Uncovering Connection Between Propositional And Practical Knowledge In Professional Development Activities Of Teachers: Leadership Role And Conversation Mechanics

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Abstract
Structural reforms in teaching have limited effect unless the intended changes are implemented based on robust professional development within an environment where individuals adapt cautiously on margins of cultural practices. This behaviour is nurtured overtime and is sometimes seen to positively encourage the forging of "personal connections" through leadership. Reflective questions that underpinned the study was How recursively alternative views are refined by reflecting on their effects until satisfaction with the consequences are arrived at? Using a qualitative case study underpinned by collaborative methodology design that adopted a video intervention, a sample size of four teacher leaders was selected through theoretical sampling technique. Reflective dialogue served as the main data collection tool. Using thematic analysis, some findings that came out were that, Rich and deep professional dialogue were developed, Conversational Format and Frequency of Seeing Practice were necessary to link prepositional knowledge to practical knowledge. Further, the cultural norms support the development of deeper understanding in practice. Overall, leadership interactions are critical in both preparing tomorrow's leaders and their changing behaviours by towing leaders professional development journey to perfection within a contextualised cultural environment. It is therefore recommended that professional development activities need to rely on the connections between leaders' beliefs within any cultural dispensation for effectiveness.
Keywords: *Prepositional Professional knowledge, Practical knowledge, hierarchical transfer of knowledge*

I.   Introduction

Both developing and developed countries are engaging in serious and promising educational reforms. Most importantly the professional development of leaders has been given much attention because leaders are considered as significant key change agents. In response to the attention for change, various models have been employed and have moved more towards emphasising leaders' professional practice explicit and open for inquiry (Leat & Lin, 2003). The sharing of knowledge from the collaborative activities among teachers leaders enables a greater access to learning that is tied to their actual work which Pontefract and Hardman (2005) have called for teacher development strategies where teachers can explore their beliefs as well as reflect on their classroom practices.

The propositional professional knowledge and the practical knowledge of leaders generally are skills that are linked to what leaders have to demonstrate in their work places. Thus, if leaders do not have enough exposure to exhibit the propositional knowledge which should transcend to the relevant and appropriate practical knowledge, challenges emerge. Hence leadership prepositional knowledge need to be linked to practical knowledge.

In any leadership and teachers interaction process, one suggestion relates to advancing the Ghanaian communal cultural principles of communality to support teachers discuss their practices (Owusu-Mensah, 2006). This argument was premised by the fact that the Ghanaian culture recognises everyone within an environment as the "brother's keeper", and the problem of an individual is the problem of all in the community. This communal attitude involves debate and negotiations where the individuals wrestle with ideas to develop better understanding, share ideas and learn from each other collaboratively. Consequently, leaders and teachers can use their immediate colleagues within the environment to engage themselves to discuss their problems. Such an undertaking can support suggestive evidences in literature that resonate and reflect leaders and teachers professional and classroom realities when they engage in critical reflections on their practices. Implicit in these understanding is the fact that teachers" classroom practices are found as a function of their personal socio-historical past, beliefs, and school culture and values (Wideen et al., 1998; Scribner, 1999). 'Teachers need to see how the activities promote new opportunities for growth, exploration, learning, and development' (Villagas-Reimer, 2003 p5 in UNESCO ILLP, 2003) through dialogue.

It is therefore important to consider how rich and deep leaders and teachers can engage with the dialogue. Rareiya (2005) therefore think there is the need to develop in leaders and teachers the disposition to interrogate their unidentified knowledge about their practices. Without this, the leaders and teachers are more likely to be engulfed by the demands of of their practices as usual and less likely to interrogate the ways they read and experience their practice" (p331). This suggests that diagnosing their practices is important to help leaders and teachers understand their practices as they could learn in new ways from such interactions.

Hatton and Smith (1995) have also pointed out that reflective dialogue allow teachers to think and resolve an issue which involved active chaining, a careful ordering of ideas linking each with its predecessors. Although it is difficult to establish hard empirical evidence to support this view in Ghana, there appears to be good grounds from the cultural set up point of view of the Ghanaian people that, the use of the underpinning communal spirit and the manner individuals wrestle and interrogate their views (Owusu-Mensah, 2006) could serve as an enabling process to develop rich and deep professional dialogue.

Hatton and Smith (1995) believed that reflective thinking generally addresses practical problems, allowing for doubt and perplexity before possible solutions are reached. It has been argued by Rareiya (2005) that this cannot happen instantaneously upon lesson demonstrations. Teachers thus, will develop deeper thinking on how to deal with on-the-spot professional problems, analyze competing claims and viewpoints, systematically and coherently organise their thoughts, and engage in critical thinking that includes taking account of social, political and cultural issues. Thus, the research set out to explore how leaders can support teachers use their prepositional knowledge and practical professional knowledge within their own environment to change their practices and also to ascertain whether the Ghanaian teacher can develop such thinking processes, and if it was not happening, why?

