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The Efficacy of Phenomenography as a Cross-Cultural Methodology for Educational Research

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Abstract

This paper demonstrates that the phenomenographic methodology – the study of variations of lived experience – has the capacity to manage cultural and paradigmatic differences between researchers and participants in cross-cultural research. The process of cross-cultural research presented herein makes a contribution to the existing body of knowledge about the efficacy of phenomenography. This process was developed from a phenomenographic research project in Northern Uganda and from due consideration of other cross-cultural phenomenographic studies. The study of experience in cross-cultural education projects provides an opportunity to understand participants' conceptions of inner (psychological) and outer (socio-cultural) learning processes. A phenomenographic methodology necessitates the organisation of categories of description into a holistic 'mental model,' which may comprise metaphoric representation. The use of metaphor in phenomenography to depict the categories of description as a whole was found to be particularly powerful in this cross-cultural research study as metaphor helped to establish common understandings between researchers and participants. Furthermore, phenomenography also has the potential to help manage the influences of internationalisation in local contexts as its methods give primacy to local participants' experiences.

Keywords: Phenomenography, cross-cultural research methodology, Northern Uganda, study of experience, educational research.

Introduction

This paper explores a methodology that has proven efficacious in cross-cultural educational research as its methods manage paradigmatic differences between cultures. Cultural, conceptual and ethical disparities exist in cross-cultural research, and this is particularly so in developing education contexts where foreign (often Western) advisers, researchers and policy makers are active (for example, Hutchison & Wiggan, 2009; Kunjufu, 2006; McMahon & Bruce, 2002; O'Donoghue & Clarke, 2010; Shah & Lopes Cardozo, 2014). Paradigmatic differences point to a need to develop methodologies that successfully manage such. Research of this kind is timely in an era of internationalisation and globalisation in education, where both learners and educators are increasingly likely to cross cultural boundaries to engage in learning and teaching (O'Donoghue & Clarke, 2010). The primary study of interest in this paper is a phenomenographic cross-cultural study that involved an Australian researcher and Ugandan participants (Willis, 2016) and the proposed research process was derived from this study. This study is called *the Northern Ugandan study* in this paper. The research process presented in this paper is also discussed in light of findings from other phenomenographic studies (cf. Gao & Watkins, 2002; McMahon & Bruce, 2002; Mugler & Landbeck, 1997; Purdie, Hattie & Douglas, 1996).

Phenomenography was found efficacious in cross-cultural research as culturally-specific views of psychological (inner) and socio-cultural (outer) aspects of learning became apparent in the study of lived experience. Psychologists have long acknowledged that descriptions of psychological symptoms vary across cultures (Eckensberger, 2014), and develop culturally-specific inventories accordingly (for example, Betancourt, Speelman, Onyango & Bolton, 2009). Similarly, socio-cultural factors like family structures, community norms and expectations, gender roles and power relationships also vary across cultures. Educational researchers have also discussed hesitations in using Western models in non-Western contexts (Mugler & Landbeck, 1997) and the problems with assumptions and stereotyping in cross-cultural scenarios (Purdie, Hattie & Douglas, 1996). Therefore when researching education and learning, it is important to acknowledge and seek to understand

culturally-specific conceptions of psychological (inner) and socio-cultural (outer) aspects of learning. Within a phenomenographic methodology, where participants are describing their lived experiences, opportunities are provided for participants to discuss their conceptions of inner and outer factors that affect learning and for researchers to seek clarity around intended meaning within the context of experience.

Further complications can arise in cross-cultural studies when emic (indigenous) and etic (outsider) views (Eckensberger, 2014) are amalgamated in data collection and analysis. Interviews are multi-directional exchanges and the impact of the researcher's biography must be considered in the shaping of the interview and the abduction of data. This emic and etic duality forms part of the research dynamic, but ought to be managed if the research aims to give primacy to the variations of participants' experiences, as phenomenography does (Marton & Booth, 1997). Thus, the crafting of open-ended experience-based phenomenographic questions is critical. The semi-structured nature of the interviews allows dialogue between participants and researchers that helps eliminate assumptions so that meaning is not lost in cross-cultural interpretation. For example, in the Northern Ugandan study participants frequently used the phrase "generation gap," but this did not infer a difference of understanding between generations as is the common discourse in Western contexts, but a gap in children's learning where life skills, culture and history had not been passed down because parents had died during wartime. The clarification of intended meaning and the interpretation of local conceptions of learning is advanced by the use of local themes and metaphors in the phenomenographic process. For example, when the research findings of the Northern Ugandan study were presented to indigenous Ugandan academics in the form of a metaphor that likened children's learning to the propagation of maize, the elements that affect childhood growth, development and learning were able to be likened to environmental elements that can either stunt or promote the growth of the crops. The metaphor served to establish shared understandings across cultures. Further examples are discussed below.

