

**An exploration of Curriculum Integration in the GET phase of Education:  
A Case Study.**

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**LIST OF ACRONYMS**

AS	Assessment Standards
C2005	Curriculum 2005
DoE	Department of Education
GET	General Education and Training
HOD	Head of Department
KZN	KwaZulu Natal
NCS	National Curriculum Statements
RNCS	Revised National Curriculum Statements
LO	Life Orientation
LOs	Learning Outcomes
OBE	Outcomes Based Education
SGB	School Governing Body
SS	Social Sciences



# CHAPTER ONE

## PREVIEW OF THE RESEARCH

- 1.1 INTRODUCTION
- 1.2 FOCUS AND PURPOSE OF THE STUDY
- 1.3 CRITICAL QUESTIONS
- 1.4 RATIONALE
- 1.5 PREVIEW OF CHAPTERS TO FOLLOW
- 1.6 CONCLUSION

### 1.1 INTRODUCTION

The first chapter introduces the study and outlines its purpose and the critical questions it attempted to answer. A brief outline of the research design and its rationale is also included. This research study explores educators' perspectives of curriculum integration in the GET (General Education and Training) phase of schooling (from Grade R to Grade 9).

The second chapter focuses on the literature review, which includes international as well as South African studies relevant to this research. Chapter three introduces the qualitative data collection tools, and how these were used to gain rich data from the empirical site. Chapter four focuses on the analysis of the data. Chapter five is the concluding chapter which provides a brief synthesis of the research and points towards recommendations for future research in curriculum integration.

This study explores how educators integrate the curriculum in the GET phase of schooling. The empirical site of this research was a single school in KZN where the educator's implementation of curriculum integration were observed and recorded.

This study was conducted within the qualitative research paradigm. Using a qualitative approach helped me to gain rich data so that I could relate the participant's responses and observable behavior and gain richness of meaning from the empirical data which I gathered from this specific empirical site. According to Mouton (2001), "one of the major distinguishing characteristics of qualitative research is the fact that the researcher attempts to understand people in terms of their own definition of their world", Mouton (2001, p. 194). The underling reason for this choice of approach is based on the need to explore and understand the viewpoints of the participants. Struwig and Stead (2001, p.56), posits that an understanding of the context of the participant's thoughts, feelings, experiences and behavior are crucial if we wish to achieve value-laden data.

Denzin (1989, p. 83) uses the term “thick description” which refers to the participant’s “voices, feelings, actions and meaning.”

## **1.2 FOCUS AND PURPOSE OF THE STUDY**

This study can be of great assistance to educators, curriculum planners and the Department of Education (DoE). The purpose of this study was to explore educators’ understanding of curriculum integration in the GET phase of education.

This study was conducted within the qualitative research paradigm. Using a qualitative approach helped me to gain rich data so that I could relate the participants’ responses and observable behavior and gain richness of meaning from the empirical data gathered from this specific empirical site. According to Mouton (2001, p. 194), “one of the major distinguishing characteristics of qualitative research is the fact that the researcher attempts to understand people in terms of their own definition of their world.” The underlying reason for this choice of approach is based on the need to explore and understand the viewpoints of the participants.

**1.3 CRITICAL QUESTIONS:** The following two critical research questions are those that this in-depth study sought to answer:

1. What are GET phase educators’ perspectives of curriculum integration?
2. How does curriculum integration happen in the GET phase?

## **1.4 RATIONALE**

Since the introduction of Curriculum 2005 (C2005) and Outcomes Based Education (OBE), I have as an educator, observed that educators struggle to make sense of curriculum integration and what their expectations are in the

development and implementation of curriculum integration. This challenge has created much frustration amongst educators.

The view that educators are experiencing difficulties in understanding OBE and curriculum integration, is supported by Bennie and Newstead (1999), who posits that “South African teachers are currently trying to come to terms with an ideology of outcomes-based education, new learning areas, new content, and the implications of calls for “integration”, “contextualisation”, “relevance” and “learner-centredness”. (Bennie & Newstead, 1999, p. 3).

C2005 was a South African Government initiative to help redress the imbalance and inequalities in the quality of education of the different racial groups under the Apartheid era. An important element of C2005 was the acceptance of the belief that curriculum integration must not be forced or artificial but must occur in a natural order in schools and be grounded in a holistic approach to teaching. In order to achieve the above, C2005 proposed that the content material of the different learning areas should be easily related to each other, rather than being “strongly insulated” (Young, 1971, p. 49) from each other. How C2005 was to achieve this level of integration is still not clear.

The implication here is that the desired curriculum integration would enhance teaching and learning strategies by supporting integration across the different learning areas and hopefully create a range of opportunities for the learner to show some level of progression, physically, emotionally and socio-culturally.

Taylor (2000) questions the demand by C2005 for the integration of knowledge and raises the concern of whether C2005 can actually achieve the goal of enhancing the life chances of the previously disadvantaged learners. According to Taylor (2000, p. 3), “in South African terms, the debate is not about whether we should integrate knowledge or not, but about the nature of that integration.”

A curriculum framework was then designed by the DoE to put into practice the expected curriculum integration. However there are differences in the nature of understanding of “curriculum integration” with different educators appearing to interpret the concept in different ways. Even schools in close proximity to each other, may have different interpretations of curriculum integration.

Curriculum integration in the GET phase is therefore quite a complex task which places a high degree of responsibility on the educator’s ability to firstly understand and then implement curriculum integration. Gultig and Adendorff (2006, p. 13) quote Jansen (2006) who contends that if curriculum integration is artificial then there will always be a “gap” in the educator’s practical interaction between what they do in the classroom and what government policy expects of the educator.

The findings from this research could be useful to both seasoned and novice educators and could serve to inform Departmental curriculum specialists who prepare textbooks, as well as national policymakers who design our national curriculum. This study could also serve to inform the curriculum development process at the school at which I teach.

## **1.5 PREVIEW OF CHAPTERS TO FOLLOW:**

The following chapters will follow as part of this research study:

### **1.5.1 Chapter Two: Literature review**

This chapter looks at academic research done locally and internationally. The literature review offers a brief synthesis of scholarly literature and related DoE policy on curriculum integration, with reference to national and international studies. This chapter will focus on studies done in Brazil, Australia, Hong Kong,

the UK, United States of America (USA), Jamaica and Namibia, as well as efforts in South Africa.

### **1.5.2 Chapter Three: Conceptual and theoretical framework**

This chapter gives an overview of the various technical and conceptual terms of reference of the theory guiding this research study. Here the complex concept of curriculum integration with its relevant implications to both teaching and learning is unpacked.

### **1.5.3 Chapter Four: Data analysis and interpretation**

This chapter focuses on the initial and post semi-structured interviews and the responses of the participants. Four of the participant's lesson presentations were video recorded and analyzed in order to achieve data that were as rich as possible. Transcripts of the pre- and post- semi-structured interviews as well as transcripts of the video recorded lessons are used as a basis to understand how curriculum integration is implemented in the classroom.

### **1.5.4 Chapter Five: Research synthesis, findings and recommendations**

This chapter outlines the main research findings gained from the empirical site, based on the semi-structured interviews and classroom observation. The recommendations in this chapter are on the findings of this study. This chapter looks at limitations of this study as well as possibilities for future research.

## **1.6 CONCLUSION**

This chapter began by introducing the research study, its background and the context of this study. The focus and purpose of the study, as well as the critical questions it attempts to answer and the rationale of the study is outlined. The following chapter is a literature review of the relevant national and international research studies done with regard to curriculum integration.

## **CHAPTER 2**

### **REVIEW OF RELATED LITERATURE**

#### **2.1 INTRODUCTION**

This literature review offers a brief synthesis of scholarly literature and related DoE policy on curriculum integration, with reference to studies which are both national and international. This chapter will focus on studies done in Brazil, Australia, Hong Kong, the UK, USA, Jamaica, Namibia and South Africa.

Some studies, such as that by Fogarty (1991), focus on educators' perceptions and their effects on curriculum integration as a "continuum of integration" (Lake, 2009, p. 3). Research done by Aschbacher (1991) focuses on the effects of curriculum integration on the process of learning. Humphreys, Post and Ellis (1981) examined educators' experiences of teaching thematic lessons, and attempted to look at the rationale for justifying an integrated curriculum or an interdisciplinary curriculum.

Although the above studies do not focus directly on curriculum integration in South African schools, parallels and inferences may be drawn in relation to the present research on curriculum integration in the GET phase of South African schools.

