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QUESTIONING: A PATH TO STUDENT'S LEARNING EXPERIENCE

Wilson Ozuem* and Geoff Lancaster**

University of Gloucestershire, UK* and London School of Commerce**

ABSTRACT

Questioning and dialogue provide a framework for sharing educational objectives with students and for charting their progress. However, such an approach can generate feedback information that can be used by students to enhance learning and achievement. Moreover, the feedback generated from good 'questioning and dialogue' could help tutors realign their teaching in response to the needs of learners. Organisations or institutions of learning, which integrate productive questioning and dialogue as part of their classroom practices and commitments to students, provide enhanced meaningful connections between what their students are studying and the relevance both their thinking and their knowledge has in comprehending life issues and solving problems. Drawing on qualitative research perspectives, and adopting an embedded case study strategy, this paper aims to address the following foreshadowed questions: What are the connections between good questioning and student learning and achievement? What conscious knowledge and beliefs do tutors hold about productive questioning in their classes? The study findings indicated that Learners need to be motivated to ask questions and encouraged to get involved in discussions. Tutors should consider 'think-pair share strategy' in their classroom delivery.

INTRODUCTION

Extant literature indicated that tutors' questions are of little value unless they have some impact on the performance of students (Beyer, 1997; Gall, 1970; Dantonio and Beisenherz, 2001; Collay, 2011; McDonald, 2010). For example, Hunkins (1995) suggests that effective tutor questioning is believed to focus the attention of students on understanding learning outcomes, arousing their curiosity, stimulating their imagination,

and motivating them to seek out new knowledge. Implicit in this assertion is that effective questioning and dialogue are **invariably** essential tools for formative assessment. Formative assessment aids learning by generating information that may be of benefit to students and to tutors in further education. Questioning and effective dialogue in class or work-based settings enables students to restructure their understanding/skills and build more powerful ideas and capabilities. However, extant literature indicates that feedback information is not the sole province of the teacher (Black and Wiliam, 1998; Ecclestone, 2004). For example, Ecclestone (2004) noted that teaching in higher education is considered to be substantially different from teaching in primary and secondary education classrooms. Teachers' questions establish ways of operating in the classrooms and provide a means by which knowledge, particularly traditionally 'accepted' knowledge is contested. In addition, teachers' questions can help students to make connections between classroom knowledge and their individual experiences. This study aims to examine the extent to which questioning could be used to promote classroom practices and to meaningfully expand the involvement of students in their learning environment. This paper discusses the issues confronting classroom teachers and in doing so it reveals the tensions classroom teachers face as they do their work. In making these issues explicit, the study aims to encourage teachers to reflect more comprehensively over their classroom practices and to shape beliefs about student learning and teaching.

THEORETICAL FRAMEWORK AND CONTEXT

It is a truism that a tutor's questions play an important role in shaping classroom interaction and learning; however, it is a complex area of study. The complexity of the concept has undeniably made it difficult for researchers to agree on what classroom

questioning is. Research indicates that questioning is second only to lecturing in popularity as a teaching method and that classroom teachers spend anywhere from 35 to 50 percent of their teaching time facilitating question and answer sessions (Dillon, 1988; 1990; Hunkins, 1997; Kerry 2002). Wilen (1992) defines a question as “a specialised sentence possessing either an interrogative form or function. When raised by teachers, questions are instructional cues suggesting to students content, elements to be learned and ways of learning or experiencing said content” (p.3). Hyman (1979) argues that when students employ questions, they serve as guides to particular actions and as sentences that invite thinking and behaving along particular lines. Similarly, Aqvist (1980) classifies questions as special types of commands in which the questioner’s desire for knowledge can be met. It is accepted that people ask questions so that they can obtain information and in order to satisfy their desire for knowledge. Implicit in questions as commands is the acceptance of the belief that what is questioned is known or is possible to be known.

Several researchers who have studied classroom questioning have argued that questions and their nature really cannot be grasped by just looking at their forms (Dillon, 1985; Dantonio & Besienherz, 2001; Sattes & Walsh, 2005; Ornstein & Lasley 2000; Dantonio & Beisenherz, 2003). For example, Dantonio & Besienherz (2001) argue that questions are special kinds of declarative sentences that require consideration of the potential answers. Dillon (1988) suggested that in considering questions one must also consider that which is entailed within them, their presuppositions and potential answers. Implicitly, such thinking about questions confirms an age-old axiom that ‘in a question well-phrased, we have two-thirds of the answer’ (pp. 13). Dillon identifies presuppositions as sentences that precede the question sentence, and answers as sentences that follow the question sentence. It may be the case therefore that tutors, knowing about the presupposition of questions, allow for a reading of the student’s level

of knowledge and understanding. Also, for students to know this allows them to assess their present state of information and denotes possible future directions for the enquiry. Tutors, in responding to students' questions, serve to validate students' knowledge and encourage them to continue questioning.

TEACHING STUDENTS TO GENERATE QUESTIONS

Cognitive researchers are finding that students who make connections between new content and personal experience are engaging in productive and long-term learning. Additionally, these students develop intrinsic motivation and the skills of lifelong learning (Wells, 2001). Barell (2003) summarises the nature of good questions as follows:

- A good question reflects a genuine desire to find, a deep feeling for wanting to know more than we already know.
- A good question helps us think; it is one that is transcendent, one that helps us move beyond the immediate data or experience. (p.60)

Barell (2003) challenges teachers to create a culture of inquisitiveness, and to help students develop the skills requisite to asking good questions. He suggests modelling as a powerful strategy for attaining these twin goals. Similarly, Dantonio (1990) points out four principles of developing effective questions. The questions should:

- 1) contain words that are easily understood by learners

- 2) be stated simply, without being cluttered with additional questions or explanations
- 3) focus the student on the content and
- 4) identify the individual thinking operation students are to use in answering the question

Dantonio (1990) challenges us to place our thinking operation into teaching questions. These questions should be sequenced together to create opportunities for constructing concepts and other forms of thinking systems. Perkins (2003 p. 13) clearly asserts:

“As teachers ask good questions, they are modelling thinking for students. To ask good questions, teachers are required to have in-depth knowledge; additionally, they have to preview the text and then generate questions that will take students to more complex thinking...”