Acquiring competencies encompass the skills and knowledge of teaching approaches and strategies that meet classroom standards (Amoah, 2010). These skills facilitate the teachers capacities to plan instructions in more flexible ways recognizing the reality of differences of and in learners and yet adapting learning goals and content. Supporting this argument of the acquisition of pedagogical competencies, essential core skills of minimum knowledge and skills of both propositional knowledge and practical knowledge are requisite which need to be development through an experienced one (leader). Where teachers will learn to frame and reframe the often complex and ambiguous problems they are facing, test out various interpretations. This can be made possible through the traditional or apprenticeship or transmission (Wang & Odell, 2007) and the reciprocal model (Barrett, 2000; Higgins & Titchen, 2001).

The traditional model of mentoring relationship is where there is a relationship between old, experienced, mentor (leader) and a young, inexperienced mentee (student-teacher) (Amoah, 2010.The assumption of a significant difference between mentor-leader and mentee-teacher in terms of age, experience, knowledge, wisdom, skills and influence is typical of this model of relationship. The relationship is hierarchical in nature and there is a hierarchical transfer of knowledge and information. on the other hand the reciprocal mentoring relationship emphasises collaboration, collegiality and reciprocity (Barrett, 2000). This relationship is supposed to offer learning opportunities for both mentor and mentee. In other words, the one-way flow of knowledge, information and expertise has been reconceptualised as an interdependent relationship of mutual benefit.

In line with the study, the Cooperative-Reflective Model where there is the hierarchical transfer of knowledge and information from an older, more experienced person to a younger, was adopted. In fact, more recent suggestions for sources of mentoring include peers, groups, and even subordinates (Higgins & Titchen, 2001). So, for leaders who are already experienced teachers, negotiating the mentoring

relationship with their younger teachers may be problematic. While Barrett (2000) see the mentoring relationship as offering learning opportunities for both leaders and mentee, A m o a h (2 0 1 0 see it as a one-way relationship in which only the mentee benefits. In the mentoring programmes, both leadesr and mentees are supposed to grow personally and professionally through collaboration, collegiality, reciprocity and reflection in the relationship.

Theoretical Framework for professional development of teachers

The underpinning theoretical framework is the Transformational Learning Theory (TLT), which was developed by Mezirow (2000 cited in Amoah, 2010), represents a social constructivist theory that applies primarily to adults, in this case teachers. Transformative leaning is o b s e r v e d as the process by which we transform our taken-for-granted frames of reference to make the, more inclusive, discriminating, open, emotionally capable of change, and reflective so that they may generate beliefs and opinions that will prove true or justified to guide action (Amoah, 2010). Through instrumental and communicative (Mezirow & Taylor, 2009 cited in Amoah, 2010) emphasis is on communicative aspect of the theory deemed appropriate, it will ensure how individuals communicate their feelings, needs, and desires, contested beliefs, association, concept, value or world view through dialogic discourse. This provides avenue for l e a d e r s a n d teachers to collaborate to develop understanding and meaning in their practice (Owusu-Mensah, 2006). Teachers learn best from more competent peers while engaged in both instrumental and communicative modes (Amoah, 2010). From the background, using this model is deemed appropriate for the study.

Current Study

Questions that engaged o u r mind about this study were, do mentoring relationships support teachers to link their prepositional k n o w l e d g e to practical knowledge in Ghanaian educational contexts? Does this novelty in teacher preparation hold any potential for transforming teacher development in Ghana for the better? These are critical issues that, in our view, had to be investigated to guide policymakers, implementers and educational researchers in developing countries.

II. Methodology

Researching into the facets of individuality, for example, as how someone learns, why people choose to use some of their learning and not other parts, and their feelings about their own practice and development, requires an approach that gives precedence to the subjective views of the practitioner.
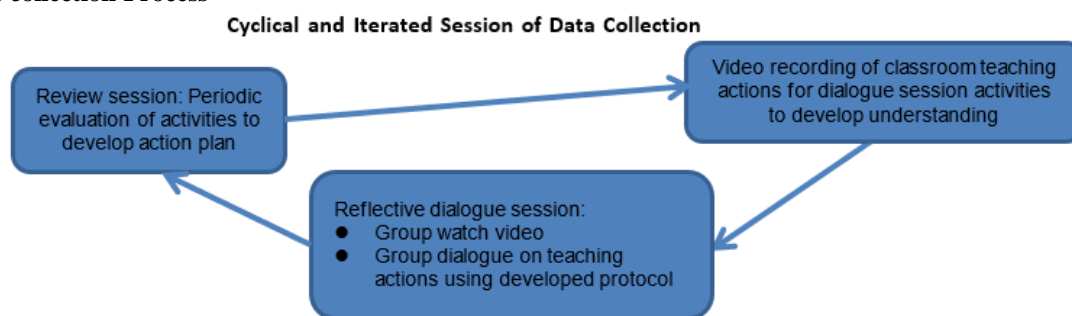
Constructivism

Constructivism influenced the study in three ways; firstly, constructing a habit is complex and nonlinear and individuals can construct multi realities of their practices. These realities are not measurable but are still real (Johnson and J o h n s o n, 2000). However, A m o a h (2010) believes that developing understanding as well as giving an account cannot be done without analysing the perspectives an conception of those who engage the process because it is value bounded and value laden, and the resulting outcome or practice developed, is considered valid for a particular time and context, rather than for all the times and context.

