framework.
- LaVoi, N.M. & Dutove, J.K. (2017) Barriers and Support for Female Coaches: An Ecological Model *Sports Coaching Review*, 1:1, 17-37
<https://dx.doi.org/10.1080/21640629.2012.695891>.
- LeDrew, J.E. & Zimmerman, C. (1994) Moving Towards an Acceptance of Females in Coaching. *The Physical Educator*, Vol. 51, Late Winter No.1, p.6-14.
- Leduc, M., Culver, D.M. & Werthner, P. (2013) Following a Coach Education Programme: Coaches’ Perceptions and Reported Actions. *Sports Coaching Review*. 1:2. 135-150.
<https://doi.org/10.1080/21640629.2013.797752>.
- Lee, S., Dixon, M. & Ghaye, T. (2015) *Improving Performance: Coaching through Positive Reflection and Action*. New Vista publications. ISBN (Print): 9780956418944
- Lefebvre, J.S., Evans, M.B., Turnnidge, J., Gainforth, H.L. & Cote, J (2016) Describing and Classifying Coach Development Programmes: A Synthesis of Empirical Research and Applied Practice. *International Journal of Sports Science and Coaching*, 11, 6, 887-899. <https://doi.org/10.1177/1747954116676116>
- Lemyr, F., Trudel, P. & Durand-Bush, N. (2007) How Youth-Sport Coaches Learn to Coach. *The Sport Psychologist*. 21,191-209. <https://doi.org/10.1123/tsp.21.2.191>
- Light, R. (2004) Coaches’ Experience of Game Sense: Opportunities and Challenges. *Physical Education and Sport Pedagogy*. 9(2), 115-131.
<https://doi.org/10.1080/1740898042000294949>
- Light, R. (2017) *Positive Pedagogy for Sport coaching: Athlete-centred coaching for individual sports*. Routledge Taylor & Francis Group. Ebook ISBN 9781315443720
<https://doi.org/10.4324/9781315443720>

- Light, R. (2008) Complex Learning Theory— Its Epistemology and Its Assumptions About Learning: Implications for Physical Education. *Journal of Teaching in Physical Education*, 27 (1), pp.21-37.
- Light, R. L., & Evans, J. R. (2013). Dispositions of elite-level Australian rugby coaches towards game sense: Characteristics of their coaching habitus. *Sport, Education and Society*, 18, 407–423. doi:10.1080/13573322.2011.593506
- Light, R. L. & Robert, J.E. (2010) The impact of Game Sense pedagogy on Australian rugby coaches' practice: a question of pedagogy, *Physical Education and Sport Pedagogy*, 15:2, 103-115, DOI: 10.1080/17408980902729388
- Lynne, A. (2010) *Effective Sports Coaching: a Practical Guide*. Crowood press. ISBN 1847971946, 9781847971944
- Lyle, J. (2002) *Sports Coaching Concepts: A Framework for Coaches' Behaviour*. London, UK: Routledge. eBook ISBN9780203994986
<https://doi.org/10.4324/9780203994986>
- Lyle, J. (2018) Reflecting on the Development of a Conceptual Framework for Sport Coaching. *International Sport Coaching Journal*, 5, 90-98.
<https://doi.org/10.1123/iscj.2017-0085>
- Lyle, J. (2019). What is ethical coaching? *International Journal of Coaching Science*, 13(1).
- Lyle, J. & Cushion, C.J. (2017) Sport coaching concept: A framework for coaches' practice. London, UK. Routledge. ISBN: 9780203126424
<http://dx.doi.org/10.4324/9780203126424>
- Lyle, J., Jolly, S., & North, J. (2010). The learning formats of coach education materials. *International Journal of Coaching Science*, 4(1), 35-48.
- Maandag, D.W., Deinum, J.F., Hofman, W.H.A. & Buitink, J. (2007) Teacher education in schools: an international comparison. *European Journal of Teacher Education*, Vo. 30, No. 2 , pp. 151-173. <https://doi.org/10.1080/02619760701275552>
- Maclean, J., & Lorimer, R. (2016). Are coach education programmes the most effective method for coach development? *International Journal of Coaching Science*, 10(2), 71-88.
- MacLean, M., Oldfield, S-J., & Hess, R. (2022) Local, National and Global Histories of Netball: An Overview. *The International Journal of the History of Sport*, 39:13-14, 1411-1421, DOI: 10.1080/09523367.2022.2178768
- Mallett, C., Rynne, S. & Trudel, P. (2021) Continuing Education in Coaching, in *Sports Coaching Handbook*. Champaign, Human Kinetics, 239-258.

- Mallett, C. J., Trudel, P., Lyle, J., & Rynne, S. B. (2009). Formal vs. Informal Coach Education. *International Journal of Sports Science & Coaching*, 4(3), 325-364. . <https://doi.org/10.1260/174795409789623883>
- McCarthy, L., Martin, A.J. & Watson, G. (2022) Developing Winning Ways for Women's Sport: New Zealand's National Netball Team, *The International Journal of the History of Sport*, 39:13-14, 1564-1584, DOI: 10.1080/09523367.2021.1912025
- McCullick, B., Schempp, P., Mason, I., Foo, C., Vickers, B., & Connolly, G. (2009). A Scrutiny of the Coaching Education Program Scholarship Since 1995. *Quest*, 61(3), 322-335. <https://doi.org/10.1080/00336297.2009.10483619>
- Mcmahon, J. & Zehntner, C. (2014) Shifting perspectives: transitioning from coach centred to athlete centred – challenges faced by a coach and an athlete. *The Journal of Athlete-Centred Coaching*, October 1, Vol.1. Issue 2, 1-18.
- Miles, M.B. & Huberman, A.M. (1994) *Qualitative Data Analysis: An Expanded Sourcebook*. Second edition. Sage Publications. ISBN 10- 0803946538
- Miller, A., Harvey, S., Morley, D., Nemes, R., Janes, M. & Eather, N. (2017) Exposing athletes to playing form activity: outcomes of a randomised control trial among community netball teams using a game-centred approach. *Journal of Sports sciences*, 35:18,1846-1857. <https://doi.org/10.1080/02640414.2016.1240371>
- Moon, J. (2004) *A Handbook of Reflective and Experiential Learning: Theory and Practice*. Routledge Falmer, Oxon UK. eBook ISBN9780203416150. <https://doi.org/10.4324/9780203416150>
- Moon, J. A. (2013). *Reflection in learning and professional development: Theory and practice*. Routledge. ISBN 10: 0 7494 3452X
- Morbée, S., Vansteenkiste, M., Aelterman, N., & Haerens, L. (2020). Why do sport coaches adopt a controlling coaching style? The role of an evaluative context and psychological need frustration. *The Sport Psychologist*, 34(2), 89-98. <https://doi.org/10.1123/tsp.2018-0197>
- Mosston, M., & Ashworth, S. (1990). *The Spectrum of Teaching Styles. From Command to Discovery*. Longman, Inc., 95 Church St., White Plains, NY 10601-1505. ISBN 0801303508
- Nash, C., Martindale, R., Collins, D., & Martindale, A. (2012). Parameterising expertise in coaching: Past, present and future. *Journal of Sports Sciences*, 30(10), 985-994. <https://doi.org/10.1080/02640414.2012.682079>
- Nash, C., & Sproule, J. (2011). Insights into Experiences: Reflections of an Expert and Novice Coach. *International Journal of Sports Science & Coaching*, 6(1), 149-162. <https://doi.org/10.1260/1747-9541.6.1.149>