## **2.2 CURRICULUM DEFINED**

The word “curriculum” can be used and understood in various different ways. Ensor (2001, p. 2) supports Bernstein’s (1996) view that the “curriculum is a scheme for fitting together bits of knowledge.” One can speak of an “official curriculum” (Olivier, 1998, p. 5) which is prescribed by the Education Department, which includes the various subjects or learning areas taught at school. The question to ask is: what do we call the content we teach or discuss with learners which is not part of the prescribed official curriculum?

Schubert (1986, p. 105) argues that what is not taught explicitly can be referred to as the “hidden curriculum”. Marsh (1997) posits that the curriculum constitutes everything that is really learnt at school, which Marsh (1997, p. 5) refers to as “an amalgam of planned and unplanned experiences”. There can be a deviation from the prescribed curriculum in terms of what is taught compared to what the learners actually learn. Gultig and Adendorff (2006, p. 21) posit that we can have an “explicit and implicit curriculum, as well as the overt and hidden aspects of the implicit curriculum”.

Milburn, Goodson and Clark (1989, p. 4) analyse the term and conclude that the curriculum is strongly influenced by cultural factors; they speak of the curriculum as a “socially constructed phenomenon”.

For the purposes of this study, the notion of curriculum is understood as a continuously evolving entity influenced by everything the learner experiences in and outside school which influences both teaching and learning.

## **2.3 DEFINITIONS OF AND STUDIES ON CURRICULUM INTEGRATION**

In attempting to establish a workable definition of what curriculum integration really refers to, various different definitions were initially analyzed. These definitions could be placed on a continuum. At one end of the continuum the definitions referred to curriculum integration in terms of different learning areas or subjects being integrated in terms of a common theme. Traditionally this was referred to as the thematic approach. Hurless and Gittings (2008, p. 1) state that this “approach usually starts with educator direction but offers many opportunities for children to follow their own interests”. Concerns around the curriculum and its relevance to the learner are strongly supported by Lonning, DeFranco and Weinland (1998, p. 9), who contend that “if relevant topics cannot be found in the curriculum, then the curriculum needs to be examined”.

Some of the existing international research on curriculum integration, such as that of Morrison (1994), Case (1994), Alsharif, Shara and Roche (2001), Fogarty (2002) and Lenoir (2006), addresses the issue of curriculum integration in terms of the implementation of cross-curricular themes or as a mixture of various different disciplines all related to a central theme.

At the other end of this continuum, researchers such as Audigier (2006) address the issue of integration, using the term “interdisciplinarity”. Audigier (2006, p. 42) stresses that although school subjects are packaged into different content areas, “there has always been evolution in this knowledge.” Audigier (2006) is of the view that these changes are dictated by the changing needs of society, which uses educational institutions such as the school to integrate these changes in knowledge into the various disciplines taught at school.

Klein (2006) refers to curriculum integration as “transdisciplinary”, contending

that the boundaries between subjects can be “blurred and connections magnified” (p. 14). This is very similar to what Fogarty (2002) refers to as a “kaleidoscope” of shifting images of knowledge which is then integrated into the curriculum. Klein (2006) supports the view that for interdisciplinary education to be achieved, there has to be a “platform” of “common understanding” between curriculum planners and educators with regard to both teaching and learning skills. Klein (2006) stresses that such a “platform” could serve to enhance the implementation process of interdisciplinary education, thereby reducing the gap between actual policy and the interpretation of policy.

For the purposes of this study, the integrated curriculum will refer to one in which the educator looks at various different learning areas and then tries to find common concepts, values and skills. Lake (2009, p. 3) is of the opinion that the educator must try to encourage learners to focus not only on the content of a particular learning area, but its relevance and meaning to the content of other learning areas. For example, in mathematics you might be looking at the concept of working out percentages, which could also be relevant to the Economic and Management Sciences learning area which looks at working out the profit margin of an item. This concept of money could then be extended to include other learning areas. Fogarty (2002, p. 72) supports the above view, and states that “in essence, teachers continue to teach their content, but their focus takes on a bigger meaning that stretches to other content.”

Lake (2009, p. 3) is of the opinion that any definition of curriculum integration must look at “preparing children for lifelong learning”. Lake (2009) uses the term integrated curriculum synonymously with that of interdisciplinary curriculum. Lake (2009, p. 3) looked at several definitions of curriculum integration and then pointed out that all of the definitions included one or more of the following: “a combination of subjects, an emphasis on projects, sources that goes beyond

textbooks, relationships among concepts, thematic units as organizing principles, flexible schedules and flexible student groupings”.

Fazenda (cited in Klein, 2006) refers to a study done in Brazil, which looked at curriculum and interdisciplinary teaching. Klein (2006, p. 12) states that the educators in the study followed a “pseudo-disciplinary approach” when working with curriculum in an interdisciplinary approach. Klein (2006, p. 12) reported that there was a definite “contradiction,” which was attributed to the “indiscriminate proliferation of intuitive practices.” Klein (2006) attempted to account for the contradictions that were observed; some of the reasons were that there were no clear rules or guidelines for educators to follow. Klein (2006) argues that by merely using “recipes and tricks” or “trial and error”, educators were not going to be assisted to fully understand the meaning of curriculum integration.

It would be interesting to explore whether the findings of the study explored by Klein (2006) can be echoed in a South African context. I decided to explore the nature of curriculum integration by looking at the relationship between actual prescribed policy, the educators’ thinking on curriculum integration and their actual practice.

Research on the integrated curriculum carried out by Madinabeitia (2007) points towards the interplay between meaningful cognitive connections between a learner’s life outside the school and the integration of knowledge. Madinabeitia (2007, p. 55) refers to this as “synergistic teaching”, and contends that the greater emphasis on the level of synergistic teaching could lead to a greater degree of meaningful connections and eventually to what she refers to as “a more sophisticated level of learning in general” (p. 56).

Madinabeitia’s study has direct relevance to our South African context, especially with regard to OBE, which places a strong degree of emphasis on the content of

the knowledge being based on meaningful experiences relevant to the learner's life outside the school environment. Although Madinabeitia's study was conducted in a South American country, we can draw a parallel between the emphasis placed on the learners' everyday experiences – this is also an essential integral feature of OBE curriculum integration in the South African context, which places strong emphasis on the learning content being relevant to the learner's environment and everyday needs.

Lam and Lidstone (2001) looked at the problems of implementing curriculum integration in Hong Kong schools, where there was a progression from traditional subject-based integration to integration across key-learning areas. Lam and Lidstone (2001) contended that the “understanding and intentions” of educators and administrators implementing integrative subjects have serious implications with regard to the importance attributed to content of the learning area and the amount of time devoted to it.

The above view is similar to that of Young (1971), who contended that the degree of classification of the content area of different subjects can tell us about the importance of that particular subject at school, as well as the needs of the wider society.

In a South African context, with the introduction of C2005 and OBE, curriculum integration, according to Gultig and Adendorff (2006), is based on the learner's ability to achieve specific critical and developmental outcomes, and these outcomes are measured in terms of different learning areas with specific assessment standards. These critical and developmental outcomes must be closely related to the learner's real-life situation, and must consider the learner's needs and environmental circumstances. Gultig and Adendorff (2006) maintain that if these critical and developmental outcomes are in fact achieved, then there is a high degree of integration.

An interesting study carried out in the UK by Squires (1990) looked at the reasons accounting for interdisciplinarity in higher education and its resultant influence on learners' choice of curriculum towards their undergraduate degrees. Squires' study concluded that there was a very strong correlation between the level of interdisciplinarity in the learner's choice of curriculum and the demands dictated by the needs of the economy and employment. Learners saw the need to choose a wider range of curriculum with a deeper level of integration between various disciplines.

Squires (1990) went on to point out that the British Board of Education then looked at the possibilities of embarking on a policy of including a greater choice of disciplines with increased focus on curriculum integration at high school level. Although this study was done in the UK and involved higher education, it is very relevant to the South African context, pointing towards the growing need for greater interdisciplinarity at the high school phase in terms of meeting the needs of the economy and resultant employment opportunities.

The work of both Squires (1990) and Beane (1995) have implications for OBE in South Africa. In South Africa, learners can embark on trade courses at high school level, which are generally referred to as N courses (N1, N2, and so on) only at trade schools. The point that Squires (1990) is advocating is that interdisciplinarity of the curriculum needs to be stressed at all levels of learning, from primary to high school and to tertiary or higher education.