One important issue that guided u s for the study was how w e could get in-depth information on how the teachers will behave when they are reflecting and collaborating. This therefore directed our thinking to the use of the *qualitative case study using the collaborative methodology* as advocated by Armstrong and Sarah Curran (2006). This was to give us a better understanding as we observed and interacted with the participants about the way they got involved in a reflective dialogue where through videos multiple observations and replications into practitioner knowledge suited to a specific context, because in each case all things are *not* equal (Gallimore, 2003).

Participants selection and qualitative sampling strategy

Four (4) participants, one (1) male and three (3) females were purposively and through theoretical sampling techniques selected for the study. These reasons served the basis for the selection. First they g r a d u a t e d from the s a m e teaching institution. Importantly, they had as part of their undergraduate courses had reflective practices as part of their internship program . Secondly, they are teaching in the same school which is underpinned by research culture. The teachers selected were friends and colleagues who were willing to assist us. To preserve anonymity we gave them pseudonyms when referring to them in the study.

Data collection Process

Cyclical and Iterated Session of Data Collection

The iterated data collection process require video recording of teachers classroom teaching actions. The actions are discussed during the reflective dialogue sessions followed by periodic evaluation of the actions and further developing action plans for subsequent teaching episodes.

Our positonality

Researcher positionality has been conceptualised as a central component in the process of qualitative (and to some extent quantitative) data collection (Ganga and Scott, 2006). Researcher positionality influences the research process in different ways. One view is that social proximity between researchers and participants promotes cooperation in social interviews while social distance hinders the research process (Cook, 2001). In other words, insider status is viewed as favourable for the qualitative researcher while outsider status is viewed more problematically. One viewpoint, is that 'insiders' (researchers who study a group to whom they belong) have an advantage in elite-based research because they are able to use their insider knowledge and are more likely to be perceived as neutral, and therefore, be given information that would not be given to an 'outsider' (Mullings, 1999). This assertion is opposed to that of Burgress (1984) and Acheampong (1997) both cited in Owusu-Mensah, 2006) who believe that familiarity with the research environment can have negative effects on the research process.

Reflective dialogue: Procedure in the conversation

Reflective dialogue has been explained variously from literature. Some writer referred to it as 'reflective practice', 'teacher talk' or 'teacher conversations'. Generally, it is been referred to as either as the maintenance of a dialogue journal or participation in reflective conversations in groups or pairs (Stephens & Reimer, 1993; Reiraya, 2005). But for this study we use the term reflective dialogue which according to Rareiya (2005) is processes which help individuals within a group help each other gain new insights about situations as it opens the window into teachers thinking and practices. It attempts to encourage the participants to express multiple perspectives about a situation or action.

Group complex characteristics therefore play a significant role during the dialogue. Teachers ability to notice what is significant to attend to, use knowledge of one context to reason about events one identifies as noteworthy and be able to negotiate with helpful others for solution to problems and share views and experiences characterise this instrument. in addition, conflicts and tension is observed to be some feature this process. that how people interpret what they see is influenced by one.s prior experiences, knowledge and beliefs (Sherin, & Han, 2009). This is important because Galimore & Stigler (2003) posit, 'if everyone does the same things' the sources of alternatives are limited, the video facility made them see alternatives in teaching episodes, which influence their multiple perspectives. Again some of their implicit actions were made explicit as well as serving as evidential record for reflection (Amoah, 2010).

III. Data Management And Analysis

Recording of data

Two forms of recording were used in the study. The first was the recording of interviews and discussion during the reflective dialogue which was mostly audio tape-recording. The other form of recording was the videotape-recording of the teachers teaching actions.

Audio and video tape-recording are important part of qualitative research because as Silverman (2006) have pointed "transcript of such recordings, based on standardized conventions, provide an excellent 'naturally occurring" interactions, and can offer a highly reliable record to which researchers can return as they develop new hypothesis" (p20).

Process of identifying themes and analysis

Inherently our views about getting teachers to interact with their teaching actions is influenced by the views we hold about the world we live, the nature of knowledge 'not as truth to be transmitted or discovered', but as emergent, developmental, non-objective, viable constructed explanations by human engaged in meaning, which according to Forsnot (2005, p ix) in underpinned by 'cultural and social communities of discourse'. This position gives us the understanding that reality and for that matter multiple realities can co-exist leading to the fact that habit development is complex and nonlinear.