- Nash, C., & Sproule, J. (2012). Coaches' perceptions of their coach education experiences. *International Journal of Sport Psychology*, 43(1), 33.
- Nash, C. S., Sproule, J., & Horton, P. (2008). Sport coaches' perceived role frames and philosophies. *International Journal of Sports Science & Coaching*, 3(4), 539-554.
- Nash, C., Sproule, J. & Horton, P. (2017) Feedback for Coaches: Who coaches the coach? *International Journal of Sports Science & Coaching*. Vol. 12(1) 92-102.
<https://doi.org/10.1177/1747954116684390>
- Navin, A. (Ed.) (2011) *Sport Coaching: A Reference guide for Students, Coaches and competitors*. The Crowood press Ltd. ISBN 978 1 84797 193 7.
- Navin, A., & Vinson, D. (2020). Seeking consensus regarding the characteristics of expertise and development requirements across five domains of netball coaching in the United Kingdom. *International Journal of Applied Sports Sciences*, 32(1), 69-90.
<https://doi.org/10.24985/ijass.2020.32.1.69>
- Navin, A., Vinson, D., & Côté, J. (2018). Stargazing–Transformational Leadership in Netball. eprints.worc.ac.uk
- Navin, A., Vinson, D., Croad, A., Turnnidge, J., & Côté, J. (2020). The Birth of the Stars: A Participatory and Appreciative Action and Reflection Investigation into the Leadership and Development of a New Superleague Netball Club. *The Sport Psychologist*, 34(3), 220-231. <https://doi.org/10.1123/tsp.2019-0087>
- Nelson, L., & Cushion, C. (2006). Reflection in coach education: The case of the national governing body coaching certificate. *Sport Psychologist*, 20(2), 174-183.
<https://doi.org/10.1123/tsp.20.2.174>
- Nelson, L. J., Cushion, C. J., & Potrac, P. (2006). Formal, nonformal and informal coach learning: A holistic conceptualisation. *International Journal of Sports Science & Coaching*, 1(3), 247-259. <https://doi.org/10.1260/174795406778604627>
- Nelson, L., Cushion, C. & Potrac, P. (2013) Enhancing the Provision of coach education: the recommendations of UK coaching practitioners. *Physical Education and Sport Pedagogy*, Vol. 18, No. 2, 204-218, <http://dx.doi.org/10.1080/17408989.2011.649725>
- Netball Australia Strategic Plan 2022-24 <http://netball.com.au>
- Netball Australia (2023) National Accreditation Framework <http://netball.com.au>
- North, J. (2016). Benchmarking sport coach education and development. *Advances in coach education and development: From research to practice*, 17.
- North, J., Callary, B., Dieffenbach, K., Galatti, L., Lara-Bercial, S., Nash, C. & O'Connor, D. (2021) A reflection on the state of Sport Coaching Research, its Community and Representation: The 2020 International Council for Coaching Excellence Research Committee Consultation. *International Sport Coaching Journal*, 2021, 8, 405-413.
<https://doi.org/10.1123/iscj.2021-0041>

- North, J., Hämäläinen, K., Oltmanns, K., Petrovic, L., Minkhorst, J., LaraBercial, S., & McIlroy, J. (2016). *CoachLearn: Enhancing coaches' learning, mobility and employability in the European Union: Report#3* (appendix 1): Sport coaching workforce data collection across five countries. Leeds, UK: Leeds Beckett University on behalf of the European Union.
- North, J., Morgan, C., Rongen, F. (2012) *Matching Player and Coach Competences in Association Football across age categories 5-11, 12-16 and 17-21*. A Report prepared for the Football Association, sport Coaching Innovations, Carnegie Faculty, Leeds Metroplitian University.
- North, J., Piggott, D., Lara-Bercial, S., Abraham, A., & Muir, B. (2019). The professionalization of sport coaching. In R. Thelwell & M. Dicks (Eds.), *Professional advances in sports coaching: Research and practice* (pp. 3-21). London: Routledge. eBook ISBN9781351210980. <https://doi.org/10.4324/9781351210980>.
- Nowell, L.S., Norris, J.M., White, D.E., & Moules, N.J. (2017) Thematic Analysis: Striving to Meet the Trustworthiness Criteria. *International Journal of Qualitative Research*. Volume 16: 1-13. DOI: 10.1177/1609406917733847.
- NSL2.0 (2023) *Netball Superleague Launch: A New Era for Netball*. England Netball. <https://www.englandnetball.co.uk>
- NZ & ENQF Joint Technical report (2016) *Comparative analysis of the European Qualifications Framework and the New Zealand Qualifications Framework – Joint technical report*, European Commission, Directorate-General for Employment, Social Affairs and Inclusion, Publications Office, <https://data.europa.eu/doi/10.2767/211812>
- NZQA (2020) New Zealand Qualifications Authority Programme Approval, Recognition and Accreditation Rules 2020. <https://www2.nzqa.govt.nz/tertiary/approval-accreditation-and-registration/programme-approval-and-provider-accreditation/>
- Oceania Netball (2022) Learning and Development Framework: Draft for feedback. (Unpublished)
- Oldridge, I., Nelson, L., Greenough, K., & Potrac, P. (2016) The Interplay Between Learning, Knowledge, biography and Practice: The Tale of an Experienced Track & Field Athletics Coach. *International Sport Coaching Journal*, 3, 257-268. <http://dx.doi.org/10.1123/iscj.2016-0020>
- Passos, P., Araújo, D., Davids, K., & Shuttleworth, R. (2008). Manipulating constraints to train decision making in rugby union. *International Journal of Sports Science & Coaching*, 3(1), 125-140. <https://doi.org/10.1260/174795408784089432>
- Patton, M.Q. (2002) *Qualitative research and evaluation methods*. 3rd Edition. London, Sage.

- Petry, K., Froberg, K. & Madella, A. (2006) Thematic Network Project AEHESIS Report of the Third year. *The Institute of European Sport Development & Leisure Studies*, German Sport University Cologne, 2006 ISBN-10: 3-00-020476-8.
- Piggott, D. (2012). Coaches' experiences of formal coach education: a critical sociological investigation. *Sport, Education and Society*, 17(4), 535-554.
<https://doi.org/10.1080/13573322.2011.608949>
- Price, M.S. & Weiss, M.R. (2013) Relationships among Coach Leadership, Peer Leadership, and adolescent Athletes' Psychosocial and Team Outcomes: A Test of Transformational Leadership theory. *Journal of Applied Sport Psychology*, 25:2, 265-279. DOI: 10.1080/10413200.725703.
- Perazzetti, A., Dopsaj, M., Nedeljković, A., Mazić, S., & Tessitore, A. (2023) Survey on coaching philosophies and training methodologies of waterpolo coaches from three different European national schools. *Kinesiology* 55, 1, 49-61.
<https://doi.org/10.26582/k.55.1.6>
- Petry, K., Froberg, K., & Madella, A. (2006). *Thematic Network Project AEHESIS. Report of the third year*. Cologne: German Sport University Cologne.
- Potrac, P., Jones, R.L. & Nelson, L. (2014) *Research Methods in Sport Coaching*, Routledge eBook ISBN9780203797549
- Reilly, T. Richardson, D., Stratton, G. & Williams, A. (2004). *Youth soccer: From science to performance*. Routledge. <https://doi.org/10.4324/9780203644133>
- Rieke, M., Hammermeister, J. & Chase, M. (2008) Servant Leadership in sport: A New Paradigm for Effective Coach Behaviour. *International Journal of Sports Science & Coaching*, Vol, 3, No.2, 227-239. <https://doi.org/10.1260/174795408785100635>
- Rowold, J. (2006) Transformational and Transactional Leadership in Martial Arts. *Journal of Applied Sport Psychology*, 18:312-325. <https://doi.org/10.1080/10413200600944082>.
- Rui, R., Hugo, S., William, F., Isabel, M., Juan, F. (2014) Coach education in volleyball: a study in five countries. *Journal of Physical Education and Sport*, 14(4), Art 72, pp.475 – 484. <https://doi.org/10.7752/jpes.2014.04072>
- Sandberg, J. (2005) How do we justify knowledge produced within Interpretive Approaches? *Organizational Research Methods*, 8:41. <https://doi.org/10.1177/1094428104272000>
- SAQA (2021) South African Qualifications Authority www.saqa.org.za
- SASCOC (2011) *From Playground to Protea: Netball South Africa's Long-Term Participants development programme*. Netball South Africa.
- SASCOC (2012) *The South African Coaching Framework Summary*. www.sascoc.co.za