Therefore, this paper proposes that the potential risks associated with the imposition of foreign paradigms in cross-cultural research can be significantly minimised through the use of a phenomenographic methodology (for example, Purdie, Hattie & Douglas, 1996; Willis, 2012). This proposition is made on the premise that participants in phenomenographic research are asked to share their lived experiences before they are asked about their views or opinions. When participants are asked about their experiences with a certain phenomenon, ‘what’ or ‘why’ questions are preferred over ‘how’ questions. For example, “*What are your experiences of children and their learning?*” instead of, “*How do children learn?*” entails responses that are example based, and accordingly, participant’s views are nested within lived experiences. Phenomenographic interviews differ from other methodologies in this regard as opinions or views come after real examples. In short, phenomenographic interview questions prefer experience over opinion. Opinions and views may be shared, but by virtue of the interview structure they are more likely to be shared within lived experiences, and therefore qualified with examples.

The risks of Western impositions in developing contexts is a constant tension to be managed (Barakat, Connolly, Hardman & Sundaram, 2013; Novelli, Lopes Cardozo, 2008; Rwantagau, 2010). In Northern Uganda in the aftermath of decades of civil war, the expertise of foreigners was welcomed as local human capital suffered significantly from enduring conflict (UNDP, 2005; World Bank, 2005). However, international influence presents challenges for the local people, including threats to local identity, values and heritage (Beerrens, 2003; Karim, 2012; Rwantagau, 2010), pressures of economic and trade advances upon traditional cultures (Hutchison & Wiggan, 2009), and sacrificing local needs for global agendas (Moja, 2004). In an educational context, O’Donoghue and Clarke (2010) alerted to the risk of foreign teachers interpreting local curriculum through foreign training and experience, and problems associated with foreign imposition where education is viewed more as a reconstructive effort rather than a process of renewal is well documented (Gallagher, 2004; Davies, 2013; Novelli & Lopes Cardozo, 2008). These challenges and risks are especially pertinent in communities that have lost cultural heritage due to war and associated disease and poverty. In the

case of Northern Uganda approximately half the population was under the age of 15 by the end of the most recent conflict in 2006 (Uganda Demographics Profile, 2010). Research of this kind is sensitive to cultural understandings and has the potential to inform future research or development endeavours.

It is therefore proposed that the phenomenographic process presented in this paper has latitude to: a) enable discussions around culturally-specific conceptions of learning through the study of lived experience; b) establish common understandings across cultures through the use of local metaphors; and c) minimize negative impacts of internationalisation. These three claims are reflected upon in the discussion section of this paper. To establish these claims, this paper presents literature pertaining to the importance of experience in learning, including psychological and sociocultural aspects of learning and how phenomenography operates within these discipline areas. The cross-cultural phenomenographic research process is presented and an explanation of how local experiences and metaphors are used to generate common understandings between researchers and participants ensues. To conclude, the efficacy of the methodology is discussed and opportunities for future research are articulated.

Literature

To lead toward an understanding of phenomenography as an efficacious cross-cultural research methodology, the review of literature is organised into the following sections: the importance of experience in learning, sociological and psychological aspects of learning, and phenomenography – a study of experience that accommodates “inner” and “outer” aspects of learning. The context of this review is developing education projects that bring together researchers and participants from different cultures and backgrounds.

The Fundamental Importance of Experience in Learning

Central to this paper is the function of experience in learning. Pioneers of the study of variations of experience in learning, Ference Marton and Shirley Booth (1997), struggled with the perspectives of separated “inner” and “outer” explanations of learning (p. 12). To map a way forward, Marton and Booth reasoned that, “The world is not constructed by the learner, nor is it imposed upon her; it is *constituted* as an internal relation between them. There is only one world, but it is a world that we experience, a world in which we live, a world that is ours” (p. 13). Thus, Marton and Booth (1997) proposed a study of learning from the learner’s perspective, with a focus on *how* learning occurs rather than *what* it is. They were more concerned with how learners in different situations and cultures talk and think about learning, with the aim of describing conceptions of learning by studying learner’s experiences. It is important to note that an experience is the internal relationship between the person and the phenomena; that is, the way a person experiences a phenomenon, and the way a phenomenon is experienced by a person. As such, an experience cannot be categorised as either psychological or physical (Marton & Booth, 1997). Rather, experiences are collective interactions that borrow from social, emotional, physical, historical, rational, abstract and perhaps spiritual dimensions. Experiences are highly dependent upon awareness (Marton & Booth, 1997). According to Marton and Booth’s (1997) theory, the study of experience amalgamates inner and outer aspects of learning.

Sociocultural (Outer) Aspects of Learning

Simply, learning does not occur in a vacuum; rather, it is directly influenced by the socio-cultural climate. This is glaringly obvious in developing education contexts. According to Vygotskian theory, childhood development and learning cannot be understood outside historical, cultural and social contexts, as children grow into the culture to which they belong (Vialle, Lysaght & Verenikina, 2005). Literature that describes traditional indigenous learning is akin to this belief (cf. Ofori-Atta, 2009; Rwantabagu, 2010; Ssekamwa, 1997). This collective, or social, perspective of

learning is significant in developing contexts as social capital has considerable bearing on the learner (Bourdieu, 1977).