The participants voice, 'own words', were used to support arguments, this support what Creswell (2003) posit that for the relevant meaning to emerge one need to look at each case and draw meaning from them, as well as categorical aggregation from collection of instances.

We used the cross-case to see how systematically cases cut across all in their contributions. Referent themes from the within-cases were used to identify similarities and differences in categories for the across-case analysis as suggested by Powell and Renner (2003). The most important reason for using a cross-case analysis, according to Moore, Petrie, Braga, and McLaughlin (2003) and Eisenhardt (1989) was to make one go beyond the initial impressions from the within-case, to increase the possibility of developing accurate and reliable results. This therefore influenced our thoughts of examining themes or categories across cases. in sum, the analysis helped us reorganize the data in a logical and coherent manner to make more understanding and to answer the research questions. It gave directions to how the sub-categories, categories and themes were identifies through axial and open coding. Iteration and multiple comparisons were used during the identification of the themes.

Ethical issues

The addressed ethical issues in the study included informed consent, access and acceptance, and confidentiality and anonymity issues which Robson (1993) considers very useful guide in research. Gaining informed consent from research participants is widely regarded as central to ethical research practice (Heath, Crow & Wiles 2004).

Emerging Issues
Rich and deep professional dialogue: What the interactions brought out

Generally, the evidence from the research suggests that the teachers' ways of expressing their views on what stood out referred to as 'call-out' (van Ess and Sherin, 2008) describes how they engaged in rich and deep professional dialogue. Some empirical research evidence suggests that teachers" change in the way they engage in professional dialogue is linked to their preferences for 'call-outs" (van Ess and Sherin, 2006), and within the transcribed data, the issue of what stood out to them and how they attended to them came through with great clarity. Following on from the identification, we drew on the strategies of the prior research of van Ess and Sherin (2009) to create the categories considered appropriate to explain the behaviour of the participants. This involved identifying dimensions about, thinking, pedagogy and management of classroom environment. Four dimensions were identified. The first focus of discussion is the specificity about what stood out to the teachers to express their views on subject and pedagogical content knowledge. The second type of discussion concerns how they expressed their views. The third is the extent to which they expressed their views. The fourth is about comments made in relation to their attitudes.
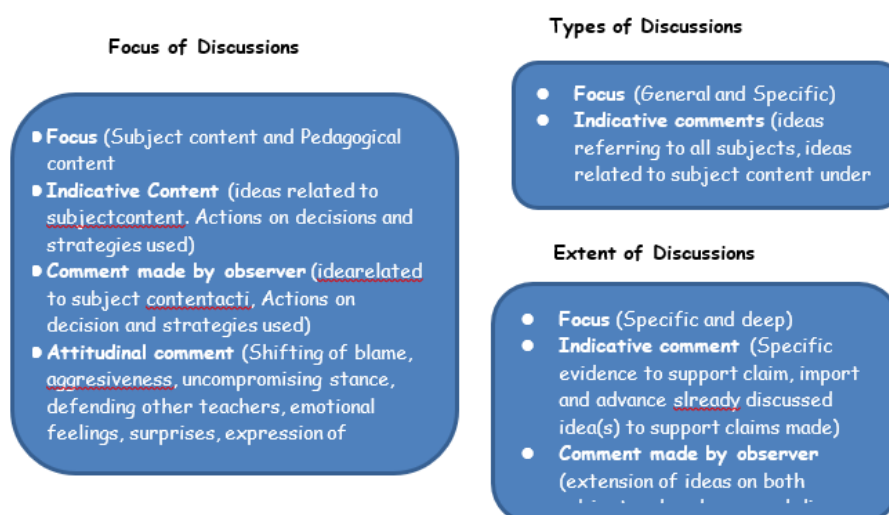

Focus of Discussions

- **Focus** (Subject content and Pedagogical content
- **Indicative Content** (ideas related to subjectcontent. Actions on decisions and strategies used)
- **Comment made by observer** (idearelated to subject contentacti, Actions on decision and strategies used)
- **Attitudinal comment** (Shifting of blame, aggresiveness, uncompromising stance, defending other teachers, emotional feelings, surprises, expression of

Types of Discussions

- **Focus** (General and Specific)
- **Indicative comments** (ideas referring to all subjects, ideas related to subject content under

Extent of Discussions

- **Focus** (Specific and deep)
- **Indicative comment** (Specific evidence to support claim, import and advance slready discussed idea(s) to support claims made)
- **Comment made by observer** (extension of ideas on both

Figure 1: Conversation Mechanics

From rereading the transcripts, it was revealed that specific comments and ideas from already discussed actions were used as evidences to support further claims made by the participants. The early sessions did not produce much in-depth reflection, as comments were mostly descriptions, judgmental remarks, recounting, agreeing and disagreeing, repetition and explanations. However as the process progressed, deeper and much more challenging reflective comments characterised their discussions. Some of the comments listed in Figure 1 are feedback and interpretation, both of which involved individuals asking thought provoking and rhetorical questions, making references to already issues, which had already been discussed.