SASCOC (n.d.) *Sports Coaching Designations Sports Coaching Qualifications*. SASCOC Professional Body for Sports Coaching- version 1.5
[jx4ftqqxgdted1pc.pdf \(revolutionise.com.au\)](#)

Schempp, P.G. & McCullick, B. (2010) Coaches' expertise, in Lyle, J. & Cushion, C. (Eds) (2010) *Sports Coaching: Professionalisation and Practice*. Elsevier, Churchill Livingstone. ISBN 1455725226, 9781455725229.

Scottish Credit and Qualifications Framework (2019) *Referencing the Scottish Credit and Qualifications Framework (ISCQ) to the European Qualifications Framework Report*
www.scqf.org.uk

Segwaba, J., Vsrthan, D & Duffy, P (2014) Coaching in South Africa *International Sport Coaching Journal* Vi 1, Issues 1 p 33-41: <https://doi.org/10.1123/iscj.2013-0042>

Sharp, L.A. (1993) Employment of Qualified Personnel. *Journal of Physical Education, Recreation & Dance*, 64(2), 18-63. <https://doi.org/10.1080/07303084.1993.10606694>

Singapore - National Qualifications Framework summary (English)(2017) . Washington, D.C. World Bank Group
<http://documents.worldbank.org/curated/en/380681508754067096/Singapore-National-Qualifications-Framework-summary>

Singapore Sports Council (2010) Building a Great Sporting Nation *Singapore Sports Council Annual Report 2019-2020*.

Smith, B. & McGannon, K.R. (2018) Developing rigor in qualitative research: problems and opportunities within sport and exercise psychology. *International Review of Sport and Exercise Psychology*, 11:1, 101-121, <https://doi.org/10.1080/1750984X2017.1317357>

Smith, M. J., Young, D. J., Figgins, S. G., & Arthur, C. A. (2017). Transformational leadership in elite sport: A qualitative analysis of effective leadership behaviours in cricket. *The Sport Psychologist*, 31(1), 1-15. <https://doi.org/10.1123/tsp.2015-0077>

Smith, R.E. & Smoll, F.L. (1977) A system of behavioural assessment of athletic coaches. *Research Quarterly American Alliance for Health Physical Education Recreation and Dance*, 48(2), 401-7. <http://dx.doi.org/10.1080/10671315.1977.10615438>

Smith, R. E., & Smoll, F. L. (1997). Coaching the coaches: Youth sports as a scientific and applied behavioural setting. *Current directions in psychological science*, 6(1), 16-21. <https://doi.org/10.1111/1467-8721.ep11512606>

Smith, B. & Sparkes, A.C. (2016) *Routledge Handbook of Qualitative Research in Sport and Exercise*. Taylor and Francis Group ISBN: 978-1-315-76201-2 (ebk)

Sport and Development International Conference (2003) *The Magglingen Declaration and Recommendations: Creating a Better world through sport*. Magglingen, Switzerland, 16th – 18th February . www.sportanddev.org

Sport England (2017) *Coaching in an Active Nation – The Coaching Plan for England 2017-21*. Sport England.org

Sport New Zealand (2016) *NZ Coaching Strategy*. Sport New Zealand. <https://sportnz.org.nz>

Stodter, A. & Cushion, C.J. (2014) Coaches Learning and Education: A case study in cultures in conflict. *Sports Coaching Review*, 3, 1, 63-79.
<https://doi.org/10.1080/21640629.2014.958306>

Stodter, A. & Cushion, C.J. (2017) what works in coach learning, how and for whom? A grounded process of soccer coaches' professional learning. *Qualitative Research in Sport, Exercise and Health*,

Stoszowski, J., & Collins, D. (2015). What makes them so good? The constructs used by coaches to identify coaching prowess. *Athletic Insight*, 7(1), 63-81.

Stratton, G., Reilly, T., Williams, A. & Richardson, D. (2004) *Youth Soccer: From Science to Performance*. Routledge. <https://doi.org/10.4324/9780203644133>.

Sujarwo, Nopembri, S., Kriswanto, E. S., Shun, J. M. T., Priyambada, G., & Mahardhika, N. A. (2023). Cultural differences and coaching styles of physical education teachers in Hong Kong and Indonesia. *International Journal of Education in Mathematics, Science, and Technology (IJEMST)*, 11(3), 683-694.
<https://doi.org/10.46328/ijemst.3241>

Taylor, B., & Garratt, D. (2010a). The professionalisation of sports coaching: definitions, challenges and critique. *Sports Coaching: Professionalisation and Practice*, 99-117.

Taylor, B., & Garratt, D. (2010b). The professionalisation of sports coaching: Relations of power, resistance and compliance. *Sport, Education and Society*, 15(1), 121-139.
<https://doi.org/10.1080/13573320903461103>

Taylor, T.L. (2000) *Women, Sport and Ethnicity: exploring experiences of difference in netball*. PhD thesis UNSW Sydney. <https://doi.org/10.26190/unsworks/19793>

Taylor, T.L. (2001) *Netball in Australia: a Social History*. *School. Of Leisure, Sport & Tourism Working Paper Series No.2*. ISSN: 1836-9979.

Taylor, W.G. & Garratt, D. (2013) Coaching and Professionalisation, in Potrac P., Gilbert, W. & Denison, J. (2013) *Routledge Handbook of Sports Coaching*. Routledge Taylor & Francis group, London and New York. eBook ISBN9780203132623.
<https://doi.org/10.4324/9780203132623>

Towler, A. (2019) The qualities of Transformational leaders and what distinguishes them from transactional leaders. All Management Learning resources /en/all-management-learning resources/search/Transformational Leadership

Tracy, S. J. (2010). Qualitative quality: Eight “big-ten” criteria for excellent qualitative research. *Qualitative inquiry*, 16(10), 837-851.
<https://doi.org/10.1177/1077800410383121>