Perkins (2003) suggests that quality questions help students think about what they read – and do something with it. Effective questions help provide the scaffolding for student learning. By formulating these questions, we are required to grapple with what is important about the content. Learning questions will secure and sustain the interests of students and will encourage them to think about and learn the content and skills on which they will be tested. Vygotsky conceptualised the “zone of proximal development” as that knowledge a student can learn when assisted by a mentor (either a teacher or a peer) who has mastery in the area (Vygotsky, 1978). According to Oakes and Lipton, the role of the teacher is to identify the potential area of learning for each of their students and to pose questions or provide direct instruction that will assist them in mastering content and concepts within their zones. Underscoring the importance of

teachers' questions, Altermatt et al (1998) argued that the role that students themselves may play in influencing the number of questions to which they are asked to respond has been ignored. Consistent with this perspective, skilful teacher-to-student questioning is generally believed to be helpful in eliciting thoughtful and reflective responses that, in turn, may lead to the enhancement of students' learning experience. Student classroom questioning complements the instructional value of appropriately posed teacher questions by provided deeper insights and validating current understanding (Karabenick and Sharma, 1994; Presssley and Afflerback, 1995; Alexander, 2004; Parker and Hurry, 2007)

Questions and structures serve as scaffoldings because they provide important teacher roles to structure activities and groupings around and these keep students 'stretching' within their zones. Students not working within their zones are either working with content that has already been mastered (and are likely to be bored) or they are working beyond their readiness levels and are frustrated (Oakes and Lipton, p.81). In simple terms, scaffolding is a sequential framework of core questions that guide student thinking from one type of cognitive operation to a different type until the cognitive operation is completed thus creating question patterns (Bruce, 2008). Scaffolds make a skill-using procedure explicit, like a blueprint. This scaffold in building question patterns is the syntactical structure of the core questions that signal each change in a cognitive operation so that students can follow the steps in a cognitive operation.

PRODUCTIVE QUESTIONING AND LEARNING

In our attempt to initiate and guide thoughtful classroom discourse, we must be certain that the action words selected for our core questions clearly cue or trigger in our students individual kinds of cognitive operation. To do so, we must be keenly aware of the kinds of cognitive operation we want students to use in answering core questions. Gall (1973, p.3 - 4) proposes seven attributes that can be used to assess the quality of student responses:

- Clarity: the learner answers in understandable language without mumbling, failing to finish or confusing his/her thoughts
- Accuracy: the learner's answer contains no factual errors and is based on accurate information
- Appropriateness: the learner answers the question that was asked
- Specificity: the learner clearly identifies who and what he is talking about
- Support: the learner gives reasons, facts, or examples to support his statement, or he explains the criteria or assumptions on which he bases his opinion
- Complexity: the learner's answer shows that he is aware that there are many ways of looking at the problem being discussed, and that he must consider the options before a valid judgement can be reached
- Originality: the learner draws upon current knowledge and past experiences to create or discover ideas that are new

Gall (1973) suggests that in classroom discourse, teachers must constantly assess each student's response. On-the-spot decisions must be made to determine how well each student understands what he or she is saying. Actively listening to student responses and using their responses in asking timely, thoughtful follow-up questions fosters occasions

for teachers to delve into student thinking and promote instructional conversation. As Duckworth (1996) noted, it is the student's response, not the teacher's question that illuminates the breadth and depth of student knowledge. Students' responses unveil how they think about things and how they monitor their thinking operations. This is generally referred to as 'metacognition'; the process of thinking about thinking while engaged in the act of thinking. Flavel (1976, pp 232) crisply explains this as 'one's knowledge concerning one's cognitive processes or anything related to them, for example the learning-relevant properties of information or data.' Flavel (1976) refers to metacognition as consisting of three types of knowledge; declarative, procedural, and conditional. Declarative knowledge is our overt understanding of something. It is what rises to the top of our minds and is the information or knowledge that we share. Procedural knowledge refers to the mental steps, processes, or phases that represent how we arrive at information, or the details of how a cognitive operation is carried out. Conditional knowledge determines appropriateness. It relays the conditions under which something is to be done or applied. Metacognition engages learners in the active monitoring and regulation of their cognitive operations while they are involved in instructional conversations. It presents the control students possess through their knowledge. Beyer (1997) perspicaciously distinguishes metacognitive reflection and metacognitive processing. For Beyer (1997), metacognition is the act of thinking about thinking as one performs the thought act. Whereas, metacognitive reflection is the student's ability to explain their cognitive operation once they have performed it.

The values of sharing and engaging with others are quintessentially reflected in asking productive questions, and giving sufficient information. Dantonio and Beisenhertz (2001p. 44) fittingly argued that "to produce quality in terms of conceptual thinking students, and for students to apply productive questioning practices to their learning strategies, they must be able to understand what, how, and under which conditions they

need to use particular thinking operations’’(2001, p. 44). In their seminal work, Walsh & Sattes (2005) articulated that more than 40 percent of teachers still use the traditional mode of teaching; a linear process of instructional modality which classifies students as passive recipients of information. Walsh & Sattes (2005) argue that the vision of a classroom as a community of learners challenges traditional views of teaching, learning, and questioning. The conventional model of teaching as ‘knowledge transmission’ treats students as sponges that absorb a teacher’s wisdom.

