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Elementary Teacher Education in Papua New Guinea: Towards a Culturally Connected Perspective of Teaching

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Abstract: Global and national agendas for quality education have led to reforms in Papua New Guinea's (PNG) elementary education, but criticism of the learner-centred Western pedagogies has emerged. One key influence on quality teacher education relates to perspectives of teaching. Existing research shows teachers' beliefs and perceptions of teaching influence their practice, however to date little research has investigated perspectives of teaching for elementary education in PNG. This single exploratory case study investigated the perspectives of teaching for eighteen elementary teacher trainers as they studied for a Bachelor of Early Childhood (Teacher Education). The study, drawing on an interpretivist paradigm, analysed journals and course planning documents using a thematic approach. The findings revealed that while the trainers' perspectives of teaching children tended to reflect a learning-centred perspective (focused on what the teacher does), their perspectives of teaching adults were both learning-centred and learner-centred (what the learner does). Based on these findings, a culturally connected perspective of teaching is advocated for PNG elementary teacher education. This perspective enables the co-existence of both the learning-centred and learner-centred perspectives of teaching in the PNG cultural context and has implications for teacher education and the communities involved in elementary education in general.

Introduction

The international focus on the provision of quality basic education has led to a global movement called 'Education for All' (EFA). EFA is a worldwide emphasis on the reviewing and restructuring of existing curriculum and teacher training programs in developing countries to promote quality education (Buchert, 1995; Christopher, 2004; Jha, 2007; Kwadzo, 2009). As is typical of other developing countries, Papua New Guinea (PNG) views the provision of quality education through reform as an investment in improving the life chances of its citizens. Quality education can be facilitated through structural and curriculum reform, including reforms of teacher education programs. While quality in teacher education programs is clearly an EFA goal, in many developing countries, the focus has often been on the quantity of elementary teachers needed for improving access to education in reform agendas (Chisholm, Soudien, Vally, & Gilmour, 1999; Jha, 2007; Mbanze, et al., 2008; Mukherjee & Banerji, 2008).

PNG has engaged in teacher education programs that have focused on recruitment and preparation to accommodate the demands of the expansion of elementary education (NDoE, 2008). These programs have resulted in significant increases, in terms of accessibility to basic education, for all children in PNG. Since 1995, there have been 18,872 fully registered elementary teachers trained and 15,323 provisionally registered across 4,372 elementary schools (Ponasu, 2007). Elementary teacher training in PNG has met targets in terms of accessibility, but quality continues to be a reform challenge. In PNG, quality teacher training is the responsibility of the National Department of Education (NDoE) and coordinated by the elementary teacher trainers through the Papua New Guinea Education Institute (PNGEI), the state agency responsible for pre-service and in- service teacher training. The role of the elementary teacher trainer is very significant in the preparation of teachers for the community-based elementary curriculum and pedagogical reforms that have taken place in the last decade (NDoE, 2005).

Elementary curriculum and pedagogical reforms

Educating children through high-quality, relevant curriculum can make a difference to their opportunities in life, and consequently contribute to the development of society (Barry, 2000; Jha, 2007; Matane, 1984). Like other developing countries, PNG considers elementary education as an important area for building strong communities through culturally-relevant curriculum (Matane, 1984; NDoE, 2004; Thaman, 1993). This is evident in the elementary reform curriculum developed by the individual tribal communities using the guidelines set by the National Department of Education (NDoE, 1994). The elementary curriculum is based on the needs and the appropriateness of the local environment and culture (Matane, 1984) and all the 800 or more tribal languages are used as media of instruction in the formal elementary school system (NDoE, 1994). The vernacular or lingua franca of the community, together with its cultures, spiritual and work practices, form the basis for the curriculum activities in elementary schools (NDoE, 2005).

The implementation of the curriculum and elementary teacher training is guided by reform guidelines that require cultural relevance and learner-centred pedagogy. While the curriculum focus is significant in the context of reform, it relates to curriculum content rather than to culturally- appropriate pedagogies. This presents a scenario in which culturally-specific content is taught using a Western-oriented learner-centred pedagogy without any consideration to the cultural ways of teaching and learning. Learner-centred perspectives on teaching and learning emphasise the autonomy, activity and 'centrality of the learner in the educative process' (Tabulawa, 2003, 9). The child initiates learning and the teacher plays the role of guide to assist acquisition of new knowledge. Teaching and learning using such an approach employs a mixed range of pedagogical strategies, such as discussions or activities in groups or pairs and small-group projects. From a social constructivist perspective, the assessment of learning is oriented more toward the processes of learning than the products (Scheurman, 1998; Smagorinsky, 1995).