The outset saw some attitudinal behaviour characterising the discussions. These initial behaviours were influenced by the fact that the participants thought that the exercise was an assessment of the quality of their classroom teaching. They later came to the realisation that it was a way of developing understanding and linking their prepositional knowledge to practical knowledge of their practices. This influenced their later comments about the process and some behaviour like boldness, uniform criticism and cooperation within the discussions.

As the teachers interrogated each other, and shared their views with the intent of understanding their different practices. Even though the wider literature suggests that talk-in-interaction needs to be contextually oriented and structurally organised (Hall, 2006), the case study evidence indicates that some behavioural and attitudinal issues, which intertwined with the dialogue patterns, did not helped the systematic organisation of the dialogue, however the process seemed to support the development of rich and deep professional dialogue.

Conversational Format

Another finding was inadequacy of conversational format. From the analysis, the unsystematic selection of the specificities and the corresponding dimension made fragmented discussions. When everybody within any group expresses reflective views differently, multiple views seemed to dominate the interactions. Significantly, inconsistencies in discussion would pose a threat to the validity of the linkages since only self reflections without collaboration exist, and group understanding of an issue under discussion seems impossible. Developing insight becomes an individualised affair, but Day (1999) posits that for better understanding, people who are willing to collaborate are reflective persons. The case study evidence suggests that consistent and continuous editing of teachers' practices accompanied with questions on such practice is important for linking prepositional knowledge with practical knowledge. The following quote illustrates this:

I seem to gain valuable insights from our analysed views when we discussed our practices consistently. I think group discussion continuously is good. (T1)

This quote clearly shows that when groups reflect and collaborate on their practices better understanding and clarity of issues becomes real. It is therefore reasonable to conclude that group reflective collaboration triumphs over individual reflection on similar actions. It is possible to argue that allowing a group of teachers to engage in reflective collaborative activities on their practices sees participants developing rich and deeper professional dialogue. For example Hatton and Smith (1995) argue that: '...it is important to structure situations, ask questions about what is happening and why, through this individuals will find it easy to identify what they want to learn, and have sound interpersonal relationships' (p. 40). In addition, Rarieya (2005) also argues that "teachers are able to share alternative views with group members in a reflective collaborative session after discussing their practices" (p. 323).

There is evidence in literature which shows that in reflective collaborative activities, there are changes in thinking that are useful in practice (Fook and Gardner, 2007). It includes thinking more deeply and broadly, taking into account different perspectives, being more rigorous about evidence for their practice and integrating different views into their professional practice (Fook and Gardner, 2007 p139). The teachers tolerated multiple views, which can be attributed to the use of different approaches in their analysis. Appropriate and relevant evidence used by each to support their claims were not wholly accepted within the group. There was therefore a pool of discreet individualised views that were not systematically presented. Isolated views presented on any observed action characterised the discussions. Mutual sharing was problematic and did not encourage better understanding of their practices within the group. However as the study progressed changes in the way they interacted did occur. Multiple views expressed on any event dominated the discussions. Each view was rigorously analysed to identify, select and adopt the idea(s) deemed relevant in the view expressed. This process enabled them to identify differences and similarities in any event as well as views expressed. Supporting this view T2 said:

The thorough interrogation of our views, on how I managed the teacher-student interactions in my lesson to me is good. The manner we expressed similar and different views have led me

have in-depth understanding in continuous manner and also afforded me to learn new things about what I need to do.

Adding her voice to what T2 said, T1 also commented by expressing her observation:

I now really see how we are displaying our knowledge as we use specific evidence to support what we say in respect of linking teaching theories to practice. In fact the different ways we expressed our thinking is showing how we analyse issues in different ways which I think is good.

These two excerpts acknowledged how relevant and appropriate pedagogical and subject content knowledge are important and tied to any discussions of teachers' practices. If these are well managed, accumulation of isolated views can influence new learning as claimed by T2. In the same way new ways of learning can happen, as was the view of T1. To identify the extent for the need for both subject and pedagogical knowledge, as deduced from the two excerpts, clearly shows joint discussions can unravel such needs.

Frequency of Seeing Practice (Group and individual Reflective practice)

Even though the frequency of observing and dialoguing teaching practices in a truly joint and systematic manner seemed to encourage professional dialogue, other factors that can provide relevant and appropriate information can compel one to engage in such dialogue. There is evidence from the literature to the effect that just engaging in mere dialogue is not a sufficient condition to describe deep and rich professional dialogue, rather this may be better thought of in terms of how relevant and appropriate isolated ideas can be synchronized (Fook and Gardner, 2007). The case study evidence indicates that an outwardly inconsistent and flawed analysis, by one of the participants, which epitomizes 'know-all' character, was a compelling factor that inhibited other members within the collaborative group from airing their ideas on an event during the discussions. The discussions were therefore sometimes characterised by irrelevant and inappropriate views, rather than views that promote the search for an alternative (Mattessich et.al., 2001). Expressing his dissatisfaction about such behaviour T2 said: "T1 you do not want anyone to talk about your lesson, but your interpretation of differences between perimeter and circumference is not convincing". T2 made a good point, and others would I think support his view that to qualify to dominate a discussion an individual should ideally possess the relevant and appropriate knowledge in such an activity.