Psychological Aspects of Learning

To understand the internal connections a learner makes with external social and cultural contexts, psychological theories of learning that accommodate theories of mind and neuroscience must also be considered. Medina's (2008) work regarding the neurological mechanics of learning complements socio-cultural theories, as he explains that fundamental to neural connections are attractions. According to whatever attractions are first, most frequent, and most coherent, neurons use both chemical and electrical signals to make connections and form synapses (Medina, 2008). Therefore, the socio-cultural environment is inextricably linked to individual neurology; again pointing to the salience of experience as an amalgamation of inner and outer learning processes (Marton & Booth, 1997). Consequently, learning suffers when interactions or attractions between an individual and their environment are inadequate (Illeris, 2009).

This is significant in developing contexts where hunger, sickness and social insecurity constantly hijack neurological resources (Willis & Nagel, 2015). This is an important consideration for foreign researchers and consultants as learning in developing contexts therefore involves neurological rehabilitation. The amalgamation of sociocultural and psychological theories of learning in the study of experience, then, is significant. Furthermore, the role that foreign consultants have in empowering local educators with knowledge about their role in the neurological rehabilitation of their students is also crucial. This paper contends that by studying the lived experiences of local participants, foreign researchers are better positioned to articulate the connection between the psychological (inner) and sociocultural (outer) aspects of learning in a meaningful way.

Phenomenography – a study of experience that accommodates “inner” and “outer” aspects of learning

The study of the variations of lived experience as a methodology was developed by Ference Marton (1981, 1988) and termed *phenomenography*. A phenomenographic view of learning accounts for variations across experiences of learning due to culture and situation (Marton & Booth, 1997). Phenomenography is particularly suited to educational research due to its dependence upon experience and its practicality for solving pedagogic problems (Marton 1988; Marton and Booth, 1997). This methodology has the scope to inform researchers about needs being presented in a community, which is most valuable in cross-cultural and developing education contexts as data is based on real examples, rather than participants’ opinions, as explained below. By accessing community needs, a researcher is better positioned to understand the situation and make future recommendations. As Marton (1988) explained, “If we understand the relationship that exists between an individual and what he or she is trying to learn, pedagogical opportunities are greatly expanded” (p. 159). It could be further argued that development opportunities are also expanded. For example, phenomenography was used by McMahon and Bruce (2002) to understand development workers’ conceptions of ICT needs in cross-cultural contexts. The McMahon and Bruce (2002) study revealed a need for further research to understand conceptions of local users also, and phenomenography was deemed suitable for this purpose.

Three lines of phenomenographic research were described by Ashworth and Lucas (1998): the qualitative differences in approaches to learning, learning within a disciplinary context and associated student conceptions, and how individuals conceive various aspects of life. The Northern Ugandan study takes the third line, as it seeks to describe individual conceptions (teacher’s experiences) of various aspects of life (children’s learning). The articulation and categorisation of local teachers’ conceptions of children’s learning was considered foundational to future professional learning and development endeavours. The project involved an Australian researcher and Ugandan participants, and phenomenographic methods allowed for the amalgamation of Western and African

paradigms and provided common language for communication through the use of metaphor, namely the propagation of maize as a representation of children's learning (discussed below). The Northern Ugandan study is not alone in this regard: in other studies phenomenography enabled the comparison of categories of description and identification of differences across cultures (Mugler & Landbeck, 1997; Gao & Watkins, 2002).

On numerous occasions Marton (1981, 1988) justified the usefulness of phenomenography over psychological models on the basis of validating human experience. But more than this, the Northern Ugandan study asserts that not only is phenomenography just as useful as psychology in the study of learning (Marton, 1988), it has the capacity to bring psychological theory into application by contextualising it within experience. Expressly, in the Northern Ugandan study the descriptions of experiences assisted in the formulation of common understandings between the researcher and participants when describing psychological aspects of learning. The formation of common understandings was critical to productive outcomes. In another phenomenographic study, Mugler and Landbeck (1997) stress the importance of the process of deriving intended meaning of words used; this process is not unique to the methodology of phenomenography, but distinctively it is 'in-built' in the research design due to phenomenographic questions being structured thus: a) What are participants' experiences of [x]? and b) How do participants describe their experiences of [x]? The Northern Ugandan study found that this incorporated process of derivation assisted in cross-cultural understandings between researcher and participants.

Cross-Cultural Research Design and Methodology: The Northern Ugandan Study

The aims of the Northern Ugandan study included: (a) to generate theory about Ugandan teachers' conceptions of children and their learning based upon their experiences; and (b) to develop a process for educational research in situations that involve researchers and participants from different cultures (Willis, 2012). The second aim is the prime focus of this paper. The first aim was

indeed met, and theory has been generated pertaining to teachers' conceptions of children's learning (Willis, 2016; Willis & Nagel, 2015). However, the success of the first aim would not have been achieved without the simultaneous realisation of the second aim: the development of a process for cross-cultural educational research.