Walsh & Sattes (2005) believe that classroom learning is a social activity that requires students to interact with their tutors and peers as they engage with the content. Their views correspond with the argument put forward by Wiggins and McTighe (2000) that a tutor is a designer of curricular and instructional activities that facilitate the interactions required for learning to the level of understanding. This view of tutor and student roles acknowledges that questioning is a core function of both learning and teaching (Wells, 2001).

CLASSROOM QUESTIONS AND AUTHENTIC LEARNING

Researchers have explored the effects of higher level and lower level questions on student performance. Research indicates that question levels should be related directly to learner objectives. To research the effectiveness of higher order and lower order questions, Bloom (1987) has been widely referred to and accepted as a means of classifying classroom questions. In most of these studies, teacher questions intended for knowledge and comprehension levels are defined as lower-level questions. Teacher questions intended for application, analysis, synthesis, and evaluation were coded as higher-level questions (Perkins, 1998).

Knowledge	recognition and recall of facts
Comprehension	interpretation and translation, summary or paraphrasing giving information, requiring knowledge in order to demonstrate comprehension
Application	uses information in a situation different from the original learning context; requires comprehension of knowledge in order to apply to a new situation
Analysis	separates the whole into parts until the relationship among elements is clear, requires the ability to apply information in order to analyse
Synthesis	combines elements to form a new entity from the original one; requires analysis in order to synthesise
Evaluation	involves acts of decision making, judging or selecting based on criteria and rationale; requires synthesis in order to evaluate.

Adapted from Bloom (1987) Taxonomy of Educational Objectives: Cognitive Domain

In recent years, Bloom's (1989) theory has been criticised by a number of researchers (see for example Beattie, 2004; Askew and Lodge, 2000) for its lack of contextual consideration in a learning environment. For example, Askew and Lodge (2000) developed an alternative taxonomy which incorporates the social environment of learning as an enabler of interaction and positive feedback (see Table 1).

Model of teaching	Role of teacher and goals of teaching	View of learning	Feedback discourse
Receptive-transmission	<ul style="list-style-type: none"> • Expert • To impart new knowledge, concepts and skills • The use of paragraph spacing is inconsistent in this table, consistency please 	<ul style="list-style-type: none"> • Cognitive dimensions stressed • Learning is individual and affected by ability which is seen as fixed • Learning involves increased understanding of new ideas, memorising new facts • Practising new skills and making decisions based on new information 	<ul style="list-style-type: none"> • Traditional discourse in which 'expert' gives information to others to help them improve • Primary goal to evaluate • Feedback is a gift
Constructive	<ul style="list-style-type: none"> • Expert • To facilitate discovery of new knowledge, concepts, skills • To help make connections, discover meaning, gain new insights 	<ul style="list-style-type: none"> • Inconsistent indentation, please amend, content is good, presentation requires revision Cognitive dimensions stressed, although social dimension recognised to some extent • Learning affected by ability which can develop and is affected by experiences • Learning involves making connections between new and old experiences, integrating new knowledge and extending established schema 	<ul style="list-style-type: none"> • Expanded discourse in which 'expert' enables others to gain new understandings, make sense of experiences and make connections by the use of open questions and shared insight • Primary goal to describe and discuss • Feedback as a two-way process (ping-pong)

Co-constructive	<ul style="list-style-type: none"> • More equal power dynamic • Teacher is viewed and views himself or herself as a learner • To facilitate discovery of new knowledge, concepts and skills • To help make connections, discover meaning and gain new insights • To practise self-reflection and facilitate a reflexive process in others about learning through a collaborative dialogue 	<ul style="list-style-type: none"> • The cognitive, emotional and social dimensions of learning are seen as inter-connected and equally important • The view of learning is extended to inconsistent line spacing include reflection on the learning process itself and meta-learning (learning about learning) 	<ul style="list-style-type: none"> • Expanded discourse involving a reciprocal process of talking about learning • Primary goal to illuminate learning for all • Feedback is a dialogue, formed by loops connecting the participants
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Table 1

Adapted from Askew and Lodge (2000), Model of Teaching, Views of Learning and Related Discourses on Feedback include on same line as Table1 above

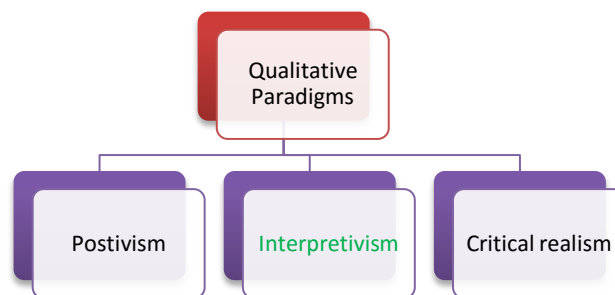
Askew and Lodge (2000) categorise teaching models into receptive-transmissive, constructive and co-constructive frameworks. The current paper is this a chapter? examines how questioning and feedback could improve students' learning. In conceptualising this study, I was interested in developing a form of collaborative investigation with tutors and learners that would address their concerns, involve them in the research process and aim, at least in part, to improve classroom practices. The study recognises that learning occurs in a co-constructive environment, where feedback is a dialogue, formed by loops connecting the participants. Askew and Lodge (2000) graphically identified three disparate models of teaching; receptive-transmission, constructive, and co-constructive frameworks. Askew argued that most tutors are involved in receptive-transmissive and constructive models of teaching which are detrimental to the development of an interactive learning environment. Following this assertion, Askew and Lodge further argued that learning is a reciprocal process which incorporates a dialogic feedback formed by a loop connecting all participants. It is clear that teacher questioning plays an important role in establishing patterns of classroom interaction. However, contrary to common-sense beliefs about questioning, it appears that teacher questioning may actually limit inquiry and mitigate against a process of exploration. As Dantonio and Beiserhertz (2001 p.23) observe, 'classroom teachers persist in asking lower-level, recall-oriented questions, requiring students to do little reflective, creative or critical thinking'. Significant to this study is the observation that most teachers are unaware of the ways in which their classroom practices legitimate the asymmetry of knowledge production, rather than following a dialogic learning process in which feedback is part of the learning practices.