While the mandated teaching theory is based on a learner-centred perspective, not all teachers adhere to this approach. This was highlighted during a national teacher ratings conference in PNG (Pagelio, 2003). Pagelio pointed out that a learner-centred approach to teaching seemed to be evident in only a small number of classrooms in PNG. It seems that many teachers are more likely to hold a *learning-centred* perspective of teaching. Learning-centred perspectives involve some elements of direct instruction and active teaching (O'Sullivan, 2004). In other words, the teacher gives direct instructions to the learner and, in this process,

questions are asked so that the learner actively participates in the learning experience. The mandated shift toward a learner-centred perspective of teaching in the current reforms presents a challenge for many teachers in PNG and so there is a need to address teaching perspectives in teacher education programs. Teacher development is essential to progress in achieving quality education (Hamano, 2008) and teacher trainers play a large role in this process. While it is recognised there are many ways to promote quality in elementary education, the focus on this study is on the preparation of elementary teacher trainers and their perspectives on teaching. Perspectives on teaching (conceptions, perceptions and beliefs) can have an influence on approaches to teaching and therefore the quality of learning outcomes in teacher education (Biggs & Tang, 2007; Chan & Elliot, 2004; Kember & Kwan, 2000; Prosser & Trigwell, 2004). However, there has been very little research into perspectives on teaching in teacher training institutions in PNG.

The Study

The aim of this study was to explore the perspectives of teaching held by 18 elementary teacher trainers at the completion of a two-year Bachelor of Early Childhood (Teacher Education) upgrade program. The research questions for this single case study were:

1. What are graduating elementary teacher trainers' perspectives on teaching in the PNG context?
2. What is the relationship between the trainers' perspectives on teaching and the perspectives on teaching evident in the course planning documents?

Using an interpretivist paradigm, the study focused on how trainers made sense of teaching based on their experiences (Hatch & Cunliffe, 2006). The study reflected this paradigm because it described trainers' personal perspectives on teaching to provide accounts of their experiences in context (Gibson, 2006).

The Case Study and Context

The case in the study was a group of elementary teacher trainers who undertook an undergraduate degree in early childhood education at PNGEI from 2008 to 2009. A case study was used to understand the relationship between the teaching perspectives described by elementary teacher trainers and those evident in the course planning documents of the undergraduate program. For this study we define case study as 'a research methodology grounded in an interpretive, constructivist paradigm, which guides an empirical inquiry of contemporary phenomena within inseparable real- life contexts' (Anthony & Jack, 2009, 1172). Case study methods allow researchers to retain holistic and meaningful characteristics of events that occur in real life (Anthony & Jack, 2009).

The study was undertaken at PNGEI in Port Moresby, the capital city of PNG. Within the Institute, there are three academic departments called 'Units'. The Elementary Unit is responsible for the planning, coordination and delivery of the pre-service elementary teacher training program to 9,000 trainees per year. Elementary teacher training is assisted by 170 teacher trainers who themselves have been trained at the PNGEI to facilitate and coordinate the training of elementary teachers in the 21 provinces (NDoE, 2005). The trainers hold a Certificate in Elementary Teacher Training (CETT). The mixed-mode training program has

three components: home study with self-instructional units, trainer-directed training in residential workshops and supervised teaching in the field. The self- instructional unit (SIU) component requires the prospective elementary teacher to read and complete tasks at the work location. The trainer-directed training (TDT) phase is a two-week residential workshop conducted by the trainers. Prospective elementary teachers are taught about teaching approaches through group activities and discussions.

The final phase—a supervised teaching period—is undertaken when the prospective elementary teacher has completed the SIU and TDT components. The supervised teaching involves training on site with monitoring and assessment of performance by trainers. The prospective elementary teacher learns, first by observing the trainers and then by gradually taking over full teaching responsibilities. This approach is reflective of an apprenticeship model that is familiar in PNG cultures. While there have been recent shifts to a residential model of teacher training, incorporating university coursework and mentors, most of the local training is still taking place through the apprenticeship model.