It ought to be noted this study abandoned an ethnographic methodology in its early stages as a pilot interview revealed that an ethnographic interview schedule was too embedded with Western presuppositions to adequately reach the breadth and depth of the situation in Northern Uganda. The reasoning action underpinning this decision is discussed here. On more than one occasion the pilot interviewee prefaced her answers with warnings that what people say and do can differ. Indeed, the same could be said of Australian participants, but the Australian researcher did not have the cultural knowledge to pick up on these nuances in Uganda. As the pilot interview unfolded it became increasingly evident that Western paradigms pervaded the interview schedule and inadvertently put the productivity of the study at risk as predictive validity could not be established. Indeed, the interview questions could have been adjusted from the pilot to minimise Western assumptions, but for a researcher who had never visited Northern Uganda and did not know what to expect, the qualitative feedback from the pilot interview could not be ignored. It was decided that a methodology that primarily focused on participants' experiences (*What is your experience of children's learning?*) rather than their opinions or views (*What advantages do you think education gives an African child?*) was more appropriate for the cross-cultural dynamic. There was a symbiotic relationship between reason and cause in the decision to change to a phenomenographic methodology. The gravity of this decision retrospectively informed the assertion that phenomenography is an efficacious methodology for cross-cultural studies as its open-ended and simplistic style allows access to local understandings that a foreign researcher may have never before considered. An open-ended and reflexive methodology was essential for a research who had never lived through the horrors of war.

Within the research design, a transparent audit trail traced the alternating analytic induction, deduction and abstraction of concepts from the data (Punch & Oancea, 2014). Miles and Huberman's (1994) interrelated components of data analysis informed the audit trail: data collection, data condensation and display (alternating and repeated components), and drawing and verifying conclusions. A summarised audit trail of the Northern Ugandan study is outlined here, and elaborated in the sections below.

- i. Data collection – semi-structured in-depth interviews.
- ii. Data collection – observations that were qualified within interviews.
- iii. Clarification of terms in interviews; comparing data.
- iv. Transcription of recorded interviews into text.
- v. Hardcopy coding and recoding of themes.
- vi. Triangulation of observations (ratified in interviews), interview transcripts, and literature.
- vii. Memo-ing of topics and emergent themes.
- viii. Analysis of transcripts in NVivo Software.
- ix. Expansion of codes.
- x. Second hardcopy of transcripts printed according to codes; second round of analysis.
- xi. Reduction of codes: comparing and contrasting codes, writing about and depicting the codes in a tree diagram, consolidation of the tree diagram.
- xii. Axial thematic recoding.
- xiii. Abduction of six categories of description.
- xiv. Selection of samples of data to display verbatim.
- xv. Organisation of categories of description into a holistic mental model that 'graphs' the variations of lived experiences; abstraction into metaphoric description (Figure 2).
- xvi. Presentation of mental model to Ugandan academics visiting Australia in open forum.
- xvii. Presentation of mental model to Ugandan academics in Northern Uganda in open forum.

This phenomenographic process moved data from first-order concrete descriptions and experiences (etic) to second-order conceptions and abstractions (emic) (Punch & Oancea, 2014). This audit trail is a linear description of a multi-linear and dynamic process. Many of the steps occurred concurrently, and some were cyclic in the reflexive process of phenomenography.

Phenomenographic Research Questions

By asking about experiences, rather than inquiring about teachers' knowledge, expertise, opinions or views, the goals of Western paradigms were somewhat removed and local teachers were able to describe their experiences of children's learning with confidence. The research questions were designed to meet both of the research aims outlined above:

What are Ugandan teachers' experiences of children and their learning?

How do Ugandan teachers describe their experiences of children as learners?

Prima facie these questions may seem simplistic, but in practice they yielded profound data as they gave local educators scope to discuss what they perceived to be pertinent issues. As the study unfolded, it was found that asking teachers to describe their experiences revealed a multiplicity of issues that surround children's learning in Northern Uganda. The investigation of experience proved to be efficacious as it brought together psychological and sociological aspects of learning in the pragmatic, everyday stories of the local people. The cross-cultural phenomenographic process is depicted below in Figure 1. This figure shows how this methodology is highly reliant upon local descriptions, themes and culture. The process starts with local descriptions and culminates in a mental model that uses themes from culture. The role of the researcher throughout is one of learner and facilitator. The phases of this process are discussed in more length in the sections that follow.

[insert Figure 1 near here].

Data Collection: In-depth Interviews

Phenomenographic interviews should take place at two levels: on one level, interpersonal contact between the interviewer and interviewee; and on a second meta-level, a therapeutic discourse whereby the interviewee is seeking to free previously unreflected experiences (Marton and Booth, 1997). The emancipatory nature of phenomenographic interviews is evident in the Northern Ugandan data set (Willis, 2012). Kvale (2007) described the research interview as an ‘inter-view’ where knowledge is constructed through interaction. The pilot interview revealed an evident need to minimise potential assumptions and preconceptions associated with structured or standardised interviews that relied upon predetermined lists of questions. Lichtman (2006) described in-depth interviewing as more of a process than a predetermined list of questions. Such a process involves building rapport, orienting the participants with the purpose of the conversation, and engaging in deep dialogue. In this way, space could be created for the complexity of a whole phenomenon to be made apparent (Burns, 2000).