- Tracy, S.J. & Hinrichs, M.M. (2017) Big Ten criteria for Qualitative Quality. *The International Encyclopaedia of Communication Research Methods*, 1-10.
- Turner, D., Nelson, L., & Potrac, P. (2012). The Journey Is the Destination: Reconsidering the Expert Sports Coach. *Quest*, 64(4), 313-325.
<https://oi.org/10.1080/00336297.2012.706886>
- Turnnidge, J. & Côté, J. (2016) Applying Transformational leadership Theory to coaching research in youth sport: A Systematic literature review. *International Journal of Sport and Exercise Psychology*, 1-16. <https://doi.org/10.1080/1612197x.2016.1189948>
- UKCoaching (2019) Great Coaching: the PEOPLE Principles of Great Coaching
<https://www.ukcoaching.org/about/great-coaching>
- UKMLA (2023) The PLAB and the UK Medical Licensing Assessment (UKMLA) Exam (medibuddy.co.uk)
- Vaismoradi, M., Turunen. H., & Bondas. T. (2013) Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nursing and Health Sciences*, 15, 398-405. DOI; 10.1111/nhs.12048
- Vallee, C.N. & Bloom, G.A.. (2005) Building a Successful University Program: Key and Common Elements of expert Coaches. *Journal of Applied Sports Psychology*, 17(3), 179-196. <http://dx.doi.org/10.1080/10413200591010021>
- Vallerand, R. J. (1997). Toward a hierarchical model of intrinsic and extrinsic motivation. In *Advances in experimental social psychology* (Vol. 29, pp. 271-360). Academic Press. [https://doi.org/10.1016/s0065-2601\(08\)60019-2](https://doi.org/10.1016/s0065-2601(08)60019-2)
- Vella, S., Oades, L.S. & Crowe (2010) The application of coach leadership models to coaching practice: Current state and future directions. *International Journal of Sports Science and Coaching*, 5(3), 425-434. <https://doi.org/10.1260/1747-9541.5.3.425>
- Vella, S.A., Oades, L.G. & Crowe, T.P. & (2013a) A Pilot test of transformational Leadership Training for sports Coaches: Impact on the Developmental Experiences of Adolescent Athletes. *International Journal of Sports Science & Coaching*. Vol. 8, No. 3, 513-530. <https://doi.org/10.1260/1747-9541.8.3.513>
- Vella, S.A., Oades, L.G. & Crowe, T.P. & (2013b) The relationship between coach leadership, the coach-athlete relationship, team success, and the positive developmental experiences of adolescent soccer players. *Physical Education and Sport Pedagogy*, Vol. 18, No. 5, 549-561. <http://dx.doi.org/10.1080/17408989.2012.726976>
- Vickers, J.N. (2003) Decision training: an Innovative approach to coaching. Canadian journal for Women in Coaching online. *Coaching Association of Canada*, Vol.3, No.3,
- Vickers, J. N. (2007). *Perception, cognition, and decision training: The quiet eye in action*. Human Kinetics. ISBN 13:978-0-7360-4256-7

- Watts, D. W., & Cushion, C. J. (2017). Coaching journeys: Longitudinal experiences from professional football in Great Britain. *Sports Coaching Review*, 6(1), 76-93.
<https://doi.org/10.1080/21640629.2016.1238135>
- Werthner, P., & Trudel, P. (2006). A new theoretical perspective for understanding how coaches learn to coach. *The Sport Psychologist*, 20(2), 198-212.
<https://doi.org/10.1123/tsp.20.2.198>
- Whitley, M.E., Gould, D., Wright, E.M. & Hayden, L.A. (2018) Barriers to holistic coaching for positive youth development in South Africa. *Sports coaching review*, No. 2, 171-189. <https://doi.org/10.1080/21640629.2017.1361169>
- Whitmore, J. (1992) *Coaching for Performance: A Practical Guide to Growing Your Own skills*. Nicholas Brealey Publishing, London.
- Williams, A.M., Hodges, N.J. (2005) Practice, Instruction and Skill Acquisition in Soccer: Challenging Tradition. *Journal of Sports Sciences*, 23(6), 637-650.
<https://doi.org/10.1080/02640410400021328>
- Woodman (1991) Coaching: A Science, An Art, An Emerging Profession, *Sports Science Review*, 2(2), 1-14.
- World Netball (2021) To Grow, To Play, To Inspire. *World Netball Strategic Plan 2021*.
<http://bit.ly/2lWDjRX>
- World Netball (2023) *Coaching Endorsement policy*.
<https://netball.sport/game/coaching/endorsementprogramme>
- WUF (2018) *World Underwater Federation Coaching Framework* Confédération Mondiale des Activités Subaquatiques. www.cmas-europe.eu

Appendices

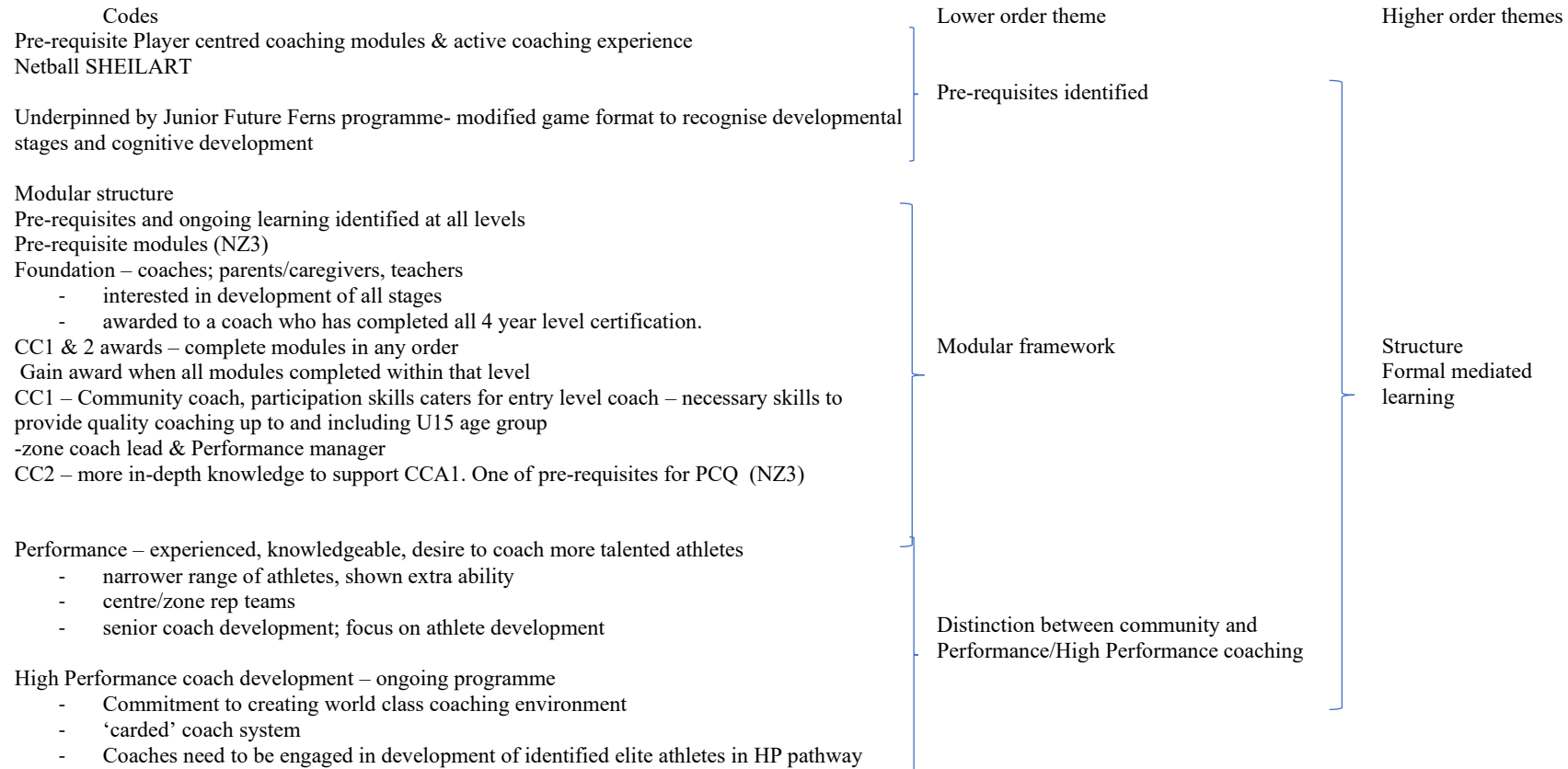
Appendix 1 – List of documentation included within Phase 1 analysis.