There has been a need to upgrade the qualifications of the trainers because many do not have the early childhood qualifications needed for elementary teacher training. This led to development of an undergraduate degree program in early childhood with an Australian university, using AusAID funding. The degree included residential and distance components. In the residential component, two university lecturers from the Australian university travelled to PNG to teach each semester for two weeks at a time. The degree program consisted of eight units of work over four semesters. These units had a strong focus on principles and practices for quality early years education and leadership and were designed to encourage trainers to reflect critically on the nature of learning and teaching throughout the course.

The Australian lecturers worked with PNGEI mentors whose role it was to support the trainers in tutorial discussions in the residential component. The mentors also assisted the trainers during the distance mode component, undertaken when the trainers returned to their provinces. The mentors visited each of the trainers twice each semester and assisted them to work through the study guides and readings.

Case Study Participants

The participants of the study included 18 trainers who were responsible to the National Department of Education and the Secretary of Education for facilitating the elementary teacher training program. The trainers, all of whom held the CETT, were selected to participate from a total of 200 serving throughout the 21 provinces in PNG. The participants came from eight provinces (Central, East Sepik, Gulf, Manus, Morobe, National Capital, Western Highlands and Simbu). Their ages ranged from 43 to 61 years and all had over 10 years of experience as senior teachers in primary schools and as elementary trainers.

Data Collection

Journals

Journals were used to gather information about elementary trainers' perspectives on teaching at the end of their course. They were also asked a series of questions:

1. What is good teaching for young children? How have your beliefs changed over the course?
2. What is good learning for young children? How have your beliefs changed over the course?
3. What is the role of research (evidence) in elementary education?
4. What have you read, discussed and reflected on that you think you will use in your future roles as elementary education leaders?
5. How has your view of elementary education leadership changed over the course? Why has it changed?
6. What do you stand for in early childhood education and care (what are your values)?

The purpose of the questions was to obtain an understanding of the trainers' perspectives on teaching in the context of elementary teacher education in PNG. While many of the questions were directed at their views on teaching children, the trainers also commented on teaching adults through their reflections on their own learning.

The learning journals were submitted as part of their assessment, so it was of concern that individuals might write what they thought was a required response, and not their actual reflection of the issues. In order to ensure that participants wrote, the journals were assessed on a 'pass'/'fail' basis only. Participants were assured that there was no right or wrong answers, and that merely submitting their journal reflections was all that was needed in order to pass this part of the assessment.

Course Planning Documents

The other source of data used in the study was the Australian university's course planning documents. These included:
1. theoretical framework based on intercultural competence (informed course development, Document 1);
2. overall course principles and graduate capabilities (Document 2); and
3. unit overviews (Document 3).

The course planning documents were important because they reflected perspectives on teaching held both implicitly and explicitly by the university.

Data Analysis

This study used thematic analysis to inductively analyse the journals and course planning documents. Thematic analysis is a commonly-used method in qualitative analysis and is not as dependent on specialised theory as are some other qualitative techniques such as narrative analysis (Bornat, 2008) or conversational analysis (Gibson, 2006). Through its theoretical freedom, it served as a flexible and useful data analysis tool (Braun & Clark, 2006) for the study. Creswell (2005) identified three steps in thematic analysis: *familiarisation of data*, *generating initial codes* and *synthesising*. The familiarisation step involves reading and re-reading raw data and noting first thoughts about the patterns of themes that emerge. Generating initial codes involves grouping emerging themes and creating codes to guide analysis of raw data. Finally, synthesising involves describing relationships between data and considering links to previous research.

The second research question addressed the relationship between the trainers' perspectives on teaching and the perspectives on teaching evident in the course planning

documents. In order to have an in-depth understanding of the relationships between these sources of data, the themes that were abstracted from the study case (Thorne, 1997) were pieced together to form a comprehensive picture of collective experience across journals and course documents. To promote rigour, four independent researchers completed a dialogical analysis of the emerging themes. The themes that emerged were first discussed with one research supervisor. Subsequently, the themes and categories used in the data analysis were modified and passed on to the second of the supervisors for scrutiny. Consensus was reached through agreement as is typical of dialogical reliability analysis. A final level of checking took place by using a third person who was not familiar with the data but was well-versed in the thematic data analysis technique.