In an environment where competitive evaluation is allowed, emotional attachment to behaviour normally happens. There is suggestive evidence in the literature that emotional pains due to anxiety influences reflection (Fook & Gardner, 2007) and within the study, a participant opined how out of anxiety she could not concentrate on the discussions. As a defence mechanism, she rudely contests ideas that do not call for any anxious moments. This behaviour seems to provide a refuge to the anxious moments, as well as address the mental torture which is created by anxiety and which literature influences reflection. There is suggestive evidence in the literature that reflection is how the mind leaps forward to find possible solution to identified problems (Dewey, 1933). It is therefore reasonable to conclude that when anxiety sets in during discussions that are underpinned by reflection, individuals" reflective ability will be affected. The case study evidence supports this view as T2 was found to express negative feeling about participants" reactions to some events. He felt the summative stance of their analysis of events, created some anxious moments and fear within him. He added that such moments put him at risk and did not motivate him to make his analysed view explicit. This is how he described his feelings:

The rationale is for us to find a way to understand our practices, but the way some of our actions and comments are condemned, I find it difficult to say anything on any action observed. Look at the way T3 and T4 have paired up to always see something wrong with what I say. Seriously T1 had a problem with her lesson on perimeter and circumference, I said a lot but I cannot continue.

This view demonstrates the important role group behaviour plays in such interactions. It is worth noting that it is not how T2 reflected on what happened, rather his concern is about what is hindering such reflection that seemed to prevent further analysis of events observed. This de-motivating issue, if it occurs within any group discussions, cannot support better understanding as one"s ego becomes threatened. Addressing such ego issues in the study was about how issues are raised, how multiple perspectives are expressed, how members audit comments made and how unacceptable views are discarded with newly analysed and adopted ideas. Such developed behaviour is what Pollard et. al. (2008) believed was needed to underpin teacher change activities.

Making sense of the realities of any situation especially those related to teaching seems difficult and challenging. As has been discussed in the literature, one"s belief about development maybe linked to how you have been trained. The belief that „a deficiency in practice connotes a bad teacher" normally sees teachers jumping in to defend comments made regarding deficiency. Discussions about practice now become a win-win approach. Claims and counter claims, disagreement and differences in opinion

resulting in heated arguments characterise environments where each tries to justify their stance. The case study evidence indicates that if such complex occurrences are not managed well, unorganised ideas, conflicts and tension occur. In addition, compromises are hard to come by with the resultant effects, which can hinder effective reflection (Mattessich et. al., 2001/2005; Fook and Gardner, 2007).

How best to manage the complex occurrences was what the study unravelled through the consistent and systematic dialogue sessions which gave way to opportunities to justify claims with relevant and appropriate evidences from their practices. The understanding is that when teachers within any interaction group do not have the opportunity to justify claims, developing meaning from practice becomes difficult. However within a dialogue if participants have the chance to justify behaviour, information unavailable from mere observation is brought out. Teachers are able to pour out what occasioned, from within them, the exhibited behaviour. Teachers therefore need to reflect within the activity about their practices. Thus, teachers need to be reflecting in the activities as well as reflect about the activity.

Support for developing deeper understanding in practice: The role of cultural norms

The literature points to the need to pay much attention to prevailing cultural norms underpinning individuals" behaviours, as it was found to assist teachers in developing a better understanding of their practices. Saliently it helped them maximise the conditions under which they operated and opened up their deep assumptions that led to learning new perspectives (Fook and Gardner, 2007). Within the literature, apart from the societal cultural influence, the school"s culture also plays a significant role, as argued by Scribner (1999), in developing understanding of teaching practices. He also noted that school structure and school culture can influence the teachers' sense of efficacy and professional motivation From the study, the idea of respect, communal engagement and the expectation for members to adhere to norms regarding the acceptance of views from the aged were prominent issues the participants struggled to tolerate and accommodate. These tenets, are strong Ghanaian cultural demands. The difficulties arose when they tried to address their common misunderstandings which saw them struggling to develop consensus from their multiple perspectives, which were at variance.