METHODOLOGY AND METHODS

Denzin and Lincoln (2000) usefully summarised the use of qualitative research strategies thus: ‘the province of qualitative research accordingly, is the world of lived experience, for this is where individual belief and action intersect with culture. Under this model there is no preoccupation with discourse and method as material interpretive practices that constitute representation and description’ (p. 8). The key point in Denzin and Lincoln’s (2000) argument is that qualitative research is a situated activity that locates the observer in the world. One of the aims and objectives of the current project is to ‘explore the level of classroom questioning between students and teachers’ and this will be implemented with the collection of empirical materials and analysis of the data generated from this exercise. Fundamentally, the section seeks to explore what research strategy is best suited for examining and meeting the underlying aims and objectives. Understanding questioning between teachers and students requires an in-depth understanding of the context in which learning takes place. In this way, teachers and students both shape and are shaped by their particular learning environment. The primary focus of the current study is on the business department of academic staff and their students and how learning is developed and nurtured within the department. Thus, this study is primarily qualitative in nature, not quantitative. The former aims to ‘capture lived experiences of the social world and the meanings people give these experiences from their own perspective... for coping with complexity and naturalistic settings’ (Corti and Thompson 2004, p. 326), whereas the latter tends to be extensively used to describe a trend in that the research problem can be answered by a study in which the researcher seeks to establish the overall tendency of responses from individuals

and to note how this tendency varies among people (Creswell, 2008; O'Toole & Beckett, 2010).

Newby (2010) explains that a researcher's philosophical view will influence the type of qualitative approach adopted for research. The choice of philosophical orientations in qualitative research is varied. For example, Orlikowski and Baroundi (1991) identified three broad categories of philosophical suppositions in qualitative research: positivism, Interpretivism and critical realism.



(Table 2) Adapted from Orlikowski and Baround (1991) Qualitative Research Paradigms

A researcher with a positivist view of the world believes that there is objectivity '*out there*' and that research findings are independent of the researcher. Yang (2006) articulates that 'the positivist approach has inevitable limitations to studying a teacher's questioning considering that it regards the various purposes of teacher's questioning, interaction of teacher and learner, and the individual characteristics of the learner, and it reduces the effect of a teacher's questioning into difference of the score between an experimental group and control group' (p.196). Yang (2006) suggests that under the positivist assumption, questioning can be context-proof, student-proof, and teacher-proof, and that the type of questioning can be graded into degrees of effectiveness. In fact, the level of question can be generalised

independently of the subjects and context in that the cognitive process type needed by each question is fixed in itself regardless of whether it fits the mandates of the context within which they find themselves operating. As insider-researchers, we do not hold this view of remaining independent of the research subjects and the context in which the current study operates. A researcher with a critical perspective of the world views that what the senses show us as reality is the truth; that objects have an existence independent of the human mind (Gomm 2008; Myers, 2009; Opie, 2004; Tracy 2013). As discussed earlier, this study seeks to understand the level of classroom questioning as it exists in a particular context, ‘attempting to make sense of or to interpret, phenomena in terms of the meaning people bring to them’ (Denzin and Lincoln, 2005 p.3) and to connect this with an understanding of the context. Interpretivist researchers seek to describe and understand socially constructed realities. They commonly aim to generate socially relative knowledge about some social phenomenon, and often proceed by interpreting experience and observation using language-based methods (Butler-Kisber, 2010; Costley, Elliott, and Gibbs, 2010; Ozuem, Howell, and Lancaster, 2008). The interpretative perspective fits in with my view of the world and the way in which the level of classroom questioning is contextually bounded in a complex learning environment (in this case, college). Mason (1996) argues that all qualitative research should be formulated around a particular strategy. The current study is formulated around an ‘embedded case study strategy’ (Yin, 2003). Payne and Payne (2004) describe a case study as the detailed study of a single unit: ‘The social unit is usually located in one physical place, the people making the unit being differentiated from others who are not part of it. In short, the unit has clear boundaries which make it easy to identify’ (p.31). Payne and Payne specify that a case study should have a real life context and the phenomenon of interest should not be divorced from its context. However, there is some contention related to the word ‘case study’, which has resulted in multiple meanings. For example, Myers (2009) argues that a ‘case

study uses empirical evidence from one or more organisations where an attempt is made to study the subject matter in context. Multiple sources of evidence are used, although most of the evidence comes from interviews and document' (p.76). Myer specifies three elements which need to be present to some degree for any research to be classified as a case study. A case study according to the author:

- 1) must always involve a firm or organisation
- 2) does not normally involve participant observation or fieldwork, and
- 3) can be conducted according to positivist, interpretive, or critical tenets of what is considered to be 'good research'.