Squires (1990) also alluded to the importance of curriculum integration being developed in terms of skills required by the needs of employment. For example, an economy based on income gained largely from an agricultural basis should look at the integration of various disciplines to give the learner a holistic point of view in order to prepare them a life outside the confines of the school. OBE in

South Africa can be strongly supported by its advocates, even if they can vicariously take into account the practical implementation of curriculum integration and apply the findings of Squires' (1990) UK study to our domestic context.

The Squires (1990) study is strongly supported by Beane (1995), who looked at curriculum integration and the disciplines of knowledge in American schools. Whilst Squires looked at the dual relationship between curriculum integration and the growing needs of employment as dictated by the economy, Beane (1995) argues that "curriculum integration is not simply an organizational device requiring cosmetic changes or realignments in lesson plans across various subject areas" (Beane, 1995, p. 1). Beane looks at curriculum integration from a more fundamental perspective, "as a way of thinking ... about the sources of the curriculum, and about the uses of the curriculum." Beane argues that curriculum integration must begin "with the idea that the sources of curriculum ought to be problems, issues and concerns posed by life itself" (1995, p.1).

Beane (1995) recommends that for curriculum integration to be successful, there must first be an identification of organising themes for learning experiences. Beane (1995) stresses that these themes should be drawn from "real-life concerns", and identifies some of these as "conflict; living in the future; cultures and identities; jobs, money, careers and the environment" (p. 4). The next stage is the planning stage, which involves developing activities according to the themes which are chosen. Both Squires (1990) and Beane (1995) are in fact outlining the guiding principles of OBE and curriculum integration in the South African context. Beane's idea of the "source" and "use" of the curriculum could be essential guiding principles for administrators when looking at the merits of curriculum integration as opposed the separate-subject approach which does not embrace economic or even vibrant political changes in society.

Milburn, Goodson and Clark (1989, p. 26), Morrison (1994, p. 5), and Kelly (1999, p. 47) are of the contention that the curriculum integration in English schools was strongly influenced by cultural and political influences which had a direct influence on the strength and necessity of the level of curriculum integration. In the South African context, the new political dispensation after 1994 necessitated an urgent redress of historical educational deprivation and imbalances. Integration was dictated to by the new political dispensation. Integration was manifested in terms of race as well as curricular integration, with the goal of possibly fast-tracking the educational institutions to redress the imbalances in education. C2005 and OBE became the new blueprints to bring about the desired curriculum integration to cater for the new political dispensation.

Chisholm (2004, p. 194) cites Harley and Wedekind (2004), who did a study on curriculum change and social transformation in South Africa, and posit that “curriculum integration is a fundamental principle of C2005 which remains largely at the level of symbolic rhetoric”.

Chisholm’s views are supported by Roehler, Fear and Herrmann (1998, p. 220), who contend that “teachers and researchers benefit from studying the process of integrating new ideas into the existing culture of the school and how the political environment may change and evolve over time”. Level of understanding and the translation of this “symbolic rhetoric” of curriculum integration into practical implementation at grassroots level is the crux of this study.

Lake (2009) supports the idea that curriculum integration needs to be done in a meaningful way, so that it can benefit the learner. Lake (2009) supports her view by referring to research done by Cromwell (1989) and later by Caine and Caine (1991), who looked at how curriculum integration can enhance the way in which children learn. Past learning experiences are “blurred” with new learning

experiences. “Learning is believed to occur faster and more thoroughly when it is presented in meaningful contexts, with an experiential component.” (Lake, 2009, p. 6).

An earlier study by Cousins (2007) also lends credibility to Lake’s (2009) contention that curriculum integration can only be successful if the learners are able to blend new knowledge with previously acquired knowledge. Cousins (2007, p. 4) adds that for curriculum integration to be successfully achieved, “both teachers and students must be actively engaged” in what he refers to as “relevant learning”. Both Cousins (2007) and Lake (2009) support the concept of curriculum integration based on its degree of relevance to improving the quality of the learner’s life.

Krug and Cohen-Evron (2000) conducted a study in the USA on how an integrated curriculum influenced art teachers to work across curriculum divisions. This study is very pertinent to the South African context, for various reasons. Firstly, Art is an essential subject of the OBE curriculum. Secondly, the influence of the love for Art in developing the learner’s artistic and aesthetic values will enhance the learner’s overall development not only as a learner at school, but also as a valuable contributing member of society. In their study, Krug and Cohen-Evron (2000, p. 259) contend that “the potential of curriculum integration positions and practices that connect different bodies of knowledge, while enhancing the integrity of each field of study.” Krug and Cohen-Evron (2000) further contend that a thorough understanding by educators of what an integrated curriculum entails will lead to its effective implementation.

Ignatz (2005) looked at how curriculum integration could be used to promote learning among prospective educators. Ignatz’s focus was on the integrated curriculum providing relevant meaningful contexts for the development of teaching skills. Ignatz (2005, p. 39) concluded that a parallel could be drawn

between an integrated curriculum and providing prospective educators with “opportunities to make connections with past and present real-life experiences ... enables students to retain knowledge and develop higher-order thinking skills”. Ignatz (2005) went on to put this finding into practice: an American elementary school in Florida was chosen. Prospective Elementary Science educators attended special courses which stressed the importance of instructional strategies being based on teaching science as part of an integrated curriculum. This curriculum integration project covered learning areas such as science, language, arts, mathematics and social studies.

Ignatz (2005, p. 41) reports that the learners were encouraged to develop a wide range of thinking skills, especially through the use of practical demonstrations. Ignatz’s (2005) study is very closely related to the research done by Katz and Chard (1989), who looked at curriculum integration as an exploration of a topic over a period of time. These projects could be done by groups of learners or the entire class, or by the individual. Katz and Chard (1989) contended that the practical experiences of the learners in the integrated curriculum through a project approach will increase the eventual outcome of the learning experience.

Curriculum integration can therefore be an essential integral element of OBE, which stresses the importance of learning by doing, observing, and learners and educators being actively involved in the teaching and learning experience. The studies of both Ignatz (2005) and Katz and Chard (1989) strongly advocate the importance of curriculum integration as an essential and effective learning medium.

There is a growing field of research on the effectiveness of curriculum integration. Researchers such as Vars (1991) and Wraga (1993), who support the implementation of curriculum integration in schools, are of the opinion that curriculum integration “leads to higher student achievement” (Wraga, 1993, p. 2).

In opposition to curriculum integration there is a group of researchers such as Schug and Cross (1998), who contend that in their research on the effectiveness of curriculum integration in schools, an integrated curriculum was not as effective as the schools which taught by keeping the different disciplines apart. Schug and Cross (1998) support their findings with empirical evidence that teaching learners in distinct, different learning areas was more effective than integrating the curriculum.

An earlier study by Yorks and Folio (1993) looked at integration of art into the learning curriculum. Yorks and Folio (1993) found that with the integrated approach there was a “positive effect on student attitudes and self concept” (Yorks and Folio, 1993, p. 2). Another study by Schubert and Melnick (1997) supported the findings of Yorks and Folio (1993), showing that using the integrated curriculum increased the positive attitude towards learning of both learners and educators.

The relevance and pedagogical value of the above studies to the South African context is most glaring: OBE being based on the concept of meaningful learning experiences governing the teaching and learning experiences. Mbodo (2009) conducted a research study in Namibia on the perspectives of educators and undergraduate college students on integration, and stated that educators used the word “integration” as a “buzzword”. Mbodo was interested in going beyond this mere “buzzword” to find out how integration was really understood and then implemented. Mbodo’s study was the closest to our South African context, not only because of geographical proximity but because we share similar demographic and economic constraints. Mbodo (2009, p. 2) appears to be a strong advocate of curriculum integration, and concluded that “learners might have the impression that subjects are separate entities. Life outside the school does not make provision for people to apply concepts, ideas and skills acquired in

isolation. An option to integrated teaching will help learners to examine ideas from various perspectives.”

The views of Beane (1995) on curriculum integration could serve as an appropriate conclusion to this review of literature on curriculum integration. In other studies on curriculum integration, as mentioned earlier, researchers argue for or against integration. Beane (1995, p. 2) contends that “the argument for curriculum integration and against the more traditional separate subject curriculum is a false dichotomy”. Beane (1995, p. 2) further adds that “knowledge of the various disciplines is fundamental to effective interdisciplinary teaching. Therefore, teaching content separately should not be abandoned in favor of integration, nor should integration be set aside in efforts to teach subjects discretely. A balance between the two strategies is necessary because both are effective means of increasing student achievement.”