While it is evident that collaboration emphasises trust, respect and cooperation, these constructs can also hinder collaborative activities. From this study, the behaviours of the participants suggest that tacitly, their societal cultural norms were so much ingrained in their daily lives and conversations to the extent that they influenced what they said during the interactions. Despite the fact that the cultural norms created an opportunity for giving voice to their own thinking, as well as making them sensitive and constructively very critical about what they said, it hindered their interactions from the outset. However, as the process progressed, the participant behaviours showed that they made sense of their experiences through the knowledge, beliefs, schema and attitude, which are culturally situated experiences (Richardson, 2004). Their actions, beliefs and ideas seemed to hold them up and help support how they engaged their colleagues to scrutinize their actions in a more willing manner. This is because as stated by Richardson (2004):

...the degree to which any one teacher will actually engage in reflection depends on their individual propensities and abilities. Thus it is teachers' underlying personal values and beliefs that effect (sic) their interpretation of the educational practices they experience, and their ability to engage in reflection is affected by their previous (and current) experiences of the schooling processes, its culture and climate (p431).

T1, who was the oldest among the group, was observed from the outset to be fairly dominant. She normally wanted each participant to follow exactly what she instructed them to do.. Commenting on T2"s lesson she said:

As you can see from my presentation on finding the circumference of a circular object, I found out from the students if they know what a circular object was, after that I wrote the formula to use on the board, then I explain the variables, after that I solved two examples and later I gave them classroom work to do on it. In this your lesson, ask them what simple interest is, write the formula on the chalkboard, work out two or more problems for them and then introduce classroom work for them to do while you supervise. This is what I expect everyone to do in his/her lesson.

Insisting on specific codes of practices from one person to the other makes the former unreflective. The case study evidence indicates that continuous insistence resulted in some resistances from the other. The continuous resistances from her colleagues was reflected later on in her saying 'we need to as we normally do even in our homes, together try to find out what were our shortcomings and suggest alternatives so that what we come out with what can be used in our other lessons. I think this will make us develop better understanding as our tradition demands'.

The resistance from the others seemed to influence the change in her behaviour. Even though the study was not about exploring the structures in the cultural tenets of the participants, their behaviour gives

room to examining some hidden policies of the routine interaction behaviour (Quicke, 2000 cited by Amoah, 2010) of the participants. Her initial behaviour, which is the influence of culture, can be described from the outset as prejudicial to such a process, however over time it changed. Therefore I suggest that such cultural norms need to be rendered responsive to the aim of any such interaction process. This also explains why teachers need to privilege their own experiences within such environments despite the hierarchical relationship embedded in their culture. Despite all these challenges, the communal spirit with which they collaborated, was another influence of their culture.

T1"s behaviour change appeared to be the result of her becoming aware of how the cultural norms have influenced her behaviour. Her request for further explanations, evidence to support justification, and her demand for support, shows her behaviour change which was made possible through her reflections. The way she experienced different reflection can be attributed to how she separately used tenets within the same cultural norms. At one point she adhered to the age factor and at another point she was considering the communal aspect. Even though the two have their merits, the appropriateness of using any of the tenets is crucial. I therefore suggest that if the underlying cultural principles are well-identified and used, reflection is possible and effective.

As stated earlier, there are cultural characteristics which are tacitly used to reflect on the comments made. Some of the comments that portrayed such characteristics were observed to be serendipitous, and occurred without planning or forethought, but it was those which guided the individual" participants in their interactions within the environment. The participants instinctively were aware that they needed to share their views on any issue which arose. Supporting this idea T2 said

…anytime I noticed a deficiency in any of our practices, I always think about sharing it with all. It is something that has been with us right from our homes through school and now. I do not fear what other say about what I do.

This confirms the fact that the communal cultural norm firmly entrenched in his behaviour, however this is tied to his thinking or reflection on any observed deficiency. The reflection made him aware of the cultural instinct for him to recognise the environment in a way that changes his perception of what is possible (Clarke and Otaky, 2006).

Clarke and Otaky (2006), following extensive research on reflection came to the conclusion that 'human' capacity is 'akin to our abilities to create and use language and other 'tools of the mind' to understand actions, even though the particular form it takes is shaped by historical, cultural and social factors" (p120). Furthermore, Hatton and Smith (1995) emphasise the need for consideration to be given to any form of knowledge or belief involved in terms of its support in reflection. This suggests that a more elaborate form of beliefs would have the potential to enrich the processes by which teachers can support their understanding, on the grounds of cultural norms. In contrast it has also been argued that teachers have a more complex view of belief in their development (Adalbjarnardottir and Selman, 1997; Clarke, 1995; Geddis, Lynch and Speir, 1998). By this definition much more information regarding how cultural norms can support understanding would be required than just their teaching beliefs. However Bell and Gilbert (1996) have argued that teachers need more ways to develop their practices. But Schon argued that the personal identity is very crucial in reflection, as it can influence a person"s thinking. This is something, which the study unravelled, as the lengthy discussions helped the members to listen to others" perspectives and to share values to reach consensus. This meant that having honest and open intentions within an activity can support developing understanding. Most often some cultures demand rigid rules, however with the results of the study, such rigid rules cannot support compromises, as they gave them the opportunity to determine when to seek compromises or common grounds, and the ability to negotiate major decision in situations, where they did not initially share same opinions.