This last step provided an opportunity to check themes and categories developed by the researchers. There were no significant differences in the rating patterns among the raters and any minor disagreements of issues related to the themes and categories were corrected through discussion, as is typical of dialogical reliability checks. This process reflects Braun and Clark's (2006) notion of analysis for *best fit* as opposed to *perfect fit*. It draws on the interpretivist paradigm of how knowledge is constructed to give credence to the understanding of the themes and categories used in the study (Hughes, Blaxter & Tight, 2010). In an interpretivist paradigm, knowledge is socially constructed by individuals interacting with the social and cultural environment (Sandberg, 2005), hence a best fit rather than a perfect fit is recognised as appropriate for inter-rater reliabilities.

Discussion of Findings

While the focus of this study is on trainers' perspectives on teaching, participants often discussed aspects of learning when describing their views on teaching. The rationale for including views about learning is strengthened by Lefrancois (2000), who states that teaching is an instructional process involving strategies (*teaching*) designed to lead learners to attain certain goals (*learning*). Pratt (2002) also stated that "A perspective on teaching is an interrelated set of views and intentions that gives direction and justification to our actions. It is a lens through which we view teaching and learning." (p. 6). Using such definitions of teaching which are inclusive of learning, the current study investigated perspectives on teaching for both children and adults, and these are now discussed in turn.

Perspectives on Teaching Children

The most widely discussed views about teaching children involved the following categories:

Perspectives of teaching children	Exemplars
Understand children's learning abilities, developmental level, cultural backgrounds	The language of instruction used must be understood by all at the level of the children (P2, p 1). The curriculum learnt must be relevant to enhance children's learning and development (P3, p1).
Planning and preparation	Good teaching is when the teacher gets him/herself prepared well the prescribed...subject content (P4, p1). It is when effective teaching methods are applied under such teaching as child-centred (P7, p1).
Active participation	Teachers apply strategies...like concrete materials in context (P7, p1). Culture of democracy and active participation... in
Preparing children for community life (Teaching family and community values, impact of life changes Community orientated, collaborative teaching)	Example of good teaching is when children learn how to sing a traditional song & dance (P13, p 1). Teaching that will have more life impact on the children and citizen of this country (P15, p 1). Good teaching for children must come from families and community first (P10, p1).

Table 1: Perspectives on teaching children

Table 1 presents the perspectives on teaching children derived from the data. For the purpose of maintaining confidentiality, each participant was identified by the letter 'P' followed by the number of that participant. The small letter 'p' denotes the page number of the participant's document from which the exemplars were derived.

According to the trainers, teaching that is based on *Understanding children's learning abilities, developmental levels and cultural backgrounds* attempts to build bridges from the learners' current way of thinking to new ways of thinking. The ability to understand a child's developmental level, individual abilities and cultural background is very important for the trainers, as children's learning differs between various cultural groups in PNG. The primary goal is to help learners develop increasingly complex cognitive structures, beginning with what they already know and gradually building new knowledge (Pratt, 2002b).

While Pratt indicates that a developmental view of teaching is based on learner-centred constructivism, the results of the current study did not suggest such constructivist principles. Rather, the findings indicated that trainers were aware of a need to understand a child's cultural background in order to plan, prepare, facilitate and structure learning experiences that were culturally appropriate. This is supported by socio-cultural theory that

suggests that each individual's cultural experience is important in the process of learning (Boghossian, 2006; Rogoff & Gutierrez, 2003).

Another commonly-held view was related to careful *planning and preparation* of learning activities. The trainers were aware that, within the PNG cultural context, teaching was about promoting meaningful, inter-related activities as a whole rather than fragmented information or activities. The weaving of a fishing basket is a specific community cultural activity that reflects inter-related and holistic approaches to teaching. This activity involves the learners sitting around the knowledgeable person watching and following the steps to weaving a basket and engaging in conversations. Planning and preparation of culturally-appropriate educational experiences provides a framework that can be responsive to diversity within and between cultures. In other words, teaching involves planning to assist children to move from their current ability (actual level), firstly with the teacher and then, gradually, to new learning (potential level of development) by the child on his or her own (Vygotsky & Cole, 1978). Therefore, the teachers' understanding of children's developmental levels and cultural backgrounds is crucial for planning and preparation to scaffold learning.

Learning for children was also viewed by many trainers as a result of *active participation* and these collaborative learning interactions acknowledged the role of the family as partners in learning. The responses indicated that children should be active but there was not a clear sense that this should be an active process of constructing meaning.