Beane (1995) looks at curriculum integration in terms of a continuum - at one end the breakdown of subjects into separate categories or learning areas divorced from each other, and at the other end total integration across all learning areas. It is the experience and academic background of the educator, as well as other factors - such as the dictates of the educational framework as set out by the relevant education department, and the needs of the economy and employment opportunities - which will eventually decide the point at which the educator places herself on this continuum.

Naidoo (2006) conducted a South African research study which examined the curriculum practices of educators at different schools. The schools Naidoo (2006) looked at ranged from very impoverished to elite socio-economic backgrounds. Naidoo (2006) used Bernstein’s sociological theory in order to understand how “integrated knowledge is motivated by a redistribution of power” (Naidoo, 2006, p. 10). Naidoo’s (2006, pp. 10-11) study further revealed that the “integration of

knowledge results in a less rigid social structure” in the schools traditionally from an affluent background compared to those from a lower socio-economic background.

## **2.4 CONCEPTUAL AND THEORETICAL FRAMEWORKS**

In this section the theoretical framework which underpin this study will be explained, with special reference to curriculum integration.

### **2.4.1 Models of curriculum integration**

We need to go a step further and clarify and elaborate on our understanding of what can be considered as the integrated curriculum. In order to achieve the above, it is necessary to look at the various models of curriculum integration. Loepp (2004) advocates three basic models of curriculum integration: the interdisciplinary model, the problem-based model and the thematic model. Fogarty (2002) introduces the following models of curriculum integration: cellular, connected, nested, sequenced, shared, webbed, threaded, integrated, immersed and, finally, the networked model.

Our focus will be on Fogarty’s (2002) integrated model. Fogarty (2002, p. 72) stresses that the “integrated curricular model represents a cross-disciplinary approach similar to the shared model”. Fogarty explains that disciplines are blended by “setting curricular priorities in each and finding the overlapping skills, concepts and attitudes”. Fogarty (2002) holds the view that educators must continue to teach their subject’s content. In doing so, the educator must attempt to relate the meaning of their subject’s content to other learning areas, or issues of concern.

Fogarty (2002) appears to be a strong advocate of the integrated model, contending that learners can learn faster once able to appreciate and understand

the inter-connectedness between the various learning areas. This fits in with C2005. According to C2005, the traditional approach of the thematic perspective of learning was to be done away with, and in its place an approach which integrated all the different learning areas was to be initiated.

Fogarty is of the opinion that once the learner builds a certain level of understanding, he/she can then focus internally, which could then serve as an important motivational factor. While Fogarty (2002) has outlined some of the advantages of using an integrated curriculum, there are certain inherent challenges with regard to effective implementation of curriculum integration. First there need to be educators who are highly skilled and who understand not only the confusing semantics of an integrated curriculum but are also able to translate theory into practice.

A greater challenge preventing effective implementation of an integrated curriculum is the glaring lack of resources and the financial constraints which are inherent defects of the South African schooling system. There also needs to be a very high degree of commitment on the part of educators towards meeting the challenges of implementing an integrated curriculum.

In the “layered cake” metaphor, each learning area maintains its identity but contributes towards making up the integrated science curriculum; the metaphor of the “marble cake” is used to explain curriculum integration as a process which is much more fluid, with each learning area gelling with the others as when required. There are no clear boundaries in the approach as explained using the metaphor marble cake metaphor. Loepp (2004, p. 2) is rather pragmatic in his analysis of the integrated curriculum versus the interdisciplinary curriculum, and contends that “whether a curriculum is interdisciplinary or integrated is not the main issue. Rather the focus should be on designing a curriculum that is relevant, standards based, and meaningful for students.” Loepp’s (2004) view is similar to

Dean (1996, p. 1), who adds that “educators who wish to implement an integrated curriculum must reflect its values by recognizing and benefiting from their own interconnection.”

## **2.5 THEORETICAL FRAMEWORK**

This research is informed by Bernstein’s (1996) theory of classification and framing of knowledge within the curriculum, which holds that any curriculum will operate according to a set of rules. These rules or principles give different subjects different levels of importance. In order to fully comprehend the theoretical framework of curriculum integration discourse in terms of the classification and framing of knowledge, reference to Bernstein’s views on the symbolic boundaries and the control of knowledge will be explored in the context of curriculum integration in the GET phase of education in South African schools.

The use of Bernstein’s theoretical framework to analyse teacher discourse and curriculum integration is strongly supported by Short, Singh, Yarrow and Millwater (2000, p. 1), who are of the opinion that “Bernstein’s theoretical framework is useful in analyzing ... teacher classroom discourse for the purpose of improving learning outcomes for students through appropriate teacher preparation programs and intervention strategies.”

Bernstein’s theoretical framework of the “classification” and “framing” of knowledge needs to be clearly understood. According to Nyambe (2007, p. 1): “Classification embodies power relations and is concerned with the strength of the boundaries or the degree of insulation between the categories. Thus, classification is defined by the degree of insulation. The degree of insulation between categories regulates the classification values, and classification can either be strong or weak.”

Nyambe (2007, p. 1) say that “Framing, on the other hand, determines the locus of control over the selection, sequencing and pacing of the instructional discourse (Bernstein, 2000:13). Where framing is strong, the locus of control lies with the transmitter and when framing is weak the locus of control lies with the acquirer.”

Hugo *et al.* (2006, p. 8) contend that “the difficulty with concentrating on a formal analysis of education in South Africa” can be attributed to the poor quality of pedagogy when it comes to curriculum implementation. Hugo *et al.* (2006) further contend that Bernstein’s theory of framing and classification should rather be interrogated in conjunction with other curriculum theorists. This study will be guided by the views advocated by both Bernstein and Gultig where possible.

Bernstein draws a distinction between a collection type of curriculum and an integrated type of curriculum. The collection type of curriculum has subjects which are different from each other. Hoadley and Jansen (2002, p. 100) refer to this type of curriculum as being “insulated from each other.” The subjects are therefore separated from each other. For example, if you are studying the history of the numeric system, no reference is made to it in any other subject, even if it could indeed be explored in mathematics. The integrated type of curriculum has minimal insulation of subjects.

The thematic approach to teaching and learning (used prior to the introduction and implementation of OBE) is a clear example of an integrated type of curriculum. If the topic of discussion in history was the development of the numeric system, then in it could also be studied in mathematics, for example, the introduction of the concept of zero. In geography the learner could be encouraged to study the map of the world so as to locate the different places where the numeric system evolved. In main language, paragraphs could also be written on the importance of the numeric system.

Hoadley and Jansen (2002, p. 100) maintain that Bernstein (1996) viewed the subjects as either “insulated or open”. According to Bernstein (1996), the integrated curriculum will have boundaries which will have minimal insulation. By implication, subjects that do not blend in well with other subjects will have a greater degree of insulation. The central tenet here is that with integration, the contents of the different learning areas become part of a greater whole. This bigger picture is continuously subjected to change brought about by the needs of a particular social order.

Young (1971) draws a clear distinction between what Bernstein refers to as the framing and the classification of knowledge. Young (1971) stresses that classification does not refer to content, but to the relationships between the contents of the different subjects. Young (1971) emphasizes that the degree of classification can tell us about the importance of the contents of the particular subject. It can also tell us about the curriculum at school and what message it portrays. For example, when we have subjects such as mathematics, accounting, business administration and mercantile law, the boundaries will be blurred. This sends the message that there is an emphasis on commerce-related subjects, which might be dictated to by the needs of the society and its economy.

Young (1971, p. 50) further adds that the “frame refers to the strength of the boundary between what may be transmitted and what may not be transmitted. Frame refers to the range of options available to the teacher and taught in the control of what is transmitted and received in the context of the pedagogical relationship.” Young (1971) makes it clear that the strength of the frame can change from subject to subject or depending on the variety of needs. If the relationship between the taught and learnt is close to the required educational knowledge, then the frame is strong.

The implication here is that a strong frame places greater control in the hands of the educator in terms of the sharing of both power and knowledge in the class. Singh (1997, p. 5) concludes that “power relations create, legitimize and reproduce symbolic boundaries between different groups of students and different categories of instruction.”

One of the tenets of OBE, as analysed by Pretorius (1998, p. xi), is that educators must be “flexible in their teaching methods”. The implication is that there must be a weak classification of learning areas as well as a weak frame where the contents of learning areas are negotiated by the educator and learners in terms of the learners’ needs, interests and readiness in terms of maturational development.