Accordingly, a semi-structured interview schedule was formulated to serve as a common starting point. Each interview opened with the simple question, “Can you tell me about your experiences with children and their learning?” This interview question mirrored the research guiding questions. A semi-structured, open-ended interview is not restricted by fixed wording or ordering of questions. Rather, it allows more free-flowing conversation that some would argue produces more valid participant responses as they are able to share their versions of reality (Burns, 2000). Francis (1996) claimed that one of the unique traits of phenomenography is its insistence on capturing conceptions within interviews that are faithful to the individual’s experiences of a phenomenon. Such a perspective is highly dependent upon the security of an interview and the rapport between the researcher and the interviewees, as the views of the participants ought to be handled in a non-judgmental manner. In a context that had suffered ongoing political abuse (United Nations, 2003), it was found that such an approach was suitable.

Nine interviews were conducted with 16 participants. Individual interviews were conducted with four participants, and in all other cases interviews were conducted with groups of two or three teachers. Interviews were all conducted in English, as this was a requirement of the participant selection process approved by the research ethics committee. The researcher was cognisant that her ethnicity and Western background could be intimidating in a context that has become accustomed to Western aid and assertions of power. Although being female seemed to help reduce the potential for intimidation, in some interviews the participants needed assurance that their experiences were valuable and that there were no right or wrong answers. In light of Uganda's history of didactic schooling (James, 1994) it was quite possible that the interviewees felt there may have been 'right' answers to interview questions. It was found that conducting interviews in groups gave participants the advantage of being the majority, but it also gave them time to formulate their thoughts while their colleagues talked. Interviews lasted between 20 minutes to one and a half hours, depending on the enthusiasm of the group.

Data Collection: Observations

Researcher observations were recorded most days during the data collection phase on the topics of children, learning, education, schooling, and the Ugandan (Acholi) culture. Much of the observational data concurred with interview data, but no observational data was carried forward for analysis unless it had been discussed in interviews. In this way, a local consenting participant qualified observations. This process helped to minimise assumptions. For example, to a Ugandan person an orphan is a child without active parents, but to an Australian an orphan is commonly defined as a child whose parents are deceased. This example is indicative of many observations that would have led to incorrect conclusions had they not been discussed within interviews. Interviews also provided opportunity for clarification of terms. Having a background in critical literacy, the researcher was very cognisant of seeking to understand local discourses and social norms by the ongoing clarification of semantics and non-verbal semiotics embedded in language use. Interviews commonly complement fieldwork observations (Burns, 2000), but in this case it was the other way

around as observations were validated within interviews. Holliday (2007) refers to core and peripheral data, and in this study interview data was core, and observation data was peripheral. Observations provided opportunity for concurrent validity and triangulation and emerging phenomena could be considered in light of interviews, observations and literature. As Holliday (2007) argued, in many ways everything is data in a qualitative research study. So although observations were peripheral, they played an integral part of data collection and analysis as the researcher was able to discuss what she saw with participants and gain local perspective on the observations.

Data Analysis: Coding and Categorising

Interviews were recorded in Northern Uganda using a digital recording device, and later transcribed into text in Australia. The hardcopy transcripts were initially analysed by coding and recoding recurring themes. If a topic or theme presented more than three times in the transcripts, it was allocated its own code. Once preliminary codes had been identified, the transcripts were loaded in the software programme NVivo™ (version 8) for more complex coding. The number of codes expanded to 66 over a period of two months. The transcripts were printed again, this time according to their codes, and the data reduction process began. During this process of coding and re-coding analysis moved from identification to interpretation, and first-order constructs moved to second-order constructs as the researcher added layers of elucidation. In the second hardcopy analysis of the data, many codes merged or were discarded and only 25 remained. For a code to be retained, it had to have a minimum of three data sources and have thematic connections to the other codes. Comparison of data, codes, themes and concepts occurred throughout the qualitative process. The process of having to display the data in categories of description, according to phenomenographic tradition, brought more clarity to the data. During the data display process the six final categories of description emerged, and all codes were able to be accommodated. It ought to be noted that the final six categories were not predicted at the beginning of the data coding process. They emerged from the data, not from the researcher's assumptions. Prior to data collection, a review of literature pointed to

the major themes of poverty, conflict, disease and corruption negatively impacting learning and education (Willis, 2012). However, these themes did not emerge as categories of description in the research. The final categories were i) learning as dependent, ii) learning as affected and iii) learning as a means (see Figure 2). In retrospect, it was reasoned that a study of experience allowed the generation of categories to be shaped by the research participants' conceptions rather than researchers' preconceptions arising from literature.