The final set of views about teaching related to a combined view of preparing children for community life: *teaching family and community values* (8 trainers), *teaching about impact of life changes* (9) and *community-orientated collaborative teaching* (7). These responses reflect a community focus, which is evident in the PNG elementary education reform. The reform advocates that teachers teach family and cultural values and, in doing so, work with community members in the education of children (NDoE, 2004).While the participants were clear about preparing children for community life through social processes, few reflected explicitly on how children might construct meaning through this process.

In summary, the perspectives on teaching children espoused by the trainers in their journals suggest that teaching is conceived as actions and interactions in the community (or socio-cultural setting), with a focus on understanding children's developmental levels and cultural backgrounds. The trainers came from a range of provinces in PNG, and from within small communities in these provinces. Consequently, a great diversity in culture and language is evidenced in PNG schools (Gelade, 1999).

The pedagogies used to teach content knowledge in the Highlands are different from those in the Coastal communities. For example, the pedagogies used to teach a child how to grow *kaukau* (sweet potato) or make a ceremonial head dress in the Highlands would be different from those used to teach a Coastal child how to spear a fish or make a canoe. These communities have distinctive perspectives on elementary teaching that focus on connecting children to their cultural values, norms and ways of living, so it is not surprising that the trainers considered that teaching should be about being responsive to cultural backgrounds.

This interactive, community-focused perspective on teaching children might be described as being *learning-centred* rather than *learner-centred*. Learner-centred approaches are child-centred and focused on the individual child constructing and managing their own learning. In the planning and preparation of educational activities in a learner-centred approach, the teacher's focus is on how to support the learner to build their own knowledge in social contexts. Learning, from this perspective, may be characterised as active, self-regulated and constructivist, as it follows a set of activities designed to assist the child to construct knowledge through social

interactions (Tabulawa, 2003).

On the other hand, learning-centred perspectives evident in the current study involve both direct instruction and active teaching (O'Sullivan, 2004). According to O'Sullivan, the learning-centred perspective on teaching is often evident in developing countries where there may be lower levels of teacher training and fewer resources. In this approach, the teacher identifies what children need to learn and implements clear teaching plans for mastery of the content, often with a focus on providing a caring environment.

Learning follows as a set of instructional phases including informing the child of the objective, directing attention to what is to be learned, providing guidance for learning, facilitating transfer of learning and evaluating performance at the end of the activity as a way of assessing the learning outcome (Dimmock, 2000). In the current study, we see a focus on planning for and promoting an active, rather than passive, approach to learning. This would suggest a learning-centred approach because there is no clear evidence of a focus on children as autonomous constructors of meaning as is the case with learner-centred perspectives.

Perspectives on Teaching for Adults

The results of the data analyses also showed views of teaching and learning for adults. This focus on teaching adults is important because the ways that teachers are trained as adults may have an impact on their approaches to educating children (O'Sullivan, 2004). The seven categories are described and exemplified in Table 2.

Perspectives of teaching Adults	**Exemplars**
Sharing & transmitting information	I share my experiences with those I come into contact with because it is important for teachers to see other views of teaching (P8, p.2).
Expand knowledge and skills	The teaching and learning pedagogies I learn in this course builds my knowledge about child development & practice (P15, p 4).
Collaborative teaching	In collaborative teaching a trainee is involved with others in group activities to share experiences and learn from others (P14, p 1).
Collaborative learning	Collaborative learning is good…I enjoy working with my friend and we exchange new ideas and share our experiences (P2, p21).
Teaching for change	Each of us is an agent of change for people we are working for as well as the organisation (P6, p 2).
Building knowledge to address challenges	I have learnt that holistic learning cannot be taught in bits and pieces and should be take place in meaningful activities (P3, p5).
Deep learning processes (Problem solving &constructing meaning; Observe & reflect on learning Good results demonstrate understanding)	By doing so, it deepened my understanding and knowledge of…teacher training, child development and curriculum practices (P6,p 3). I reflect what I observe in the schools I visit and learn from it (P17, p2). I will work collaboratively with others and improve on weak areas using knowledge gained from this course (P4, p5).

Table 2: Perspectives on teaching for adults

The first four categories suggest a valuing of transmission of knowledge and social interdependence in approaches to teaching adults. These represent the most common views about adult teaching and include *Sharing and transmitting information* (16 trainers); *Expand knowledge and skills* (17); *Collaborative teaching (*15) and Collaborative *learning (*11). The analyses of the data also showed other frequently expressed views about teaching adults included *Teaching for change* (13). While collaboration is typically portrayed in the literature as a key to helping the learner construct knowledge and be introduced to values and ways of knowing

(Blumenfeld, Marx, Soloway & Krajcik, 1996), it is not clear in these categories if there was a focus on construction of knowledge. In these data, there seems to be a focus on teaching through sharing and collaboration with others.