As many researchers have noted, it is crucial to take account of both the social context and immediate discourse context of questions in terms of social meaning. Thus, whether Payne and Payne's definition of case study or Myers' categorisation of three elements of case study (positivism, interpretivism and critical realism), meets our aims of delving into the level of classroom questioning in a complex environment. Drawing on the work of Myers (2009), the basic research strategy for this project involved an interpretivist case study. This strategy was employed based on the nature and the size of the setting. Such a qualitative strategy can offer a holistic view of the issue under investigation by providing 'retrospective insights' into the level of classroom questioning within the organisational setting (Denscombe, 2010). Additionally, the use of a case study strategy is appropriate given that the current study is an exploratory examination of the level of questioning in a particular organisation. We considered several research strategies such as action research and survey, but decided to use case study based on its embedded relevance to the phenomenon under investigation

and the researchers' judgement on 'typicality or interest', which is classroom questioning in further education sector in London (Robson, 2011). Such a qualitative approach can offer a holistic view of the issue under investigation by providing a clear account of the respondents' understanding of the phenomenon. As recommended by Valsiner (1986), 'The study of individual cases has always been the major (albeit often unrecognised) strategy in the advancement of knowledge about human beings' (p. 11). In a similar vein, Cook and Campbell (1979) noted that 'case study as normally practiced should not be demeaned by identification with one-group post-test only design. Rather, case study is not a flawed experimental design; it is a fundamentally different strategy with its designs' (p. 96). The current study adopted a single case study to examine the phenomenon in its context

OBSERVATIONS

The aim of this project is investigate the connections between good questioning and student learning and achievement between 2011 and 2012 in a further education college in London. Observation took place in one of the departments. When asked if they were interested in participating in a small-scale qualitative teaching observations, twelve members of staff indicated interest. Nine participants were subsequently invited to a meeting to discuss permission to audio record all observations. The participants approved of this on the understanding that the recordings would be destroyed two months after the analysis of data. Subsequently a pilot observation session was conducted in another department. The observations were spread over two weeks, in order to accommodate participants' availability. Notes were made 'surreptitiously' (Hammersley, 2008) and in an attempt to capture additional information to provide complementary data for the audio-recording notes were taken at regular intervals and in some cases a full description of the classroom activity was

noted in order to capture the essence of the process and form an accurate basis for subsequent reflection and analysis (Martin and Double, 1998). During two of the observation sessions, more than two interactions between tutors and students took place making it difficult to take notes and observe. The audio recorder helped capture the varied activities during the session. After all the observations had taken place, one-to-one meetings were carried out with the tutors and these lasted around 30 minutes each. During the meeting, participants agreed that, on reflection, observation was useful but required future observation sessions and training in order to improve on their teaching skills. In addition, they agreed that confidence in observations had risen and each wanted to know which areas of their teaching could be improved upon.

FOCUS GROUPS

Based on the original plan, four focus groups were conducted with students. Consequently, four classes were selected. Two of these classes had previously registered complaints about their tutors' classroom delivery. In terms of the remaining classes, fewer complaints had been received. As Denscombe (2010) recommends: 'People tend to be chosen deliberately because they have some special contribution to make because they have some unique insight or because of the position they hold' (p.181). Similarly, Kitzinger (2005) argued that researchers tend to work with familiar faces or pre-existing groups, individuals who know each other through living, socialising or working together. According to Kitzinger, such familiarity facilitates and enhances 'naturally-occurring group' and giving researchers the opportunity to identify 'fragments of interactions' within the group (p.62). Like Kitzinger, Warr (2001) crisply states:

Feedback epitomises the ambiguous nature of the data that are collected from existing groups, and is at the intersection of naturalistic and contrived interaction. Both features are brought

together in focus group interaction because people feel comfortable being with people whom they know, and the discussions draws on existing group dynamics and experiences (p. 121).

Warr contends that the success of focus group interviews is based on their ability to realise the familiarity of the participant to improve the data collection process in a more interactional platform. One of the groups was selected because they had expressed an interest in participating in interviews. The other group was selected to provide additional insights and perspectives related to the nature of questioning. During visits to these four classes it became difficult to select individuals for inclusion in interviews. The initial plan to randomly select five students from each of the classes was abandoned because the researcher was familiar with the students. Instead a voluntary system of self selection was adhered to. The research aims were explained to all participating classes and 25 students from two classes subsequently volunteered to participate in an interview. The students agreed that interviews would be held during their lunch break. Since their lunch break lasts for only an hour all sessions could not be accommodated on the same day and students were asked to choose which day they preferred to participate in interviews. The interview questions were piloted on three students from different institutions. Some of the questions were reworded either because the concepts were too difficult or answers were not directly related to the theme of the investigation.

Participants were given some background to the research and it was made clear that they could withdraw from interviews at any point in time. The number of participants was scaled down to six in each focus group. In all, some 24 students participated in four focus group interviews. Students agreed to audio recording taking place during the focus groups following some initial reluctance. The participants agreed to be recorded following an assurance to destroy the data later. Six semi-structured interview items comprised the broad structure of

focus groups and formed the framework for the interviews. Each question was accompanied by some ‘prompting questions’ in order to prompt participants. One of the advantages of this technique is that participants’ responses are guided by interviewer questions and respondents are afforded the opportunity to freely express themselves within the areas of the research. The focus group interviews lasted between 50 minutes in each case.

GENERALISABILITY, VALIDITY AND RELIABILITY

In terms of the validity and reliability of the study, Liamputtong (2010) argues that ‘qualitative research holds the view that reality is socially constructed by an individual and this socially constructed reality cannot be measured, although can be interpreted ‘(p.20). This paper set out to explore the underlying phenomena using three major qualitative strands of observation, focus group interviews and theoretical reviews. The primary aim of such methods is not to confirm any existing hypothesis related to classroom questioning. More so, the aim is not to disprove any existing theoretical construct in classroom questioning. These methods accept that the outcomes are not geared towards a ‘definitive answer’ to any particular set of problems but to provide useful and valid expositions that contribute to the understanding of an existing problem. The combination of these three qualitative data collection techniques in a small scale qualitative research provided a richer understanding of the phenomena.