According to Cope (2002) reliability in a phenomenographic study is achieved by a clear audit of research procedures and the thorough and transparent presentation of research data and findings. Data presented was drawn from and cross-checked between multiple interviewees' accounts of their experiences with children and their learning. Therefore, the conceptions of children's learning reliably belong to the 16 Ugandan teachers who participated in this study, and collectively they establish reliable, context-specific conceptions. These conceptions are manifest in categories of description, extrapolated below, and are accompanied by excerpts from the data set. Pseudonyms are used to protect the identities of the participants, and African English has been preserved to minimise layers of interpretation.

Phenomenographic Research Outcome: The Construction of a Metaphoric Model

The culmination of the data analysis process was the formulation of six categories of description to represent teachers' conceptions of children's learning. Ultimately, they contributed to the construction of a complex phenomenographic model that metaphorically depicts Ugandan teachers' conceptions of children's learning (Willis, 2012). A simplified version of this model is depicted in Figure 2, which shows the strong interdependent relationships between the six distinct categories. The Northern Ugandan study used the local agrarian theme of propagating maize as a metaphor for the growth of children's learning in Northern Uganda. Metaphor established common language and enhanced discursive meaning, bringing together real experiences with academic theory.

The categories are not linear in nature, nor are they exhaustive, but they have been constructed to best accommodate and describe the variations in individual and collective experiences.

[Insert Figure 2 near here].

Excerpts from the Northern Ugandan Dataset

To support the assertions made up to this point, and provide examples for the process illustrated in Figure 1 and discussed in the previous section, a selection of data from the Northern Uganda study is presented here alongside an explanation of the phenomenographic mental model (Figure 2). In this extended metaphor a child is depicted as a maize plant, his/her roots represent what learning is ‘dependent’ upon, and the ears of maize represent the ‘fruit of learning,’ which are impacted by positive and negative factors.

Conception A: Children’s learning as dependent upon cultural heritage and family background

There is a quality in teachers’ conceptions that children’s learning is fundamentally dependent upon cultural heritage and family background. This conception is reminiscent of the old African adage, “It takes a village to raise a child” and in the abstraction process cultural heritage and family background were likened to the roots of a maize plant: the plant (the child) cannot survive without strong roots. This metaphor highlighted the importance of the soil (the context that hosts culture and belief systems) to growth. The following comments from the dataset demonstrate this conception:

...the child is for everybody and whatever happens to a child affects the whole community, and the whole community was concerned for the growth of every child in the community. And to me that was good. And you find a child grows up and knows that all these are my people.
(Timothy)

Right from home respect is taught through elders, and education has the same respect. So you find it is a little somewhat easier because it is in their [children’s] blood they have respect. Talking to an elderly person, they respect and want to learn what you are teaching them...

Culture plays that role. We have a good cultures. Respect is one thing, and also sharing... Learning by 'direct method' - learning by what you are doing. When a father is teaching a child how to act, for example, hunting, you do not go to the theory. You go straight to the field!... That is true that the war took some cultures away. But the adults that are so strong, it does not go easy. War alone should not take the goodness of cultures... Another thing we teach is stories - myths and legends from the ancestors... I like to put these stories into science. It always leaves you with something to think. Now this is a different teaching from the scientific way. This one has been taught with some ethics around it - respect. In so doing this, people learn how to know. You grow up like that, until when you are fully grown. (John)

The child development in our cultural setting was so good. In that, even if you had a child at school, the informal learning was also at home. So when the child leaves school and goes back to our home setting - the village - the elders takes the responsibility to teach them what they should know as the tribe of that particular area. And that was very good during our time. It is what we call wang-oo, our fireplace. So that is the fireplace and children were taught what they should learn because they belong to the society. (Abe)

In describing their own lived experiences, participants spoke with authority and confidence, as their experiences could not be denied. They were able to discuss their educational and cultural experiences in an integrated manner.

Conception B: Children's learning as dependent upon the education system

Ugandan teachers used the terms learning, education and schooling synonymously. As interviews progressed, it could be seen that there was a strong reliance upon the education system and government policy to facilitate children's learning and compensate for the breakdown of family structures due to war. In a post-conflict context it was found that school life often filled the void of lost village-life and that teachers were acting in parental roles. Therefore, this conception of children's learning as dependent upon the education system was represented as another root of the maize plant (the child) in the phenomenographic model. When teachers were asked about children's learning they would often begin to describe the education system or the routine of their school. For example:

They start school in P1 (six years old). They must be mature enough to recognise shapes, dress themselves, walk from home to school. Students start learning from home and progress to the school curriculum. They move through the syllabus developmentally. There is a focus on concrete objects in P1-P3.