However, a focus on constructivist views about teaching seems to be evident in the final three categories in Table 2. In the category, *Building knowledge to address challenges* (11 trainers), there is some evidence that teaching adults is more about an active rather than a passive view of learning. In the group of categories named Deep *learning processes* there is a range of perspectives, including *Problem solving and constructing meaning (*4 trainers), *Observing and reflecting on learning* (6) and *Good results demonstrate understanding* (3). These responses suggest that some trainers believed that teaching adults went beyond merely expanding knowledge to include perspectives on teaching as promoting active and meaningful learning.
In summary, the dominant perspective on teaching adults was about expansion of knowledge and skills, with a focus also on collaboration and the active building of meaningful knowledge. Trainers have a collaborative and community-oriented perception about teaching adults, focusing on teaching for change in elementary education. This indicated a much stronger learner-centred perspective on teaching than was the case for the perspectives on teaching children.

How do the Elementary Teacher Trainers' Perspectives Relate to the Course Documents?

The final research question was: *What is the relationship of perspectives on teaching between the course planning documents and the trainers' perspectives of teaching?* This question called for the examination of how the perspectives evident in the course planning documents for the degree program were related to those of the trainers. The Bachelor of Early Childhood (Teacher Education) served as a learning environment for the trainers and therefore provided a context for influencing the trainers' perspectives.

The design of the course planning documents focused on the perspectives on teaching adults and, as a result, no perspectives on teaching children were evident in these documents. The categories of perspectives on teaching that were common across the documents and the trainers included: *Build knowledge to address challenges* [AL6] (11 trainers, three documents); *Teaching for change* AT1 (13 trainers, one document); and *Problem solving and constructing meaning* [AL1] (4 trainers, two documents).

These indicated a view of teaching suggesting that adult learners were most interested in information and ideas that helped to solve problems they were presently facing or that addressed reform challenges. However, even though there was a clear focus in the course documents on extending the critical capacities of educational leaders, this did not emerge in the trainers' responses (for example, *Evaluating practice* [AL11 - Document 3], *Critical analysis of learning* [AL19 – Document 1]; and *Teaching for social justice* [AT26 - Document 1]).

In summary, perspectives evident in the course documents focused on helping trainers to reflect critically on culturally-specific perspectives on teaching, to engage in higher-order thinking and to socially negotiate meanings relevant to their contexts. The trainers' perspectives showed that they were most interested in solving problems and addressing reform challenges, but did not focus on critical thinking to the same extent as advocated in the course documents. The trainers partly conformed to the learner-centred Western expectations espoused in the course planning documents, suggesting that this learning context may have had an influence on their perspectives on teaching.

Toward an Alternative Perspective on Teaching in PNG

The findings from this study showed that the trainers held perspectives on teaching that were not strongly aligned with the Western, learner-centred views of teaching and learning advocated in the elementary education reform. The perspectives on teaching children included cultural teaching approaches that were not learner-centred in nature but promoted the transfer of information by understanding the learner, promoting active, holistic and community-based teaching and learning practices. It is important to consider a culturally-based perspective of teaching to promote culturally-specific pedagogies in elementary education and for this to be reflected in the curriculum and teacher training policy documents. Therefore, a culturally-sensitive perspective on teaching that can promote interesting, stimulating and responsive approaches to teaching and learning for diverse children requires further consideration (Gay, 2002; Rogoff & Chavajay, 2002).

The education reform in PNG advocates the learner-centred perspective on teaching and learning (NDoE, 2004; NEC, 2009) that has dominated the country's elementary education system for the last decade. The research data indicated that pedagogically the use of learner-centred approach to teaching did not align with PNG culturally-specific pedagogies and is culturally inappropriate. The mandated focus on learner-centred teaching and learning does not seem to be producing the intended outcomes of the reform (McLaughlin, 2010). The learner-centred perspective has been introduced in many developing countries as a way of providing solutions to a myriad of problems (O'Sullivan, 2004; Schweisfurth, 2011), such as examination-focused teaching and irrelevant content (NDoE, 1994), but reform experiences in some developing countries indicate that learner-centred perspectives have not always been successful (Sriprakash, 2010). It was also expected that such perspectives would address issues such as alleviating poverty and creating an educated elite that would contribute to the social, economic and political development of a society (NDoE, 2004; O'Sullivan,2004; Sriprakash, 2010).