		Nation	Document	Source
1	A1.	Australia	Accreditation – National Coach Accreditation Framework	http://netball.com.au
2	A2.		Accreditation and Development	http://netball.com.au
3	A3.		Coach Approach	http://netball.com.au
4	A4.		Coaching Blueprint	http://netball.com.au
5	A5.		Coaching Update logbook	http://netball.com.au
6	A6.		High Performance Coaching Accreditation Course Programme Outline 2016-17	http://netball.com.au
7	A7.		Intermediate Advanced & Elite Coach Accreditation – Blended Course Review	http://netball.com.au
8	A8.		National Coach Accreditation Framework 2018	http://netball.com.au
9	A9.		National Coach Accreditation Framework 2020	Sheila l
10	A10.		Netball Australia Coach Survey – 2014	
11	A11.		Netball Australia - Advances Coach Accreditation practical self assessment form	http://netball.com.au
12	A12.		- Development Coach accreditation practical self assessment form	http://netball.com.au
13	A13.		- Elite Coach Accreditation Practical self assessment form	http://netball.com.au
14	A14.		- Intermediate coach Accreditation Practical Self assessment form	http://netball.com.au
15	A15.		- Online Foundation coach Accreditation Competency statements and assessment	http://netball.com.au
16	A16.		Netball coaching – - Checklist for Beginner coaches	http://netball.com.au
17	A17.		- Demonstrating Skill	http://netball.com.au
18	A18.		- Keeping your players engaged	http://netball.com.au
19	A19.		- National coach accreditation Updating requirements	http://netball.com.au
20	A20.		- Netball Skills Development framework	http://netball.com.au
21	A21.		- Tips for Good Coaching/Seven Steps of Skill Progression - What's Happening in Netball	http://netball.com.au
22	E1	England	Coaching Strategy 2018-2021	England Netball
23	E2		1 st 4sport level 1 Award in Coaching Netball Qualification specification	Coachwise Ltd 2017
24	E3		1 st 4Sport Level 1 Award in Coaching Netball	Coachwise Ltd 2021
25	SOPHIE		1 st 4sport level 2 Certificate in Coaching Netball Qualification specification	Coachwise Ltd 2018
26	E5		1 st 4sport level 3 Certificate in Coaching Netball Qualification specification	Coachiwise Ltd 2018
27	E6		Level 3 Onfile course resources	England Netball 2021
28	E7		Netball UKCC Coach Education programme level 1 Assistant Coach qualification Coach Induction Qualification	Coachwise Ltd 2018
29	E8		Netball UKCC Coach Education programme level 2 Coach qualification Coach Induction Qualification	England Netball (Netball UKCC) April 2014
30	E9		Netball UKCC Coach Education programme level 2 Coach qualification Coach Induction Qualification	England Netball (Netball UKCC) April 2014
31	E10		Netball UKCC Coach Education programme level 3 Coach Award Coach Information Pack	England Netball (Netball UKCC) April 2014
32	E11		Presentation from Education & Training workshop (2019)	SM
33	E12		UKCC Coaching Courses – England Netball (2/10/2019)	https://www.englandnetball.co.uk
34	E13			https://www.englandnetball.co.uk
35	E14			(accessed (7/08/2021))

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			Your Coaching Journey	
36	NZ1	New Zealand	Coach Accelerator programme	Netball New Zealand (2014)
37	NZ2		Coaching Framework	https://www.netballnz.co.nz
38	NZ3		Community Coach Award Levels 1 & 2	https://www.netballnz.co.nz
39	NZ4		Foundation Award	https://www.netballnz.co.nz
40	NZ5		Get Involved	https://www.netballnz.co.nz
41	NZ6		High Performance	https://www.netballnz.co.nz
42	NZ7		High Performance Coaching Plan 2011-2020	https://www.netballnz.co.nz
43	NZ8		High Performance Player development	https://www.netballnz.co.nz
44	NZ9		High Performance Strategy 2015-2023	https://www.netballnz.co.nz
45	NZ10		Netball Coaching Awards	https://www.netballnz.co.nz
46	NZ11		Netball Coaching framework	https://www.netballnz.co.nz
47	NZ12		Performance Coach Qualification	https://www.netballnz.co.nz
48	NZ13		Player development guidelines	https://www.netballnz.co.nz
49	NZ14		Our Game	https://www.netballnz.co.nz
50	NZ15		Recognition of Prior Learning	https://www.netballnz.co.nz
51	NZ16		New Zealand Coaching Strategy	Sport New Zealand
52	NZ17		New Zealand Community sport coaching plan 2014-2020	Sport New Zealand
53	NZ18		2020-2021 Strategic Priorities: Sport NZ Response to Covid-19	Sport New Zealand
54	S1	Singapore	Basic Sports Science Course	Sport Singapore
55	S2		Basic Sports Science Course Manual – Contents page	Singapore Sports Institute
56	S3		Coach's Code of Ethics	Sport Singapore
57	S4		Coaching Accreditation & Pathway	Netball Singapore
58	S5		Communication & relationships Building Learners' Guide	Sport Singapore
59	S6		Continuing Coach Development	Sport Singapore
60	S7		Continuing Coach Education (CCE)	Netball Singapore
61	S8		Delivery Methods – Coaching Learners' Guide	Sport Singapore
62	S9		Foundation Coaching Course Pre-course reading material	Sport Singapore
63	S10		Risk Management Learners' guide	Sport Singapore
64	S11		Singapore Coach Excellence (SG-Coach) Programme	
65	S12		Values & Principles in Sport Learners' Guide	
66	SA1	South Africa	Application for assessment	Netball South Africa
67	SA2		Assessment transcript – Level 1 coach	Netball South Africa
68	SA3		Assessment transcript - Level 2 coach	Netball South Africa
69	SA4		Competence sub-criteria –Level 1 practical coaching	Netball South Africa
70	SA5		Competence sub-criteria - Level 2 practical coaching	Netball South Africa
71	SA6		How 2 Coaching Bugs	Netball South Africa
72	SA7		Pre-assessment agreement – Level 1	Netball South Africa
73	SA8		Pre-assessment agreement – Level 2	Netball South Africa
74	SA9		Coaching Manual Contents page – Pre-level, Level 1 & Level 2	Netball South Africa
75	SA10		SASCOC South African Coaching Framework 2010	SASCOC
76	SA11		Consultation document: Model for long term coach development (LTCD) March 2011	SASCOC
77	SA12			

Appendix 2 Thematic analysis of documentation – exert taken from New Zealand



Appendix 3 – Example of Framework analysis of documentation - Theme of ‘content’