*Interviewer: How do you build knowledge in a child?
From the syllabus. It happens in stages. (Godfrey)*

We have a school attendance register - a roll call. We follow them up if they do not attend. And we follow the parents up too. We talk to the parents about the benefits of education. We also have testing. We talk about testing results with the children and with their parents. (Mercy)

The packed lunch initiative was another example of dependence upon the government to establish social norms:

But now the government came up with a system ... It is special program known as Lunch Package. You pack your lunch and you come with it to school. They tried it for one year and there was great improvement [in student performances]. (Paul)

Within the methodology of phenomenography, open and honest discussions about the education system took place without fear of redress.

Conception C: Children's learning as fragmented

This conception includes the “gaps” in children's learning that were created by loss of the traditional fireplace, displacement, the subsequent breakdown of domestic care, and an underdeveloped education system. Due to ongoing war and consequent disease and poverty, traditional learning has been fractured and many teachers now believe children's learning to be fragmented. The phenomenographic model included underdeveloped ears of maize in the mental model to illustrate “gaps” in learning and how the ‘fruit of learning’ is impacted by war, poverty. The following comments about the impact of the war and displacement upon parents and children sum up these findings:

Because those who have lived without valuing their life they are now the majority, and some of them are now parents. Now what do you think that kind of a parent can do when he or she has lived without valuing his or her life, now they will take the child to live the way he or she has lived, and that is a very big challenge. (Timothy)

Abe's school conducted home visits to try bridge the “gaps”.

So we go and encourage them to help the children to learn where they come from, where they are going and what was the situation before their parents came to the situation we are in. They

begin learning how was it then, before. How did our ancestors used to behave or live? Then how are we now, and where are we going? So that children can even begin to think beyond the problem to the [solution] so they can develop their society. (Abe)

Prudence, a teacher at Abe's school, shed further light on how children's learning can be fragmented:

The challenge is parents sending a child to school - the parents get up in the morning and go and do his/her own duty, making the child, thinking a child is normal. As soon as the child is sick, the parents do not even take concern. The child want to come and learn, so the child will come when sick. And sometimes we find a child lying on the road. From school, you think the child is at home. From home, you think the child is not there so she has gone to school. And yet in the real sense, the child is badly ill. So those are the challenges sometimes we get. And because another always reports to us, hey we find a child lying on the road, we have to take care. (Prudence)

During the recent war, the fragmentation of learning was intensified by the Internally Displaced People (IDP) camps and ongoing associated social issues.

The IDP camps were overcrowded, so parents had no control over their kids. Add to this equation trauma and poverty. The resettlement process has had its own challenges. Not only were there displaced people, but displaced schools. Some people refuse to leave the IDP camps and go back to the villages, so they become street kids. (Victor)

We used to have protective camps (IDP camps), the father or mother is not there and way they are treated is not in a good way. So they are messing up with our mothers and with our elder sisters. So it does become a problem whereby each and every family violence has touched. (Mark)

These personal accounts bring to life the effects of war described by aid and development based literature (Joshi & O'Donnell, 2003; Republic of Uganda, 2003; United Nations OCHA/IRIN, 2004).

Conception D: Children's learning as hijacked by competing post-conflict and poverty related stressors

In many instances, children's attention and energy that may be otherwise devoted to learning is hijacked by post-traumatic stress, HIV/AIDS, the phenomenon of orphaned children, including child-headed families, and child labour. In the phenomenographic model these factors are represented as predators that hijack the 'fruit of learning'. The following excerpts embody the tragedy of this situation:

You find the child is not properly cared for. Education becomes totally nonsense to them. For example, today we had to send for two kids who [were absent] and we said, "What is wrong?"

They said, “My dad is not there. They have not bought me any scholastic materials. And my mum is admitted with [HIV]. So I am living with my eldest sister.” And that girl is in P3-5 and is taking care of this situation. (Prudence)

Some of them have parents, but most of the children here are orphans. They don’t have a father or mother, so like they are with the relatives. So when they are at home they may be overworked. They may be given work to do somewhere and make them keep on thinking hardships. So that brings some frustrations to them... There was one that we had here she tends to sleep in the class... she used to sleep in class because at night she wasn’t what? Sleeping. So we tried to help that one out. (Mark)

And then there are some parents who have not been educated sometimes, and that is the ignorance of the parents. So they just stop the children and they get them to go and do the work in the field. So they don’t want to be educated, their children ...because of the activities at home they are not sending their children. (Ernest)

These findings are sobering in light of the effects of stress and trauma on children’s learning (further elaborated in Willis & Nagel, 2015). Phenomenography facilitated without-prejudice conversations where participants could discuss the gravity of the effects of post-traumatic stress on the education of their children.

Conception E: Children’s learning as a means to “open the mind” and overcome fear, shyness and low esteem

Intangible notions of love, fear and esteem feature strongly in this conception of children’s learning. Teachers’ conceptions of how the widespread prevalence of fear in their communities had sabotaged their children’s learning and their beliefs about the powers of love and encouragement in facilitating learning are elaborated. An open ear of maize depicts this conception in the phenomenographic model to show the development of the ‘fruit of learning’. The following excerpts from the dataset typify this conception:

Most Ugandans are discouraged, they have no self-esteem. So they have come with a way of helping them to realise they are important in life. So when you realise you are important in life you open up your mind to things. (Walter)

When asked how she coped with the challenges of war, poverty and disease, Alice offered the following response:

Love. It overcomes the barriers and brings them close. And then they learn. Love helps facilitate learning... These are helped by love. Slowness is overcome by love. We give them praise if they do something well and a lot of encouragement along the way. (Alice)

For many participants, education was a means of emancipation, and these hopes for the future were able to be communicated within a phenomenographic interview.