The implementation of reforms provides a challenge for developing countries because the shift from learning-centred to learner-centred perspectives is profound.
The success of the learner-centred perspective on teaching is dependent on teachers' understanding that learners construct knowledge through social interactions to generate meaning (O'Sullivan, 2004). This is a challenging task, because, culturally, in developing countries, knowledge is viewed typically as fixed, objective and specific to the learner (O'Sullivan, 2004; Schweisfurth, 2011).

In addition, a lack of resources and suitably-qualified teachers often contributes to the difficulties experienced with such reforms (Mukherjee & Banerji, 2008).

Clearly, the findings of this study show that teacher perspectives on teaching that do not align with that of the reform and have been an important factor in the challenges experienced in PNG. It may be important to realign teachers' perspectives by drawing from their cultural experiences and that of the reform to propose a perspective that would be culturally relevant and appropriate. The perspective we propose is called *culturally connected* teaching and this is represented in the model shown in Figure 1. It is generated from both the research data and literature.

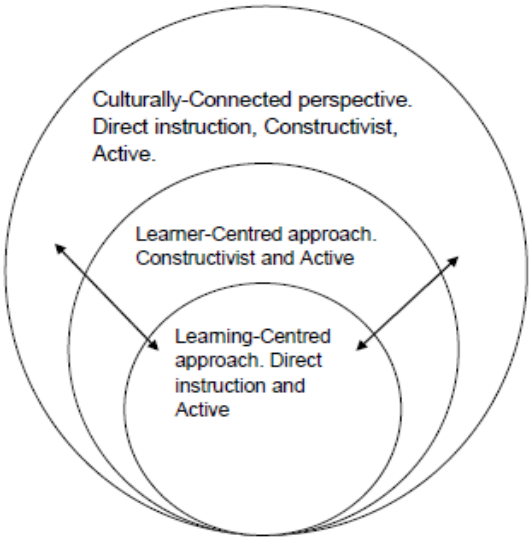

Figure 1: Proposed culturally-connected perspective on teaching

The model shows the significance of a *culturally-connected perspective* of teaching and proposes that it be considered as an alternative for the PNG context. This perspective does not exclude learner-centred, constructivist perspectives, but advocates the co-existence of both perspectives, as emerged in the perspectives on teaching for adults in this study. This is shown in Figure 1 by the concentric circles that build on each other.

The culturally-connected perspective builds on the learning-centred and traditional perspectives typically evident in elementary education by defining teaching as involving both the transferring of information and the internalisation of knowledge through a focus on non-verbal and verbal interactions in the social and cultural environment. This includes localised perspectives in addition to Western- oriented learner-centred approaches and is intended to improve the practice and quality of education. The co-existence of the perspectives would ensure that connections were built in order to maximise effective learning in the context of promoting socio- cultural consciousness.

In addition to advocating a culturally-connected perspective, it is important to also promote learning processes that support critical reflection. Socio-cultural consciousness is a type of critical reflection in which trainers reflect on multiple ways of perceiving reality and how these are influenced by varying cultural contexts (Villegas & Lucas, 2002). Such consciousness would help trainers to understand that the way people think, behave and see things is influenced by their varying socio-cultural contexts. This means they would need to appreciate both learner-centred and learning-centred perspectives on teaching as multiple ways of perceiving reality in PNG.

This appreciation of multiple teaching perspectives suggests that a culturally-connected perspective involves an ability to reflect critically. Explicit reflection on and the analysis of multiple teaching perspectives affects pedagogical decision making. Each teacher is unique and has different ways of teaching in relation to family, community and school (which make up the socio- cultural context). It is within this context that teachers have to understand how individuals learn so that multiple perspectives can be appreciated. Furthermore, teachers have to be culturally responsive to different ways of learning in diverse PNG communities.

The culturally-connected perspective acknowledges that each context is constituted

of experiences from interaction within social and cultural contexts (Rogoff & Gutierrez, 2003). The culturally-connected perspective is evident in the findings of this study with regard to perspectives on teaching adults, which had elements of both learner-centred and learning-centred views.