Nation	Sub-theme Professional knowledge – Pedagogical/Coaching Methodology	Sub- theme – Interpersonal knowledge	Sub-theme intra-personal knowledge
Australia	Developmental awareness What to coach versus how to coach Increased focus on science informing practice Game focused and game sense approach throughout Sensitivity with error detection and correction approaches Use of constraint-led, game based training and decision making within problem solving approaches	Personal and interactive skills – relationship building Player centred coaching Inspirational aspects of coaching Choosing appropriate leadership styles Reactive approach to coaching Empowerment, fun and GROW model	Self-awareness Developing reflective skills High performance specific content
England	Coaching process- plan--Review throughout Game sense versus traditional approaches Decision training and problem solving Planning and delivery of lined sessions at Level 2; Seasonal planning at Level 3 'How to Coach' bugs introduced at level 1 Meeting learner preferences and needs including motivation	Communication types Instruction/Demonstration from Level 1 Effective questioning skills Developing rapport and relationship building Player welfare within programmes Player/athlete centred coaching Range coaching/leadership styles	Role of coach Safe & ethical practice Self awareness Self-monitor, review and evaluate Coaching philosophy Personal reflections and self-evaluation forms Awareness of development within wider coaching world
New Zealand	Positive empathetic learning environment Nurture love of netball Early exposure to ethical competition planning and preparation Variety of practice structures Player centred approach	Building effective relationships Player centred Growth mind set Leadership and mentoring	Professional integrity and caring Importance of reflection Vision & Values Idealised influence Impact of mental model on learning
Singapore	Teaching and Learning styles Game activities appropriate for developmental platform Holistic & inclusive approach Caring for and meeting needs of different athletes	Positive rapport Teamwork and leadership Group development Communication skills – listening & giving information effectively Relationship building – 5 Factor Model Importance of social and moral components	Self awareness Role model – Idealised influence Philosophy & reflection Love for country Ethical framework for coach behaviours Performance values and ethical standards
South Africa	Game related activities Holistic approach Planning skills 'How to coach' bugs	Instruction & demonstrations Rapport building Positive environment Range of styles	Role of the coach Code of conduct Reflections

Appendix 4 Interview schedule for System managers

Questions	Potential probe questions
Introductory 1. Talk me through your role within the NA/EN/NNZ/NSA/NS/NTT coach education and development system	Length of time in role What brought you into this role?
Main body 2. Tell me about the thinking behind the current system and how it was developed	How would you describe the coaching culture you encourage within your coaches? What do you believe is the ‘uniqueness’ of your nation’s coach education and development system?
3. If you could change one element of your current system what would that be and how would you change it?	
4. Where would you like to take your coach education and development system in the future?	What help would you need to get there? What resources do you make available freely online that could be added to the INF site
5. If we are looking to encourage/facilitate global movement of the netball coaching workforce, what are the issues that need addressing?	What are the challenges for you? What help would you like?
Concluding question	
6. Is there anything else you would like to tell me about your national coach education and development system that maybe I have not yet asked you?	

Appendix 5 Interview schedule for Coach interviews

Introductory questions	Potential probe questions
1. Tell me about your sporting experience and what brought you into coaching in the first place	Sporting experiences in netball and in other sports Reasons for starting coaching
2. Describe your coaching journey to where you are now	Groups & contexts coached. What groups working with now? In what capacity – paid/voluntary/ other? Tutor? Any changes in reasons for coaching over time? Tell me more about your experiences when working in different countries

Main section questions	Potential probes
3. What qualifications/formal training have you gained along your coaching journey so far?	Netball related? Other? Impact of these courses on approach to coaching?
4. Within your NGB training courses, what key messages impacted you?	Kind of learning culture provided/encouraged within the course Coaching culture encouraged Further probes - Athlete v coach centred; - Interpersonal skills and leadership encouraged - Impact on structuring practice - Managing individual needs What was the biggest challenge when applying these messages at home?
5. What other sources of support have you been able to access?	Explore opportunities (non-formal & informal); impact How sources of support have varied at different stages of coach development What is the NGB 'culture' of supporting coaches beyond the formal coach education Challenges NGB faces in growing their coach workforce
6. How would you describe yourself as a coach – your philosophy (beliefs & values)	What has shaped this philosophy? How has your philosophy evolved over time? Given your philosophy, how do you most like to coach? Which behaviours do you use most?
7. What have been the most powerful influences on you, as a coach, and at what stage in your career?	Incidences? People? other? When did they occur? What impact did they have?

Concluding questions	Probes
8. If you could reshape any of the development journey what would you keep and what would you change, if anything?	What would you add in...at what stage in your development?
9. Is there anything else you would like to tell me about your training and development experiences that I have not asked?	

Appendix 6 Example of Similarities and Differences in framework analysis of Documentation

Similarities	Differences
Structure • All have structured formal coach education programmes to support coach journey • Formal qualification programmes overseen by NGB • Pre-requisites and follow-up tasks combined with formal delivery • Dynamic system	• Number of qualifications in each system • Pre-requisites prior to starting programme • Inclusion of RPL • Other qualification/development programmes surrounding formal programme • expectations and structure of support for learning at each stage • degree of flexibility within system to individual coach journey
Philosophy behind content • Balance of F2F delivery with practical • Professional, inter-personal and intra-personal skill development • Performer centred approach • Relationship building important	• Degree of integration of development opportunities with formal elements • Content included at different stages
Modes of delivery and assessment • Formal learning supported with other forms of learning • Competence based • Practical assessments combined with tasks	• Increasing use of online delivery and assessment • Programmes of support • Degree of integration of development opportunities with education • Changing focus of practical F2F delivery and coaching practice assessments
Vision • Structured aims and objectives • Supported by strategic development & planning • Underpinning philosophy highlighted	• Stated aims and objectives • Philosophical stances • Contextual factors

Appendix 7 Summary of anomalies that might impact portability of qualification,

Level of qualifications	Anomalies that might impact portability
Systematic; All levels	- Partnership links and their impact on structure of national system - Reaccreditation and ongoing CPD requirements vary. - Extent of mentoring and work with coach developers - Australia – inclusion of Diploma in Sports Coaching - Differences in assessments and evidence for competence - Pre-requisites stipulated vary across nations - Differences in inclusion in content and degree of focus on inter and intra-personal skills Professional knowledge – coaching methodology: Differences in levels of adoption within content and degree of application in practice: - game sense - constraint led practice - athlete centredness - balancing win orientation with whole person development Australia – 7 step skill progression model Netball specific professional knowledge differences: - Australia Skill Development framework; - New Zealand CC1 – technical focus & CC2 – tactical - Use of match play within assessment tasks - Stage where annual training programme and coaching to a season is introduced Professional knowledge – Sports Science - Singapore Sports Science module at Level 1 - Content differences – mental skills particularly - KNEE programme (Aus) & Netball SHEILART
Coaching Assistant	- Different pre-requisites – NZ; Singapore; England - Requirements for rules test completion in Singapore - Physical screening in Australia and Singapore - Age group specific guidance in Australia, New Zealand, England - Reality of expectations of awards – to assist, or to coach - Assessment – formal or Self- assessment (Aus); No formal assessment (NZ) - Support for coaches - work with coach developer (NZ) - Australia’s Skill Development Framework - Australia’s 7 step skill progression - Degree of focus on holistic elements -social & physical - Degree of focus on physical literacy
Coach	- Sports science component & rules tests in Singapore - Age group awards are targeted to prepare coaches to work in - Focus on technical versus tactical (NZ) or integrated approach - Level of knowledge of season planning - Extent of game sense approach versus traditional approaches - Self- assessment (Aus); No formal assessment (NZ) - Mentoring and contact with coach developers
Senior Coach	- Inclusion of Diploma in sport coaching (Australia) - Level of inclusion of wider coaching issues - Philosophy behind programmes – improving coaching generally versus performance focused. - Level of focus on match play and annual training programmes - Mentoring; degree of support
Master Coach	- Extent of inclusion of leadership ‘Carded coach’ system in NZ - Involvement in communities of practice - Degree of support - Extent of individualised programme and focus on coach to drive development - Assessment process – evidence - Degree of inclusion of working with others e.g. umpires and media - Mentoring