Gultig, Hoadley and Jansen (2006, pp. 104-105) state that Bernstein’s theory of classification and framing outlined a set of criteria to be met if curriculum integration is to be successful: “There must be consensus about the curriculum integration. The plan for curriculum integration must be very clear. Ideas and content must be linked and systematic. There must be sensitive control over the process. There must be very clear criteria for evaluation.”

In attempting to explore educators’ perspectives on curriculum integration in the GET phase, this study took into consideration whether the above criteria with regard to the implementation of curriculum integration were being adhered to in the South African context with regard to policy, educators’ perspectives of curriculum integration, and the actual practice of curriculum integration.

### **2.5.1 Levels of Integration**

Bernstein (1971, p. 71) stresses the importance of “social structure” as a contributing factor in the classification of knowledge. According to Bernstein, when a community has a “rigid” (Bernstein, 1971, p. 74) social structure, then the framing and classification of knowledge in return can be affected.

In the South African context, OBE was implemented to overturn the system of education as advocated by the previous form of Government. The new DoE introduced OBE with the intention of leveling the playing fields through the integration of knowledge from different learning areas.

In Bernstein’s terms, this would be a policy advocating a weaker implementation of the framing and classification of knowledge in all learning areas. There were now different levels of integration in the various learning areas in the GET phase. The new DOE introduced eight learning areas, each of which had a central theme referred to as a phase organiser. These phase organisers then had their own Learning Outcomes (LOs) and Assessment Standards (ASs). It is at this juncture of the LOs from the different Learning Areas that integration of knowledge was to take place.

In the view of Naidoo (2006, p. 94), the “boundaries” between the different Learning Areas had become “blurred”. Naidoo is of the opinion that while Bernstein advocated “conceptual rigour,” C2005 advocated the “transfer of knowledge to real life”.

I am of the opinion that for effective curriculum integration to take place, educators need to have a more informed understanding of what constitutes an integrated curriculum code, because the educator must now be able to change his/her approach from regurgitating factual information to the learners to one where he/she must now analyse information and then assimilate this new

information into his/her previously acquired knowledge before interacting with the learners. This requires thorough prior preparation on the part of the educator, and has major implications in terms of teacher development and training, as well as the availability of teaching resources.

## **2.6 CONCLUSION**

This literature review has examined what the term curriculum refers to and attempted to enhance understanding of the term curriculum integration as compared to interdisciplinary teaching. The concern of working together for the successful implementation of curriculum integration is strongly supported by Lonning et al (1998, p. 9), who are of the opinion that for curriculum integration to be successful there must be a concentrated “team approach”. It further explored curriculum integration as practiced and experienced in various countries around the globe.

The focus of this was not to look at gaining support for OBE in the South African context; however, the research points towards curriculum integration as being an essential feature for the success of OBE.

This literature review provided a brief synthesis of scholarly literature and related DoE policy on curriculum integration, with reference to national and international studies. The following chapter will look at the design and methodology of this research study.

# **CHAPTER THREE**

## **RESEARCH DESIGN AND METHODOLOGY**

### **3.1 INTRODUCTION**

This chapter focuses on the research methodology and its relevance to this study. According to Hitchcock and Hughes (1995), for qualitative social research to be meaningful, the researcher must listen to the participants and observe what the participants do and say.

The research design was dictated to and guided by the necessity to proficiently answer the two critical questions which I had formulated:

1. What are GET phase educators' perspectives of curriculum integration?
2. How does curriculum integration happen in the GET phase?

In this study qualitative data collection strategies and analysis techniques were used with the intention of exploring the participant educators' perspectives of curriculum integration. In order to achieve this goal, it became apparent that my research design would be looking at primary data in a specific setting.

On this premise, I therefore decided that this empirical study should be initiated as an interpretive study and conducted within a qualitative research paradigm, taking on and respecting the tenets of an ethnographic case study. I felt that the context of the data gathering could help towards enhancing the value of the data. I also chose the qualitative research approach because it favoured what Marshall and Rossman (1995, pp. 1-5) refer to as an "insider perspective on social action". I conducted research at the empirical site where I was a role player. The ethical concerns of such an approach are discussed further on in this chapter.

There are some social scientists, such as Yin (2003), who consider the case study approach to be separate from ethnography. Patton (2002), Cohen, Manion and Morrison (2007) posit the view that ethnography is the umbrella and the case study is a part of that greater whole under the same figurative umbrella. For the purposes of this study I concur with Cohen, Manion and Morrison (2007).

We can make a distinction between what a qualitative case study refers to and what constitutes ethnographic research. Bell (1999) recommends that individual qualitative researchers will find it appropriate to use the case study as an approach to educational research if they are interested in exploring just one aspect in detail, and if this needs to be done within time constraints. Patton (2002) explains ethnography as a social science research strategy where the researcher attempts to explore beliefs rather than find answers to set questions through the use of interviews, observations and taking field notes.

I decided to ground this study as an ethnographic case study, and will hereafter refer to this study as an ethnographic case study on the basis that I needed to look at the whole picture in the context of a single school. I needed to figuratively get into the mind of my participants in order to explore their perspectives on curriculum integration.

Cohen, Manion and Morrison (2007, p. 167) stress that “social research needs to examine situations through the eyes of the participants”. According to Mouton (2001, p. 194), “one of the major distinguishing characteristics of qualitative research is the fact that the researcher attempts to understand people in terms of their own definition of their world.” The school became my field, and my fellow educators became my participants. The context of the school therefore constituted the “naturalistic setting” (Cohen, Manion & Morrison, 2007, p. 168) of this study, where “the context was heavily implicated in meaning”.

The sentiments of Mouton (2001) are echoed in the views of Struwig and Stead, (2001) who believe that the research design is essentially like a blueprint which must attempt to blend the participants' thoughts, background and experiences. Struwig and Stead (2001, p. 56) further posit that an understanding of the context of the participants' thoughts, feelings, experiences and behaviour are crucial if we wish to achieve "value-laden data." Denzin (1989, p. 83) uses the term "thick description," which refers to the participants' "voices, feelings, actions and meaning." Four educators from the GET phase were selected at my school, and this selection was guided by adopting the basic principles of an ethnographic case study.

### **3.2 TENETS OF AN ETHNOGRAPHIC CASE STUDY**

The tenets of an ethnographic case study mode of research were experimented with in order to explore and attempt to understand educators' perspectives on curriculum integration within the "real-life context" of a single school (Cohen, Manion & Morrison, 2007, p. 170). The choice of the research setting and participants was determined by the kind of evidence that I required as the researcher to adequately address my research questions. The school in this study is in a rural environment of KwaZulu-Natal.

The population dynamics of the school have remained relatively stable over the past five years. There are over 1000 learners at the school with 90% of ethnic African origin, 8% of Indian, 1% White and 1% Coloured. The medium of instruction is English, while most learners are either fully or colloquially conversant in English, IsiZulu, Hindi and Tamil. The choice of this setting was also governed by the fact that my access to educators could be expedited because of the rapport I had developed over the years since this was the school at which I was a fellow educator.

Burgess (1985, p. 45) posits that “acceptance” of the researcher by the participants is an “essential precondition” for any ethnographic study. Burgess (1985) adds that “acceptance is the beginning of participant observation”. In this study I was able to exploit the rapport that I had with fellow educators and their “acceptance” of me first as a fellow educator, then as a researcher.

The participants in this study can be considered to be a relatively purposeful sample, because I “hand-picked” (a term used by Cohen, Manion & Morrison, 2007, pp. 114-115) them to be included as my sample, chosen for the specific purpose of exploring their perspectives on curriculum integration. This study therefore relied on “purposive sampling” which Lincoln and Guba (1985, pp.39-45), contends that purposive sampling allows for the full scope of issues to be explored.

The choice of purposive sampling as well as being part of the natural setting allowed me the opportunity to enter the “real world setting with as little intrusiveness as possible” as another adult in the classroom, and made it possible for me to observe my colleagues and learners with a greater degree of acceptance (Cohen, Manion & Morrison, 2007, p. 168). Patton (1980), as cited by Cohen, Manion and Morrison (2007, p. 177), states that “there are no rules for the sample size in qualitative inquiry.”

The size of the sample will depend on “what one wishes to know, the purpose of the research, what will be useful and credible, and what can be done within the resources available.” Taking into consideration the time constraints, I decided to interview four educators at the school from the GET phase. I believed that my sample of four educators would be appropriate in order to answer the critical questions of this research study.