It is important to consider perspectives on teaching adults because the trainers will be responsible mainly for teaching adults rather than children. These perspectives will influence the quality of teacher training. In this study, one clear contextual influence on views about teaching adults has been the Bachelor of Early Childhood course. Guthrie (2003) asserts that teachers tend to select teaching approaches that work best for them within their socio-cultural contexts.

In this case, it would have been obvious from the course requirements that the trainers had to work partly within the learner-centred perspective on teaching, yet negotiation of approaches relevant to the cultural context also emerged in participants' views. Socio-cultural theory recognises that perspectives on teaching develop in the complexity of interactions between individuals (personal), the social setting (interpersonal) and the community. It also recognises the impact of both internal and external influences on an individual and the way in which that individual views reality or the world (Rogoff & Correa-Chavez, 2009). In this respect, there exists a relationship between the individual and the socio-cultural environment from which the individual's perspective on teaching is constructed, and it occurs through a web of interaction with others. The course formed one such environment.

Beyond the experience of the course, presumably the trainers' cultural encounters in teaching and other educational experiences and the transition from the pre-reform to the post-reform curriculum have contributed to their teaching perspectives.

Cultural teaching experiences refer to the participants' individual experiences of the pedagogies involved in the cultural and community contexts. With regard to the pre-reform experiences, teachers used teacher-centred approaches, reflecting a learning-centred perspective of teaching. While the focus was on the teachers and what they did and the pedagogy was based on the transmission of information, it also transmitted concepts and knowledge of subject content (Biggs & Tang, 2007; NDoE, 1994). The focus of the pre-reform approaches was on the teacher, but the reform pedagogies focused on the student, and represented learner-centred, social constructivist views of teaching and learning (NDoE, 2004).

While the reform had the intention of incorporating culturally-valued activities in the elementary school curriculum, there was no inclusion of cultural pedagogies. McLaughlin (2010) argues that such an approach is impractical and culturally inappropriate, as it fails to demonstrate real cultural appreciation. The introduction of culturally-connected perspectives marks an attempt to demonstrate cultural appreciation through a shift in pedagogies, and this will have a range of implications.

Elementary teacher training needs to support changes in perspectives on teaching in PNG. The pedagogies used in the training programs need to model culturally-responsive teaching and engage trainers in critical reflection on such perspectives. Culturally-responsive teachers would be socio- culturally conscious; that is, aware that there are multiple ways of perceiving reality, and that these are influenced by varying cultural contexts (Villegas & Lucas, 2002). Teachers would need to appreciate both learner-centred and learning-centred perspectives on teaching as multiple ways of perceiving reality in PNG.

The preparation of elementary teacher trainers that promotes socio-cultural consciousness advances the development of culturally-responsive teachers and reflects a culturally-connected perspective on teaching in higher education. It is argued that in order to align reform requirements with practice and demonstrate cultural appreciation, the CETT training program

should incorporate culturally-connected perspectives to ensure that teaching is relevant and effective for quality elementary education in the PNG context.

Elementary education reform in PNG promotes the involvement of all stakeholders in the education process and calls for greater school and community participation (NDoE, 2003). The community's role is to assist in the development of the curriculum, based on its culture (the *what*). It does not have a say in *how* children are taught, only *what* is taught, because, typically, teaching strategies from a learner-centred perspective require children to construct their own meaning without direct instruction from adults (NDoE, 2004). This perspective does not value the cultural way of teaching children through active and direct instruction (learning-centred perspective). Using the proposed culturally-connected perspective on teaching, the process of collaboration with communities would involve not only the use of cultural knowledge (the *what*) but also culturally-specific approaches to teaching (the *how*).

These approaches to teaching would include active and direct instruction typical of PNG communities as well as the constructivist approaches advocated by the reform. By expanding the current reform to include culturally-connected perspectives on teaching, cultural teaching strategies (community involvement in teaching) and knowledge (culturally-specific content knowledge) could be woven into learning experiences. There is increasing realisation that family and community members contribute to children's learning (Cairney, 2000; Rogoff & Chavajay, 2002) in terms of both cultural content knowledge and teaching strategies.

As a way forward, the existing curriculum would have to be rearranged to align the curriculum and pedagogy with both the reform (learner-centred perspectives) and cultural (learning- centred perspectives) values. The re-arrangement of curriculum documents and resource materials for teachers in PNG would need to reflect and value more culturally-connected pedagogies. In this respect, the change would both acknowledge and support the pedagogical views of communities in varying socio- cultural contexts.

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