The research is therefore centred on finding out the level of questioning and to suggest some potential solutions for how questioning could be used to improve tutor and student engagement. The research therefore explored the ‘favoured approaches’ utilised and these were not hinged on generalisable results but geared towards how people do things. It is not the intention to provide a ‘God’s Eye’ frame of reference. Rather the purpose is to understand how questioning is being conducted in a particular setting. The underlying rationale for

taking these particular approaches in relation to classroom questioning is that these methods would facilitate a complete picture of the nature of questioning that exists within a particular educational setting. Data collection was therefore triangulated to frame the enquiry which would be useful for the personal development and organisational practices of the researcher and the researched.

SELECTING DATA AND FINDINGS

The data was analysed in three stages (Shortland, 2004; Guest et al 2011). Observations were analysed to look into the patterns of questioning and to provide a richer understanding of individual knowledge and the methods of questioning. Second, a cross section of respondent comments were examined in search of patterns and features that justified their knowledge of questioning. Considerable efforts were made to ensure that post observation interviews focused on the pertinent issues related to the each observation. Following Miles and Huberman's (1984) and Ozuem and Lancaster's (2012) categorisation and theme analysis, patterns and features were generated and thematically segmented based on 'descriptive codes' strengthening the connection between good questioning and student learning and achievement. The purpose is to answer the following research questions: *What are the connections between good questioning and student learning and achievement? What are tutors' conscious knowledge and beliefs about productive questioning?*

TYPES OF QUESTIONS USED

The transcripts for teaching observations were provided to participants for validation before proceeding to a synthesis of their perspectives in the study. It is important to understand the variables within which the teaching observations were conducted. Four major variables (1. encourages elaboration – open question, 2. probe question 3. checks understanding and 4. offers encouragement – thanks, expression of interest) bullet points were employed to assess and to monitor the level of questioning and interactions in classes. The data generated was analysed to identify areas where productive questioning and responses were involved. Observations were recorded based on the occurrence and relationships of the variables. Sometimes, these variables were dependent on one or more variables, thereby occurring simultaneously in the context. To this end, the level of questioning and interaction that existed in classes might be placed in one or more of the related variables. Taken together, two patterns of questioning were largely focused on probing questions, whilst the remaining teachers focused on checking understanding.

TEACHERS' POST-OBSERVATION INTERVIEWS

Nine teaching observations were conducted, which were followed by an individual interview session. The underlying aim and objective of this section is to answer the question: *What conscious knowledge and beliefs do tutors hold about productive questioning in their classes?* The focus of the interview session was to discuss areas for which questioning is productive or not effectively used. While some of the teachers believed that student success depends on the effectiveness of their teaching, others claimed that the nature of the students within the college requires much more than effective teaching. When T1 asked about the low level of questioning his class, he responded that:

We are dealing with challenging students and most of them are not really paying attention to the lectures. They are too preoccupied with their work and family issues. I spoke to one of

them the other day. He mentioned that he could not concentrate because he has not worked in the past two months. I don't really feel encouraged to ask questions to people who are not willing to participate.

This respondent indicated that some of the students were unwilling to actively participate in class activities due to various family commitments with other related issues. In the observation session, T2 posed some interesting questions to the students but never allowed them enough time to think about the answers before answering the questions. She claimed that students were not naturally willing to participate in the class. The questions were open, requiring that students explain their answers related to the content. However, there was a one-off focus on learner responses, which the tutor would have refocused and verified with the learner before answering the questions. As a result, this limited the depth of learner recitations and interactions with other students since there was no attempt to follow-up questions.

I've tried on several occasions to ask questions in class but when they refused to participate, I ended answering my questions in most cases.

Similarly, T3 avers that:

I get no answer if even though I gave them some notable cues. There are classes that they chose to participate. In fact, I choose not to ask too many questions because of the 'no idea' culture within the class.

During the observation sessions, T1, T2, T3 had a tendency to answer the questions themselves most often and when asked why posing questions without giving the students the opportunity for 'wait time' to think before providing the answer, they concurred that students are fond of 'keeping quiet' rather than making attempts to answer the questions. They admitted that one of the reasons was the drive to complete the 'lesson on time'. Similarly, T4

admitted that questions could be a set back and because of the pressure to complete the scheme of work, he never thought of questioning as a technique for developing student learning.

I never really considered the importance of questions in my class. So much so, we are under mounting pressure to complete 90% of our 'scheme of work' by the end of the term. To be honest, too many questions could drag one back.

Interestingly, T5 claimed that he never bothered to ask questions due to the inherent culture within the class. For him, students are always passive and do not respond to questions; a predominant culture which he claimed exists within his class setting.

I actually did not per se recognise that few questions were posed to my students during the session. This is something I need to seriously consider in my subsequent classes.

Presumably this has not really strike a chord in my classroom practices. It is a matter that requires training and development within the college. I, for one, have not received any formal training.

My awareness on the importance of questioning started 7 years ago when I was a teaching assistant. I've always found questioning interesting and I've tried to maintain this practice as it could be. I was fortunate though to receive some support in my previous employment on 'leading quality questioning'. I think this institution has not done much on staff development on class practices.

T5, T6, T7, and T8 generally organised learning well in the classroom but posed few recall and probing questions during sessions. The teachers, as with their students, experienced several minutes of interaction. Perhaps, this is because they had received some form of training and prior transferable experience. One interesting observation that emerged was the perceived need for greater training and support within the college. Whatever the reason,

teachers noticed that the need for productive questioning requires professional training and continuous development.