### **3.3 FIELDWORK PRACTICES**

Hatch (2002) suggests that fieldwork in ethnographic research must involve “participant observation, and informant interviewing ... in an effort to come to understand the cultural knowledge that group members use to make sense of their everyday experiences” (Hatch, 2000, p. 21). In support of the above principles of ethnographic research, this study focuses on the use of semi-structured interviews and informal participant observation, as outlined in the data collection strategy.

My role at school as a colleague was now transformed into the role of a social researcher. I had the advantage of not having to initiate any new relationships or having to negotiate entry into the setting. Flick (1998), cited by Cohen, Manion and Morrison (2007, p. 179), contend that before the researcher gains entry into the setting, he or she needs to negotiate with the traditional “gatekeepers” with regard to entry and gaining the participants’ confidence.

I was part of the establishment. I was an observer who was immersed in the research. Cohen, Manion and Morrison (2007, p. 179) refer to this sort of researcher as an “insider” who must try to “enable confidence”. This role as an “insider” presented certain ethical concerns with regard to my role as a researcher versus that of a colleague. I will elucidate on this concern later.

### **3.4 DATA COLLECTION STRATEGIES**

Hammersley and Atkinson (1983), as cited by Cohen, Manion and Morrison (2007, pp. 170-171), state that “the main methods for data collection in the naturalistic inquiry” make use of “participant observation, interviews and conversations.” Thompson (1994, p. 9) cites McCall and Simmons (1969), who are of the opinion that “participant observation is not a single method of data collection. Participant observation is a collection of methods and techniques.”

For the purposes of clarity in this study, I have taken note of the above sentiment but decided to follow the recommendation of Hammersley and Atkinson (1983), that in order to answer my critical research questions within the ethnographic mode of research I collate data using semi-structured interviews and participant observation.

### **3.4.1 The semi-structured interview**

Semi-structured interviews were used as a means to collate and understand the data. They were audio-recorded and then transcribed. The main reason for using semi-structured interviews was based on my intention to have the opportunity as the researcher to firstly listen to the educator's initial responses, and then go a step further by probing into their initial responses.

One of the advantages of using semi-structured interviews is emphasised by Cohen, Manion and Morrison (2007, p. 182), who contend that semi-structured interviews “permit flexibility rather than fixity of sequence of discussions, allowing the participants to raise and pursue issues and matters that might not have been included in a pre-devised schedule.”

I used more open-ended questions in order to get my participants to reveal as much data as possible on their perspectives of curriculum integration. Mdutshane (2007, p.34) cites Kendall *et al.* (1988), who contend that open-ended questions will put the interviewee at ease, “revealing avenues for further questioning that may have gone untapped and providing richness of data.”

Four willing educators were interviewed, one educator from each grade from grades 4 to 7, with the intention of gathering data across the GET phase rather than just a single grade in the phase. I conducted the interviews outside of my teaching time. I used my non-teaching periods (NTP) and the tea breaks. The duration of each semi-structured interview was approximately 30 minutes.

Vithal and Jansen (1997, p. 22) are of the opinion that the semi-structured interview will in fact provide the most “direct evidence,” and in this study I attempted to gain such evidence with regard to the educators’ perspectives of curriculum integration. This research was conducted in a relatively unstructured manner with an ‘open mind’ so as to realise as much value-laden data as possible.

### **3.4.2 Unstructured participant observation**

While value-laden data can be collected via the semi-structured interviews, I used unstructured participant observation as a means to observe the educator’s behavior as it occurred. I used unstructured participant observation on the premise that I was an educator at the specific setting, and that I considered myself as being part of the activity I was engaged in. Swann and Pratt (2003, p. 73) refer to this type of researcher as an “outside expert” who is now looking in. As a novice researcher, I doubt that I could refer to myself as an expert. In positioning teacher research, Cochran-Smith and Lytle (1993, p. 18) state that an essential feature of any ethnographic study is the ability of the researcher to be on the “inside” looking out rather than on the outside looking in.

The learners were used to the idea of me visiting their class, and sitting in on lessons. This could be attributed to the on-going Integrated Quality Management System (IQMS) being conducted at the school, where fellow educators are encouraged to sit in on their peer’s lessons as a form of assessing their peers. I also regularly visited my colleagues during my non-teaching periods to share ideas and observe peers teach. Although I merely sat in on the lessons and did not contribute verbally in any way, I was part of the activity I was engaged in.

Bell (1999) and Cohen, Manion and Morrison (2007) draw attention to some of the limitations of unstructured participant observation. According to Bell (1999, p. 157), unstructured participant observation “is time-consuming and not easy to

manage”. Cohen, Manion and Morrison (2007, p. 262) point out that with unstructured participant observation, there is a risk of the researcher “disagreeing with an interpretation” of the respondent and thereby increasing the researcher’s level of subjective bias.

Bell (1999, p. 158) stresses that “if you are researching your own organization, you will be familiar with the personalities, strengths and weaknesses of colleagues, and this familiarity may cause you to overlook aspects of behavior which will be immediately apparent to a non-participant observer seeing the situation for the first time.”

Koen *et al.* (2003, p. 67), posit that “observation is a purposeful, systematic and selective way of watching and listening to an interaction or phenomenon as it takes place.” I found the understanding of observation as offered by Koen (2003) to be clinical and tainted with the tenets of a quantitative focus.

As an unstructured participant observer I understood and accepted the possible liability of researcher bias; the semi-structured interviews gave me a window into the perceptions of the educators. I was of the opinion that observing the behaviour of the educators in their actual teaching could help me as the researcher to observe the teachers’ perspectives in terms of understanding the tension between the educators’ understanding and practice.

In my role as a participant observer, I now had to record what I saw. This was a serious source of concern to me. I had to know what to look out for in terms of curriculum integration. The educators’ lesson preparation then provided me with a reasonable guide as to the depth and extent of curriculum integration. However, my problem was compounded when the educators deviated from their planned lessons or did not implement any form of curriculum integration although according to their lesson preparation they had intended to do so.

Added to this dilemma was that I had to simultaneously make written notes, observe and make sense of the educators' lesson presentation. Dictating notes would have been easier, but this would have disturbed the natural environment of the class.

I then transcribed my shorthand notes into relatively meaningful chunks of information which was used in my triangulation process. Burgess (1985, p. 53) asserts that an ethnographic researcher should not "explain what is happening, but describe what is happening". My focus was therefore on recording my observations as quickly as possible rather than immediately attempting to analyse them.

### **3.4.3 Video as research**

In order to achieve rich data, four lesson presentations were video-recorded using a Sony Hi8 Video Camera. I wanted to see as well as hear the lesson presentation as it happened in live real time. These lessons were then transcribed and used as part of the study. According to Knowles and Cole (2008, p. 303), "video as a research method can be used instead of audiotape to collect data."

Pink (2003) contends that visual research should not be used in isolation of other methods. Pink (2003) suggests that visual research should rather be interwoven with other methods of research so that the researcher can get a "pure image" of the culture or individuals who are part of the ethnographic research.

The use of visual methods in ethnographic research is also strongly supported by Thomson (2008, p. 60), who posits that the use of "visual data allows readers and viewers of research to assemble the complications of the lived experience and cultural meanings from the image." The video recording is unedited and has no sound or visual make-overs. The video camera was placed on a tripod at the

centre of the classroom so that the lens could capture as much of the class as possible.

An initial concern was that the participants would be nervous or anxious about the presence of the video-camera in their class. However, they did settle down and in all cases quite “forgot” about the alien camera in their classroom. Banks (2003, p. 178) cautions that the “value of visual methods” in research should not be seen as “a means to an end”, contending that visual methods in research is “only a step along the way”.

In support of Bank’s (2003) assertion, the visual method in this study was supported by the use of audio-recording of the semi-structured interviews with the participants.

### **3.5 TRIANGULATION**

As a result of the crystallisation and combination of methods used in this case study, I used another necessary characteristic of ethnography, that of “triangulation”. I used triangulation so that my interpretations and relevant findings could be confirmed by more than one data source. Patton (2002, p. 248) states that “triangulation within a qualitative strategy can be attained by combining both interviewing and observations, mixing different types of purposeful samples.”

Burgess (1985, p. 171) refers to the triangulation process as an attempt at “*rapprochement*” between the researcher’s interpretation compared to that of the participants. In trying to reconcile my understanding with what Burgess (1985) recommends, I concluded that my central focus as a researcher was not on explaining the observations but in describing what was going on, although I am by nature highly perspicacious.