Conception F: Children's learning as a means to community rehabilitation

For many teachers, children's learning is the fundamental starting point for rebuilding their community. This conception incorporates themes of schools leading communities, teachers in parental roles, and hopes for the future, and is represented in the phenomenographic model by the 'fruit of learning' (the maize) being sown back into the 'soil' of the community, enriching human capital. The data in this conception is inspirational, as the following excerpts demonstrate:

And I want to say with all the other background we had [the African setting] and with the challenges we had in the middle [consecutive conflicts] where there was a big gap. But now we find, we have the challenges but what can we do to reinstate? ... Now what kind of people? The one ones to be educated along that line can make a very big difference. Because this children we have here, these are our leaders of tomorrow. So if they have grown up in a way where they respect one another what thing shall we lack? Nothing. (Timothy)

And you find, especially when we call these parents at the end of the year, when we have open day, they come and see what their children do. These parents here really enjoy the education of their children. And they are able to tell us that "so-and-so doesn't want to send their children to school. Teacher, help us to pull a team together." (Rose)

But I believe in a new future to come and changes will take place and learning will be really affective. Because all that people are doing now are trying just to make the learning process to be enjoyable. At the moment they are just trying. But I believe in 5-10 years from now the situation may have changes from what it is now. (Mark)

Although educational goals and aspirations were not mentioned in the research questions, phenomenography allowed for unanticipated topics to arise.

Discussion: Methodological Reflections

The discussion here evaluates the earlier assertions that phenomenography has the latitude to: a) enable discussions around culturally-specific conceptions of learning through the study of lived experience; b) establish common understandings across cultures through the use of local metaphors; and c) minimize negative impacts of internationalisation.

Not only have phenomenographic methods produced a rich yield of data, they have also demonstrated a capacity to amalgamate sociocultural (outer) and psychological (inner) aspects of learning theory in the study of experience. This synthesis provides opportunity for pragmatic interpretations, deductions and analysis of real life events and considerations of the implications for practice. Figure 3 depicts this relationship between experience and the psychological (inner) and sociocultural (outer) aspects of learning. The other dimension of synthesis facilitated by phenomenographic methods is the formation of common understandings between the researchers and participants from different cultural backgrounds through the construction of categories of description, which culminate in a metaphoric representation in a phenomenographic mental model. The Northern Ugandan study is not alone in this discovery: Gao and Watkins (2002) and Purdie, Hattie and Douglas (1996) also used phenomenography to compare conceptions across cultures.

[Insert Figure 3 near here].

Furthermore, as phenomenography employs metaphor/s in the construction of a mental model to describe/graph variations of a phenomenon, it was found that its scope for incorporating local themes from the research site enhanced the significance of the findings for local practitioners. This finding is meaningful in view of the current issues that accompany increasing multiculturalism and internationalisation in education (Beerkens, 2003; Hutchison & Wiggan, 2009; Moja, 2004; O'Donoghue & Clarke, 2010). In this way, the methodology of phenomenography serves to construct common understandings for both the researchers and the participants. Mugler and Landbeck discussed doubts about using Western models or inventories in cross-cultural educational

research back in 1997, as different cultures emphasise different teaching and learning styles, and similarly found phenomenography to be efficacious in the establishment of local conceptions. Purdie et al.'s (1996) research also demonstrated the capacity of phenomenography to challenge stereotypes through the categorisation of participants' conceptions.

Consequently, the phenomenographic methodology proves efficacious in minimising negative impacts of foreign influence as local experiences and conceptions are given primacy and advocacy. A phenomenographic methodology also accommodates abstractions from foreign researchers but places these within a context of a locally-derived theme or metaphor. This is critical in conflict-affected contexts that are in need of foreign intellectual capital to assist in overcoming the devastation that has been caused by tragic events, as foreign influence can be both positive and negative (Davies, 2013; Novelli & Lopes Cardozo, 2008).

Conclusion

Altogether, this paper asserts that phenomenography is an efficacious methodology for cross-cultural educational research as its methods investigate paradigmatic differences between cultures, give primacy to participants' experiences, provide scope for the use of local themes and metaphors, and subsequently formulate common language and understandings for both researchers and participants. The need for sensitive methods is apparent so that foreign responses are not offered without first seeking to understand the local context. This study makes a contribution in this regard and would contend that the methodology of phenomenography has the potential to make similar contributions in other cross-cultural projects. By seeking to understand participants' experiences, phenomenographic research builds a common platform for researchers and participants to discuss relevant educational issues that have been jointly identified.

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