Optimistically, the nature of student is that they want to study. There is an inner-self drive toward understanding the world they live in. I found questioning as an interesting means of understanding my students' inner-self and this had really worked out for me.

T9 posed several questions relating to the requirements of the lesson plan and the course content and this allowed students a decent level of interaction with her. She argued that posing questions is one of the means to actively interacting with students and to understanding their thought process. The teacher's questions were clear, open and focused on the process and the course content. The teacher asked some narrow and focused questions. One of the learners provided half of the answers and the teacher made no attempt to clarify the differences between the half-answered responses before answering the questions. Although, to a certain degree, the teacher would have clarified and verified the questions in greater detail so that other learners could contribute to the same questions before moving on to answer the question.

STUDENTS' PERCEPTION OF QUESTIONING

Several themes emerged from the students' focus group interviews. These comments are examined and interpreted in the context of the researcher's subjective understanding of the issues. In so doing, respondent comments were critically presented to reflect their perspectives on the level of questioning in their classes. For example, a respondent was

asked to explain the nature of classroom questioning within her learning environment and queried:

“Do you mean interaction, classroom questioning in this college? We have some professionally competent tutors in our department. But there are some tutors who come to the class to preach rather than teach. These tutors are very boring and unprepared for class. In most cases, I spent my entire class sleeping in the case.”

This particular respondent acknowledged that some teachers are professionally competent in their level of questioning. However, he indicated that there are still some teachers who might be professionally qualified but their mode of teaching is rather one-way ‘preach’ than a two-way interactive process. The following respondent expresses a similar view:

“There are some lecturers who basically have two ways of communication. They always ask questions and encourage feedback. Others basically come to the class with the intention of just imparting their knowledge to the student. This group of teachers are too preoccupied with the procedural course outlines and pressures to complete them before the end of the class. Asking questions poses some constraints on their target.”

The level of students’ thought is influenced by their questions in class. If questions are not properly dealt with, this will influence the way information is processed and analysed. If teachers’ questions are used to analyse information, perhaps looking for likely antecedents to some events, students will contemplate relationships by relating these to the outside world. It can be argued that teachers are too concerned with the ‘procedural course outlines and the pressures’ to complete their lesson without being cognisant of checking understandings. Disinterested students seemed not to pay much attention to some of the tutors, particularly

those whose mode of delivery was time-conscious rather than rigorous. As the following respondent indicates:

“It is very much a quiet atmosphere and students are not as attentive as they should be in normal classes. They expect to be bored at some point in time in class. Hence we occupied ourselves with one thing or the other, playing online games or using social networking sites.”

In simpler terms, this respondent is observing that classroom questioning and delivery is one-way traffic. Although, he referred to the mode of questioning and interaction in a way likened to a transmissive mode of interaction, questioning as it exists in the classroom does not provide room for learners to be involved in the learning process. Similarly, another respondent said:

“In some classes there is a greater level of engagement versus other classes. There are times when students ask questions with little tutor engagement, while there are other times when tutors ask questions and students are not engaged. This occurs because some students view the questions as unnecessary or not directly linked to the class content. The greatest level of interaction and engagement occurs when both student and tutor ask questions and respond on issues pertaining to the area of content for that class. We really found it difficult to link some of our tutor questions to course content.”

Tutor questions not only contribute eventually to increased achievement, but also to heightened knowledge, and in many cases a more positive effect between the tutors and the students. Student enquiries in the class generate an enriched awareness of the cognitive process. Learners should have positive feelings about questioning in class, since questioning is invariably linked to the validation of understanding. Productive questioning should be capable of fostering a free-for-all dialogue in the learning environment. One of the respondents asserts that:

“Some tutors appear to design their lesson plan with the aim of creating more interaction but others do not. There is general agreement among students that they feel that they have learnt more content when the tutor creates opportunities for engagement and interaction. There are a few tutors that seem open to answering questions and challenging students intellectually. In classes that do not have this type of engagement or interaction students are likely to fall asleep, have side conversations and feel like their time was wasted. This sets the tone for the rest of the term and students sometimes come to class late and generally put little effort into the class. Unfortunately, in most classes I attend the level of questioning is fairly bad, leading to dialogue that is not interesting or informative.”

Learners should be free to actively participate and to have the confidence to engage in questioning activities. Accepting student involvement is essential in developing a cognitive process. Tutors' encouragement challenges students to reflect over their understanding and to validate the nature of this understanding. The learning environment, which is complex and stimulating, enables learners to interact, reflect and propel students towards a greater understanding of information. A stimulating learning environment will eliminate other side activities and focus on the course content. As one of the respondents illustrates:

“I get discouraged from some of the classes simply because of their non-interactive nature. Some tutors just give detailed course materials and other related course hand-outs. They don't even care to explain and digest these materials in a language we can understand. I come to the class to read and study these course materials while such a class is going on.”

Perhaps this respondent is unhappy about the conduct of delivery in the class. There is a lack of classroom questioning and dialogue within the class. Some of the tutors are concerned with providing course materials to learners without the accompanying interaction. Course materials are essential tools for classroom questioning and dialogue. Efficient use of course materials could provide learners with a deepened knowledge of the subject areas.

“Sure, there is no classroom dialogue in this college. Some lecturers do not give students the opportunity to ask questions in the class.”

The discussions are very relevant and true for most classroom settings. As a lifelong learner I sometimes get the impression that some lecturers feel challenged or alternatively threatened by questions for fear gaps in their knowledge may be highlighted. Personally, I employ the use of an abundance of questions to ensure the students are alert and engaging with the subject content.