My motive was to investigate the possibility of using some form of methodological triangulation between the semi-structured interviews and the observation of the educators' actual teaching. This research was steeped in ethnographic terms and, in keeping with this premise, I was not intimidated by the lack of quantitative variables to determine a high degree of reliability and validity.

My focus was on exploring educators' understanding of curriculum integration - even though their understanding was at times contradictory to what they practiced. At this juncture I fully support and echo the sentiments of Cohen, Manion and Morrison (2007, p. 168), who contend that the "focus of the study should determine its boundary" and that "trustworthiness and its components replace more conventional views of reliability and validity".

At this point it must be mentioned that although triangulation will take into account different sources of data to try to achieve the same result, what came through was that my data sources were not entirely consistent with each other. I attributed this inconsistency to basic human nuances - but certainly not as a weakness or limitation. I preferred to refer to these inconsistencies as further opportunities to explore my participants' perspectives on curriculum integration.

### **3.6 CONCLUSION**

This chapter looked at the research design of the study. The tenets of an ethnographic case study, fieldwork practices and my data collection strategies were outlined.

The following chapter will focus on an analysis of the responses of the participants with regard to their understanding and experiences of implementing an integrated curriculum in the GET phase of schooling, from grades 4 to 7.

# CHAPTER FOUR

## DATA ANALYSIS AND INTERPRETATION

### 4.1 INTRODUCTION

The previous chapter focused on the research methodology used in this study. This chapter focuses on the presentation, analysis and findings of the data. The participants' multiple understandings of curriculum integration were explored through semi-structured pre- and post-interviews, and observation via video recordings of lessons. The analysis also takes into account the participants' written lesson preparation.

The interviews were conducted with educators in the GET phase of education. One educator per grade was selected, on the basis of their availability during the course of the research. As an "insider" to the research, I had already established "sustained contact" with the participants. Siegle (2009, p. 1) is of the opinion that qualitative "data is usually collected through sustained contact with people in the settings where they normally spend their time."

The "setting" of this research study, as previously mentioned, was one in which the researcher was already immersed. (I have been an educator at this school for the past 19 years.) The consequence of me being an 'insider' in the research setting, according to Lee-Treweek and Linkogle (2000), is that the "social relationship to data collection and understanding of social phenomenon" needs to be understood as part of the challenge in gaining access to the empirical site. I needed to manage the situation by what Terre Blanche (2008, p. 350) refers to as "playing the tension between the insider and the outsider ... not only to understand, but actively to interpret the voices of the respondents."

Terre Blanche (2008, pp. 350-351) suggests that one way to reduce the “tension between description (insider perspective) and interpretation (outsider)” is by involving “those being researched in the analysis and to explore understanding in a dialogue with them”. With this suggestion in mind, the semi-structured pre- and post-interviews provided a forum to explore the educators’ understanding of curriculum integration. Reason and Bradbury (2008, p. 205) contend that it is naïve to think “that simply bringing people together allows us to transcend pre-existing relationships.” In order to overcome the ethical challenge of being an insider with the quest of being an outsider to the empirical setting, Reason and Bradbury (2008) concur with Terre Blanche (2008) and stress the importance of deeper understanding via dialogue.

The possibility that the responses to the questions in the semi-structured interviews could have been influenced by the researcher being an inherent element of the dynamic social milieu of the school, prompted and then forced the researcher to visit and re-visit the issue of the trustworthiness of the research. In the analysis of the data, I observed what Shenton (2003, p. 1) recommends to qualitative researchers, “that findings emerge from the data and not from their own predispositions.”

The educators’ teaching background ranged from novice to seasoned, and the typology of their responses was analysed. I was interested in gathering what Siegle (2009, p.1) refers to as “rich-thick description” data from the educators on how they made sense of curriculum integration and how they translated this level of understanding into their repertoire of teaching skills.

## **4.2 NARRATIVE VIGNETTE OF THE SCHOOL**

This school was built in 1926 by the rural Indian farming community to cater for the needs of the Indian community of Welbedaght. It was previously a flourishing farming community which supplied the Durban markets with fresh produce such as bananas, tomatoes, and mangoes. The Indian farmers also ran two large cattle and sheep farms which supplied the Durban Abattoirs. The traditional mode of transport was via donkey-driven carts and tractors, now replaced by modern transport such as cars and mini-buses. The farms have now been replaced with low cost housing which is part of the reconstruction and development programme (RDP) initiated by the South African Government to build houses for the formerly disadvantaged.

The empirical site is physically located between Chatsworth and Pinetown in an area referred to as Welbedaght Inner West, in the Province of KwaZulu-Natal. Although this school was built by and for the Indian community, it admitted Black learners long before the advent of democracy in South Africa in 1994. As a result of the population demographic being highly diverse, the majority of both Indian and Black learners are fully conversant in both English and IsiZulu. If you walk around the school during the lunch break you will observe Indian and Black children playing together and conversing with each other either in English or IsiZulu.

In 2007, the South African Government's Department of Housing, commissioned 10 000 houses to be built for formerly disadvantaged citizens in the Welbedaght area, which has changed the population dynamics of the area – and of the school. There are now over 90% Black learners, 8% Indian learners, 1% Coloured and 1% White learners at this school.

This is a co-educational school, with 1150 learners catered for by a staff of 30 educators (3 males and 27 females; 10 Black and 20 Indian). The medium of

instruction is English, while IsiZulu is a compulsory subject as second language for all learners. The learners come from a highly impoverished socio-economic background with inherent problems of crime, drug and alcohol abuse and overcrowding. However, although it services such an impoverished socio-economic community, the school is not non-fee paying (Section 21 non-profit institution), and the DoE does not subsidise the school. The School Governing Body (SGB) pays the salary of 8 additional educators so that the educator-learner ratio could be reduced from 1 educator per 50 learners to 1 educator per 40 learners.

Prior to 1994 this school was under the jurisdiction of the DoE controlled by the old House of Delegates. After 1994 this school was classified as a privileged school. The status of the school with the DoE has since not changed, although learners from this community either do not pay school fees or just pay what they can afford.

In terms of resources, the school did have a library and a science laboratory but had to relinquish these to accommodate the influx of learners. The library resource centre was converted into a classroom. The educators were left without a staffroom when their staffroom was turned into a classroom.

With the escalation of the HIV/AIDS epidemic, many households are run by children without any adult supervision. A daily Government-initiated feeding scheme caters for all learners, who are given a hot meal every day of the week.

A mobile clinic visits the community once a week to assist in treating minor ailments and to dispense basic medication. Ambulance services are reluctant to enter the area for fear of being hijacked. The South African Police Services (SAPS) are also very reluctant to attend to calls for assistance in the area.

The community is controlled by two competing gangs: a local and a Nigerian faction. Members of the community pay a monthly protection fee to these factions in order to enjoy the privilege of not being accosted. The community respects the teaching staff as playing an integral part in their lives, and the school staff therefore enjoy a high degree of immunity from the criminal elements. The physical property of the school also shares in this immunity.

Various charitable organizations, such as the Chatsworth Rotary Club, the Sai Group, and the Gift of the Givers, business concerns, families and individuals contribute in cash or kind towards the welfare of the learners.

#### 4.2.1 Background of the participants

Some biographical details of the participants in this study are given in Table 1.

EDUCATOR	GENDER	GRADE	POST	AGE (yrs)	QUALIFICATIONS	YEARS OF EXPERIENCE
1. Maya	Female	4	HOD	49	B.Paed. (Pr. Ed.)	20
2. Kim*	Female	5	Level 1	56	M.Ed	10
3. Sue*	Female	6	Level 1	44	B.Ed	8
4. Fay*	Female	7	Level 1	25	M.Ed	15

Table 1: Biographical details of participants.

\* Pseudonyms.

Apart from Maya, who requested that her real name be used, the other three participants will be referred to by the pseudonyms of Kim, Sue and Fay. As an insider to the research setting, I was privy to the participants' backgrounds in

terms of their academic and professional status as well as their familial experiences.

Each grade has three classes or units. One participant per grade was used in the research. All four educators volunteered. Selection of the volunteer was on the basis of which participant in each grade could potentially provide as much rich data as possible. The selection of educators ranged from seasoned to novice in experience.