In the case of sharing opinions, the issues of superordinate and subordinate demarcations are likely to be a thing of the past, as the evidence from this study indicated a way of erasing such dividing lines. Emphasising this T4 said:

I think we all need to put our heads together in helping T1 get the differences between perimeter and circumferences. I know we all have the knowhow to get her over this problem. She is very good, older than us, she is our boss, and we have been learning a lot from her but this should not scare us from helping her out of this problem.

The excerpt indicates a two-way support from the dichotomy. Subordinates were found to support the change process of the superordinate. It is therefore important to focus on what participants know, rather than who the participants are, since what is said and how it is said are ultimate indicators of what needs to be taken seriously. Using such occurrences can help limit anxiety and disengagement, which is most of the time an outcome of prescriptive instructions (Clarke and Otaky, 2006). T2"s reflection could easily have been tacitly influenced by the underlying cultural disposition of the Ghanaian culture, which is embedded in his behaviour, and made explicit through his comments. This shows how he was

exhibiting a socialising character to get along with others in the common good of the group, especially the superordinate.

Culture seemed to influence an interaction underpinned by multiple perspectives. On the contrary it could also promote compartmentalisation of views, more especially if the underlying principles show some inconsistencies. The evidence supports this view. Emphasising this point T3 felt we are expected to learn a lot from T1, but sometime she says something and does the opposite. For example, she expects us to follow a particular format when teaching, but this third lesson is very confusing. If she performs this way how can we get confidence in what she says,

In a situation where views are to be shared on a practice, indecision can have a devastating influence on the interactions. Since according to Hatton and Smith (1995) reflective thinking generally addresses practical problems, allowing for doubt and perplexity is necessary, before possible solutions are reached. Therefore the beliefs in framing and reframing practical problems to which solutions are being sought are crucial. I therefore argue that the expectation of what cultural tenets seek to influence in the interaction is contrary to what was observed over time. Even though, it had influence during the interactions, discussing the impact of cultural norms in such an interaction needs to be looked at cautiously. However teachers" knowledge and beliefs influence what they determine as important to attend to in complex situations

(Schoenfeld, 2004). Such belief helps to identify differences in individual teachers, and how it can help them to advocate a specific pedagogical approach (van Es and Sherin, 2009)

Imposition of ideas, where culture is used as a platform to advance behaviour is one revelation that came through the study. However, the evidence showed how such behaviour unravelled other behaviours that were being pushed on the other participants. Emphasising this T4 said "it is not everything that one knows that can be used anytime. It is its appropriateness that is important". T4 introduces another dimension-the appropriateness of such knowledge. I believe that the appropriateness of any information is vital to determine the extent to which the information can be used to develop understanding a practice. The suggestion therefore is that in the event of using cultural tenets to support the understanding of a practice, the relevance of the information to the context of discussion is vital. The consideration of any belief or practice in the light of the support it gives and the consequences thereafter need to be taken into considerations. Open-mindedness, the ability to accept and adopt wholly any feedback and consequences needed to guide such interactions. In addition, there is the need to suppress some dominant cultural norms that can hinder effective collaboration in order to develop better understanding of issues.

In view of the nature of the study, where there is potentially reinforcement, replication and critical reflection, this cultural idea needs to be judiciously used to promote choices from the information provided so as to get relevant and appropriate information.

In conclusion, I have argued that culture can support developing the understanding of teaching practices in a collaborative reflective environment. The wisdom enshrined in the Ghanaian cultural structure allows, for example, the aged to dominate in discussions or reflections on issues.. With reflection being considered as a human behaviour, and cultural norms seen to influence human behaviours, it is reasonable to conclude that in interactive activities that are underpinned by both reflection and cultural issues, for effectiveness, the two concepts need to be tied together in order to provide richer information.

Recommendation for policy

In the design of any teacher mentoring programme, critical consideration must be given to assessing how prepositional knowledge is linked to practical knowledge taking into consideration, the general culture of the people by policy makers. There should be greater consultation and dialogue among stakeholders for a consensus on the model that can accommodate the dynamics of the social and professional milieus.

Recommendations for practice

For mentoring to be an effective approach for teacher professional development for both teacher mentors and student teachers the characteristics of the selected mentors and mentees need to be given serious consideration. In addition, guiding rules, in-depth knowledge on the use of videos and its subsequent influence need to be considered during selection of participants.

Contribution of authors
1. Dr. Gifty Seiwaa Nyarko is a lecturer at the Seventh Day College of Education. She conceived the idea by developing the concept for the article. She worked on the methodology section, findings discussion and read through the recommendations

2. Prof. Samuel Asare Amoah, is a lecturer at the University of Education, Winneba. He collaborated with the lead researcher to develop the concept, worked on the methodology, analysis and read through the manuscript for publication

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