This respondent identified some explicit themes related to classroom questioning and dialogue. Learners are not given the opportunity to ask questions in class. Asking questions in class not only helps learners validate their understandings but also builds their confidence in the learning environment. The respondent is concerned about the nature of interaction that existed between tutors and learners in the classroom. Questioning brings forth knowing, perceiving, and understanding one's world. Questions bring out the complexity and richness of knowledge through constant feedback. Some learners possess natural curiosity and a need to explore physical and psychological worlds. These curiosities can only extend frontiers of knowledge when active feedback is provided to students in the class. It is essential that tutors are well-prepared to cater for the needs of these students, who consider questioning as a key vehicle that elicits awareness. Similar to this assertion, one of the respondents notes:

“It becomes clear to most students when a tutor does not have sound working knowledge in a subject area; the tutor simply does not want to be bothered to think about an appropriate answer. This deters students from asking future questions.”

What is interesting is the number of times these young learners talked about the absence of dialogue in their classes. Although teachers are reputable in their respective fields, learner intentions are not made explicit. A significant feature of effective questioning in many studies is the importance of informing learners of the learning objective of a task and the extent to which valuable answers are given during class sessions. In addition, this respondent indicated:

“I have been studying here for 5 years. In the past, we have seen a series of teaching observations when I was studying the Tourism and Hospitality course. We have not seen any of these observations in the past 3 years. I think things were different when there were teacher observations in the college. Lecturers were more prepared and engaging. They used different teaching methods to stimulate students in the class. Even the marketing department played some important roles by conducting tutors and students’ assessment.”

Students with learning orientations can talk themselves through the difficulties they encounter, including the difficulties in the learning process. The majority of the respondents have underlined why teaching remains a one-way process. Learning is traditionally couched in mechanistic and rationalistic models whereas answers to student questions are a gift from the experts.

“Asking engaging questions can be spontaneous. However, tutors have to plan the class learning objectives and how they intend to achieve them. Therefore, some questions as well as the actual information for the lesson must to be prepared before the class. Another way of improving the level of engagement between tutors and students is by having tutors spend time observing their colleagues conducting a lesson. This can allow for open feedback and discussion as well as learning techniques for teaching between tutors.”

Critically aware learners grasp that knowing – with its antecedents and understanding – involves two-way communication. For learners to ‘know’ something, they must understand it on their own terms – to question how learning is being formed rather than reacting to a monologue. Critically aware learners appreciate that understanding involves dialogue with what one hears when listening to others. A critical learning environment necessitates the posing of questions for the class and generating issues in response to what is being thought. The dialogue with one’s own voice and the myriad of voices within which learning takes place shifts the focus of student learning to the outside world. Asking questions helps generate a clear understanding of making sense of the world. ‘Meaning’ is not that which can be transferred to students by monologic dispositions; rather, meaning should be a two-way process. Students should be given the opportunity to pose questions, and to define and clarify complex issues related to understanding the world.

CONCLUSION AND IMPLICATIONS

The study findings indicates that questioning and dialogue in the classroom imply responsibility on the part of the tutors and learners to be actively reflexive in their thinking and to challenge some taken-for-granted assumptions in the classroom learning environment. Tutors should allow space for learners to ask questions and enough time should be given to learners to think and digest issues related to the questions. Learners need to be motivated to ask questions and encouraged to get involved in discussions. Teachers should consider ‘think-pair share strategy’ in their classroom delivery (Tienken *et al* 2009 p.43). After each

question, tutors should allow their learners time to think about their responses. They should also turn to their partner and share ideas. After a short hiatus, teachers should randomly sample the class for responses. To this effect, students should be allowed to interact and exchange ideas during their classes. It seems from the results that questioning is beneficial to both tutors and learners under effectively organised learning environments. Although tutors are highly skilled and well qualified in their respective fields, they do not seem to discuss the importance of questioning as a learning tool with their learners. This is in line with previous studies suggesting the relevance of self-regulating strategies and learners' awareness of tutors' teaching strategies could improve student's performance (Parker and Hurry, 2007; Altermatt, Jovanovic and Perry, 1998). The emerging awareness of the benefit of well-organised learning environments corroborated earlier research on the mediating role of productive questioning on learning engagement, learning process and learning experiences (Dantonio and Beisenherz, 2001; Dantonio, 1990; Nkhoma et al 2013)

In addition, this work highlights that the practice of preparation would enormously benefit, both experienced and novice tutors to pose more productive questions to their learners. As noted more than a century ago, Louis Pasteur said, "Chance favours only the prepared mind". Tutors can prepare a list of questions related to past and present lectures prior to their classes and this would guarantee more time to reflect on the nature of their questions to their learners. Contextual data in this study shows that greater numbers of tutors failed to pose productive questions in their classes. The study findings proposes that tutors must take into consideration several pedagogic strategies such as questioning time, questioning strategies, and preparation strategies in order to improve students' awareness and understanding of the subject. Such evidence demonstrates the need for further alternative methodological suppositions to uncover, in granularly depth, other aspects of classroom questioning other than the ones discussed in the current study. The current study examines the level of

questioning in a particular department within an institution. The perceptions generated from the respondents were only those involved in a particular department. To determine the level of questioning, a holistic study that would consolidate the perceptions of the entire teaching staff is required or even, a broader study, involving several further education colleges in UK. Also, the methodological perspective adopted identified a number of concerns. For example, some of the respondent's observations could not be placed on predetermined variables used in the data collection technique. The observation schedules were limited to four variables, which did not give any allowance for 'closed questions' in the data-collection process. In any subsequent study, the designing of the data collection techniques should take into consideration other variables, but should not be limited to the sort of unstructured and open variables utilised in the current study.

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