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Appendix 8 System Manager summary of their role within coach education and development and previous/other experience of relevance

System manager pseudonym	Nation	Current involvement in Coach education and development system	Previous relevant experience
Sheila	Australia	Role involved developing coaches and coach developers Involvement in formal coach education framework Set up new frameworks and training-trainer programmes for coaching and umpiring Looked a coaching from grassroots to high performance programme- through all levels of framework Support to the development of the Singapore Netball Coach education system	Phys Ed teaching background Previous Coaching director role General Manager of coach development
Saskia	England 1	More involved with performance development, so knowledge of coaching systems is from a more subjective viewpoint through impact on performance Involved in launching new strategy for Coaching and Officiating Identified need for improving coach confidence due to low number of applications for roles Awareness of the need to embed coaches within the roses pathway and create more of a community across the coaching workforce in the country “ I don’t feel that we as an organisation have put coaching as a priority and that’s a crying shame” (p.2, line 82) Recognises the need to examine learning beyond just courses and the support available to coaches. Instigated coach development opportunities for pathway and superleague coaches.	Performance based work
Susan	England 2	Overseas the education and training for coaches and officials Liaise with others at England netball to develop education side of things Develop and distribute resources for workshops throughout levels of courses and formal qualifications, grassroots to performance levels Aiming to embed messaging of game sense philosophy from introductory levels and use What it takes to Win to underpin new performance framework. Updating educational/learning management system and e-learning opportunities beyond formal courses to make learning more accessible “I don’t think you can ever lost face-to-face...that’s invaluable “ (p.4, line 129)	Education and training
Scarlett	England 3	Responsible for content of formal courses, work behind the qualifications content, supplementary development work with coaches; how we support, connect, communicate with coaches outside of formal courses Liaise with others at England netball to generate and embed ideas	Education training for coaches, officials and volunteers Coaching Manager, development of bespoke CPD modules SportsCoachUK Coaching Systems Manager Netball Development officer MSc sport Psychology
Sophie	England 4	1-to-1 and small group support for coaches Supporting coaches stuck in the system Wants to make formal qualifications more accessible to coaches within jobs. Recognises the need to value qualifications and link Level 3 to coaching at higher levels more directly Concerned about some coach experiences of formal qualifications currently	Primary teacher trained PE and Coaching Education Manager Youth Sports Trust projects around coaching and education Experience in other sport

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Savannah	New Zealand 1	Training and professional development of coaches Support for coach developer network, coaches within the community sector particularly. Regular meetings with coaches Reviewing and developing current offers for coaching – online learning portal, support alongside modules Changes in Face-2-face components Module development	Regional & community manager of coaching Regional sports trust developing and supporting P.E. teachers and connecting schools with clubs Observation of coach development within another sport International coach developer training
Selina	New Zealand 2	Run national roadshow ‘Coaching for Success’ Responsible for coach development from foundation through to high performance Liaison with High Performance Sport New Zealand re coaching strategy development. New HP strategy – written coaching strategy to go alongside Understand performance coaching environment 1-to-1s with coaches Encouraging key thread of physical literacy, player centred holistic coaching and growth mindset Development of online learning systems to track coach development. Facility for mentors to add information.	National Training Manager Support for Pacific Nations and some Caribbean
Sebastian	Singapore	Training up new person to work within coaching programme- will be an organiser not a coach educator Singapore is licenced to Australia, so we do a coordination role at present and bring in Australia presenters All coaches registered with Sports Institute Liaise with Ministry of Education and the Sports Institute regarding sports science component of courses; Principles & values module Oversee development of primary school manual	
Sade	South Africa	University involvement – centre for player and coach development Liaise with coaches from abroad who come into SA for coach development opportunities Work with coaches at University. Cross-sport opportunities for CPD for coaches	National level coach Development of Talented Performers
Shara	South Africa	“Coaching totally my responsibility” (p.2, line 56), on the strategic side Also operational, organising everything. Oversee 11 coach developers, trained by overseas trainers Liaise with SASCOC over expectations for different coaching qualification levels Liaise with government to support coaches to develop and come on courses	SA Netball board member MBA
Shanice	Trinidad & Tobago	America’s Federation currently running Level 1 Australian presenter authored and ran Levels 1 and 2 Developing Level 3 based in university; University Head Coach Run technical arm of TT Netball Developing online coach education – liaise with AFNA Need to get coach educator qualified in another country and come back to train our system	Trinidad & Tobago Board

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Appendix 9 Coach interview Pseudonyms and summary of their experiences

Coach Pseudonym	Nation	Experience - Coaching	Coach Education & Development involvement	Reasons for coaching/Coaching philosophy + Other relevant experience
Cali	Australia 1	Elite player Club Coach through to State and then National Level Coach. Experience with juniors and Seniors. National selector	Elite player entry to Level 2 Level 3 & HP Coach Presenter & Assessor Level 2 &3 Updated HP award	Teaching background Love of leading; competitive with older siblings Mentored by National coach Philosophy – coach the person “to do no harm...mentally, physically or spiritually” (p.5) Aims to create environment to empower players Balance direct instructions with time to solve own problems. Enjoys on court problem solving with players Started exploring performance psychology from an early stage. Works with coaches from other sports
Corrie	Australia 2	Played a number of sports Head of Netball Independent secondary school Coached juniors, worked through age groups, rep, state +AIS National coaching for other countries	Entry level qualifications across number of sports Worked through to highest level of qualifications in netball Coach Education in Aus + another country Enjoying the changes in delivery of coach education to blended learning and self-assessment. Enjoys greater emphasis on guiding and mentoring nowadays.	Teaching background; Masters degree Made decision to coach rather than play at top level Likes players to have movement experience and uses game-sense activities. Uses ideas from other sports to help. Believes in the need to educate coaches rather than assess them Provide “learning in the way that really is most meaningful for them” (p.11)
Coleen	Australia 3	Played and umpired at local clubs Started club coaching, then rep, state National indoor and Men’s netball. Happy coaching at state level	Worked through accreditation up to advanced, but learnt from mentors, friends, other courses, other sports eg. Ice hockey and being a mum	Degree – applied science in intellectual disability Like participants to enjoy what they are doing and feel like they have learnt something and take something away. Empowering coach. “An athlete doesn’t remember what you told them they only remember how you make them feel” (p.11). Use 7 step progression to build up to game but likes to use it flexibly. Operations manager with local association
Ciji	Australia 4	Coached from a young age. National player – injury led to greater coaching involvement Worked through national junior programmes Full time coaching role coaching residency programme IoS National selector	Worked through levels 1,2, 3 Mentored by HP coaches HP coaching council Coach development sessions Mentoring helped Head of coach education National Junior Pathway manager	Teacher trained – Primary, Phys Ed first; Science second. Attended leadership, communication skills and self-development courses. Recognize more than one way to teach something Love of sport and coaching Like to work with positive, open, athlete centred environment. Trust and consistency important. Less direct now

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Claire	England 1	Played other sports too National player Started as player-coach Coached juniors, county, club, prem & National level. Went full time in National role. Coached another nation too.	Advanced Coach award Completed HP coaching programme Some cross sport work Deliver coach development sessions though not part of a formal coach development programme. Help to Level 2s.	Teacher Coach to make a difference, see things you know you have influenced Start with game and work backwards for practices, use scenarios
Charlotte	England 2	Multi-sport participation, county level Became assistant to satellite academy, then county Self-employed coach Junior club coach & college Back-to-netball National coach in another country	Completed Level 1 & 2 award Working through Level 3 qualification “biggest eyeopener for me” (p.24) Coach Development Manager Teacher training Supported partner football coaching company Helped produce technical workshops for EN coach development Mentored coaches; set up courses to support coaches Attended coach development programme	Degree in communications and media studies Corporate work – senior management role, in strategy Netball development officer, EN Coaching Development manager – frustration with coach education system Girls need to have fun Wanted to work with girls from states system Level 3 – started to focus on self, explore relationships and athlete centred, questioning and varying progressions more now
Catherine	England 3	From sporting family – multi activities. Netball at club, county, regional, NSL and National level. Voluntary club coaching at start, then EN Pathway job; then NSL Assistant, progression to Head coach	Netball Coaching quals; Still working through Level 3 award HP coaching course, Sport England. Completed mentoring course with EN to mentor other coaches Run coach development sessions.	Wanted to coach rather go to university Passionate, want to give back, know players create learning and development, family culture. Level 1s in a number of sports Fitness instructor qual
Cyndie	New Zealand 1	Hockey and touch rugby – came to netball later Beginners through to seniors; academy; future ferns programme	Share ideas and upskill community coaches Mentor Coaches’ conferences	Project manager within sport Mentoring qualifications Degree and Quals in corporate world Raikae master qual Inclusive culture – trust, communication, fun
Chloe	New Zealand 2	Sporting family – mum played & coached Rep and elite netball player Club, school, U15 through to adults A/C Prem team	Levels 1 & 2; HO Q Trained as coach developer NNZ PCQ facilitator Coach centre developer	Love of coaching high performance Diploma & degree in sport & recreation Strong Maori influence on philosophy Importance of team building and connections
Caitlin	New Zealand 3	Sporty family; multisport base. Started coaching at 15/16 Progression through school age groups university and rep levels	Completed community and performance awards X-sport development Coach developer	Coached basketball and volleyball too Like to give back Management degree, including psychology Teaching diploma; primary teacher Want of grow people, player empowerment and enjoyment NNZ culture of support
Cara	New Zealand 4	Sporting family. HP experience from other sports	HP Carded coach Coach accelerator programme Athlete life adviser	Secondary PE teacher, moved into professional coaching Holistic life coach Completing postgrad in psychology

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		Coached school level through to rep. Coached in Aus for 3 years National Provincial leagues ANZ A/c and Coach National coaching	Mentoring Coach consultant	Person first philosophy; unrelenting passion, involve players in journey
Chun	Singapore 1	Previous sporting experience Started netball when coaching secondary group Play club division 3 Full time coach for 10 years Singapore netball academy	Levels 1 & 2 Singapore netball Level 1 Presenter & Coach Developer ICCE Coach Developer training National performance pathway manager	International netball umpire Australian S & C Canadian National competition programme training Involve learners; importance of inter-personal skills; use more guided games, get players to work things out
Chow	Singapore 2	Played club and SL Coaching primary, secondary, club, colleges; polytechnics Superleague Seniors National coach	Level 3 qualified coach NZ training & been to Caribbean National Youth sport Institute Community of practice	Accounting assistant before coaching Umpired Importance of fair play; respect more important than winning; need good basics strict; need set plays.
Casse	South Africa 1	Coaching from young age – tennis first. Chose netball Bursary to uni for netball National player Coach schools netball, uni, club SA national age group; unis; & seniors	Levels 1,2,&3. Shadowed other coaches; buddy coaching, mentor. Attended W/C coaching workshops. 10 days in England. X-sport workshops Happy to share as much as I can with other coaches	Degree in sports management. Diploma in teaching Coaching is about helping people to be the best they can. Top players need more managing. Need thinking players who can read game; believe in engaging players. Listen to players and leadership. Involve players
Chinue	South Africa 2	Multi sport background before netball. National player Coached junior, uni, senior, national U21 & Senior	SASCOC Senior Coach Designation Levels 1.2 and 3 Level 1 presenter Netball foundation Would love to become coach developer	Love passing on experience and seeing it come to fruition. Positive life lessons through netball. Degree in sport marketing, now doing masters Developed player involvement in coaching approach Moved from autocratic to taking care of players
Chad (M)	South Africa 3	Multi- sport, horse and cricket background Played Nets -at rep level. Umpire for 10 years Coached in 2 nations including National level University level and Men's team Currently club & provincial level	SA Levels 1, 2, &3 Australian system to elite Senior coach in SAQA certification process Mentored professional teams and their coaches, including Men and women's coaches Coach developer for 7 years Work with coaches to develop age and stage appropriate ideas	Some uni medical training then went into IT; marketing Army experience Cricket coaching Level 1 & 2 Netball consultancy business Coaching about helping others in sport and life. Understand players as whole person, treat people as individuals, respect Problem solvers, challenge tradition
Crystal	Trinidad & Tobago 1	Played netball since 9 Cricket & basketball Netball coaching – schools, club, U16; U21; Senior National level	TT Netball coaching courses with Ministry of Sport TT Olympic committee- other sports courses Work with coaches from other sport Attend workshops by ANZ/Aus players	Police officer Coaching is a gift – about player growth About all round player development, always about developing the athlete; problem solving Information from other countries accessed Hunger for knowledge and growth

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Appendix 10 Summary table of coach journey into their current role

	Australia				England			NZ				Singapore		South Africa			T & T
<i>Coach</i>	Cali	Cor	Col	Ciji	Clai	Char	Cath	Cyn	Chlo	Cait	Car	Chun	Chow	Cas	Chin	Chad	Cryst
<i>Coach developer/education role</i>	✓	✓			✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
<i>Coaching experience referred to</i>																	
Participation – children		✓	✓			✓	✓	✓		✓		✓	✓	✓	✓	✓	✓
- Adolescence		✓	✓		✓	✓	✓	✓	✓	✓		✓	✓			✓	✓
- Adults								✓	✓	✓			✓			✓	✓
Performance – Emerging	✓	✓	✓		✓	✓	✓	✓	✓	✓				✓		✓	
- Performance	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓		✓	✓
- HP/Elite	✓	✓	✓		✓	✓	✓	✓				✓	✓	✓		✓	✓
National level	✓	✓	✓		✓	✓	✓						✓	✓	✓		✓
<i>Own sporting experience:</i>																	
Netball participation/player	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
Netball elite performer	✓				✓		✓		✓				✓	✓	✓		
Other sport participation	✓		✓		✓	✓	✓	✓	✓	✓				✓	✓	✓	✓
Umpire			✓									✓	✓			✓	
Coaching in other sports						✓	✓		-			✓		✓		✓	✓
Player coach					✓				✓								
Stopped playing					✓								✓				
Injury									✓								
Teaching background	✓	✓			✓				-	✓							
					M												
Full time netball role	✓	✓	✓		✓	✓	✓					✓	✓	✓			

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			OM														
<i>Formal education qualifications</i>																	
Teacher training	✓	✓			✓					✓							
Degree – Undergraduate		✓	✓		✓	✓		✓	✓	✓					✓		
- Masters or more		✓															
Netball qualifications						✓											
- Coaching assistant						✓							✓				
- Coach	✓	✓			✓	✓	✓		✓				✓		✓		
- Senior coach	✓	✓			✓	P			✓				✓				
- Master	✓	✓											✓				
Strength & Conditioning							✓										
Leadership	✓																
Other formal qualifications								✓	✓						✓	✓	