The participants were informed of their volunteer status and that they could withdraw at any given time, even though they had consented in writing to be part of this study. Letters of Informed Consent were signed by the participants prior to the initial interview; these briefly outlined salient details of the study. Participants were also informed that their relationship with me as fellow colleagues did not obligate them to become “volunteers”. Participant one insisted on her real name being mentioned. She is the Head of Department for the Senior Primary Phase at the school, with a teaching career of well over 20 years. Maya has been married for 19 years and has two sons, one of whom is still at high school, and the other a first-year student at the University of KwaZulu-Natal. Maya’s aspiration is to strive towards being in the senior management of the school. She is attending a Management and Leadership course to help her fulfill her career ambitions.

The next three interviewees preferred to remain anonymous. Participant two (Sue) has been teaching for 10 years. Sue has just completed a Bachelor of Education Degree (B.Ed.) through the University of Stellenbosch. Sue feels that teaching is a noble profession, and is unhappy at the extra record-keeping duties imposed on educators. Sue states that she has no aspirations towards any management post and would like to exit the profession soon.

Participant three, Fay's academic credentials include a Master's Degree in Curriculum Development, and she is currently reading for a Doctoral Degree in Curriculum Development. Fay is not part of management but actively contributes towards the smooth running of the school both academically and sporting-wise. Fay feels that she can contribute more critically towards the school by not being part of management. She is a single parent with two children in high school.

Participant four, Kim, has a Master's Degree in Applied Linguistics and is immersed in reading for her Doctoral Degree in Applied Linguistics. Kim has taught abroad, in London and Canada. She serves on the Curriculum Development Committee at school. Kim is an active Union member who serves in the hierarchy of the South African Democratic Teacher's Union (SADTU), as well as being an active member in her political affiliation. Kim is a single woman who has chosen her career over social commitment.

### **4.3 ACCESSING THE EMPIRICAL SITE**

Although part of this empirical site, I still had to negotiate a formal entrance into the site with regard to the research study. Consent first had to be gained from the relevant DoE officials (Annexure C). Written consent had to be gained from the school principal (Annexure D). The participants were then asked to sign letters of informed consent (Annexure E). The participants were advised about the study and their volunteer status in it.

The "processes of gaining access" to this school also involved negotiating my role as a qualitative researcher as well as blending this role with that as a fellow educator at this empirical site. Taylor et al. (2003, p. 2) stress the importance of "gaining access" to the empirical site and go on to state that "for any qualitative researcher working in an interpretive paradigm, but particularly novice researchers, an initial challenge involves finding and negotiating access to a site."

According to a study by Maistry (2009, p. 1), “in South African education literature, there is an embarrassing difference between the rigour and elegance with which educational researchers have written about research involving classroom observations, and the extent to which they have focused on and written about the processes of gaining *access* to schools and teachers, and developing the kinds of relationships conducive to yielding quality data.” This study attempted to redress this glaring imbalance by providing as much rich data as possible gained from the empirical site.

Each grade had three or four class units, and one volunteer was chosen from each grade. In terms of the sampling technique used, as mentioned in the earlier chapter on the research design and methodology, Corbin and Strauss (2008, p. 153) recommend that “there is the ‘ideal way’ of doing things and there is the ‘practical way’. Sometimes a researcher has to settle for the latter.” In this research study I attempted to purposefully gather rich data from the participants whom I felt had the most to contribute to this study. Fortunately, I had a cordial working relationship with all the volunteers, which enhanced the process of “gaining access” to the empirical site.

I also needed to gain the trust of the participants so that they would be honest and feel at liberty discuss their responses with me without any form of prejudice. Maistry (2009, p. 1) contends that in the process of “gaining access”, the researcher should attempt to get the “teachers and students learn to trust the researcher to the point at which they are prepared to be unselfconsciously open and honest about their practices, perceptions and beliefs.”

As a qualitative researcher attempting to understand a social phenomenon, one must be prepared to accept, as Maistry (2009, p. 2) states, that “access is thus never total, but might be seen as an incremental continuum, where the researcher

is gradually able to move from initial permission to enter buildings to a series of developed and trusting relationships with managers, students and teachers.” It was my cordial relationship - developed over a period of 15 years - with the participants that allowed me greater access into the empirical site.

After gaining formal access to the empirical site, semi-structured pre- and post-interviews were scheduled. These were conducted in the first term of the 2009 academic year. The interviews were conducted during the educators’ non-teaching periods so as not to interfere with the contact time with learners. The audio recordings were sensitive to the routine background sounds one would envisage in any school set-up. The responses of the participants were then transcribed.

Two participants were interviewed at school and two outside of school. The change in the setting of the interview impacted on the length of interviews: the two conducted at school were just over 20 minutes long while the two conducted outside of school were just over 25 minutes long. The quality of the data was not compromised. The interviews at the venues outside of the empirical site were not restricted in terms of teaching time and also provided an opportunity for dialogue on a social basis.

The participants were not threatened by the presence of the audio recorder, which they were made fully aware of prior to any form of verbal interaction. The audio recorder, although diminutive in size, was fully visible at all times. The participants were also informed in advance that if they wished to switch off the recorder at any given time they could do so.

Since I felt that I needed to achieve as much rich data as possible, I also set out to observe the participants as they taught their lessons and interacted with the learners within the confines of the classroom. This task was more complex than I had actually anticipated.

Initially, I believed that my familiarity with the educators would allow them to settle down into their routines and reduce the level of anxiety of having an observer in the classroom. The three more experienced participants (8 years' experience and more) were more at ease - and so were their learners. The least experienced educator displayed a greater tendency towards being anxious in my presence, and her learners noticed this and exploited the situation by engaging in personal conversations of their own and eventually being disruptive during the lesson.

There was a pronounced difference between what the participants had intimated in their interview about curriculum integration and in their actual teaching. The interviews with the participants on curriculum integration gave me an understanding of their multiple interpretations of what they thought curriculum integration was, what it should be, and how it should be implemented.

In this study four different lessons, one per grade, were video recorded. In order to achieve a "pure image", Pink (2003) recommends images taken from various perspectives. Pink (2003, p. 17) refers to video images as "visual texts" which have now become an important part of ethnographic research. This study uses a single video camera in a single fixed position. This approach was underpinned by the quest to reduce the level of anxiety of the participants, who were initially reluctant to be video recorded although they had at the onset collaborated via informed consent.

One of the participants requested that the lesson be video recorded but that the video camera should not directly focus on her but on the class. The implication of this request was that although as a researcher I had gained access to the empirical site, I now had to renegotiate this level of access. Maistry (2009, p.13) endorses this process of re-negotiation and states that "researchers have to be mindful that

access, once negotiated, is never settled”. This request was respected and adhered to. In the video clip concerned, the educator’s voice is clearly audible but there was very little interaction between the educator and learners in front of the chalkboard.

Another implication of using a single video camera was that once the participants walked around the class or changed their physical position, they moved out of the picture frame. However, the advantage of video recording allowed all verbal interactions, whether audible or not, to be recorded.

Participants’ responses in the interviews were analysed in terms of my initial research questions:

1. What are GET phase educators’ perspectives of curriculum integration?
2. How does curriculum integration happen in the GET phase?

The following analysis and interpretation will revolve around the above questions. All four participants’ responses will be looked at in terms of each of the above, with the focus was on richness of the data achieved. The interpretation of the rich responses was not in any way related to the participant’s knowledge or lack of it with regard to curriculum integration.

## **4.4 WHAT ARE GET PHASE EDUCATORS’ PERSPECTIVES OF CURRICULUM INTEGRATION?**

From an analysis of the data, the following key themes emerged which, although discussed under separate subheadings, are strongly interrelated:

- 4.4.1 Multiple understanding of curriculum integration;
- 4.4.2 Contrived integration;
- 4.4.3 Feelings of abandonment; and
- 4.4.4 Textbooks help with integration.

### **4.4.1 Multiple understanding of curriculum integration**

After analysing the participants’ understanding of what curriculum integration means to them, it was evident that there were divergent understandings and interpretations of what curriculum integration entails and how it should be implemented. This depended largely on the educators’ academic potential and experience. One participant, Fay, stated that she tried to relate different learning areas and topics, as revealed in the following extract of the video transcript:

*“Yes the Antarctic, think of your SS and you have done the different continents, isn’t that so? And which of these are the coldest?”*

This was her understanding of what curriculum integration was.

*“What is your understanding of the term ‘curriculum integration’, CI?” “Well, from what we have learnt from the workshops, integration was trying to relate one learning area to another, and relate a given topic in two different learning areas ... how you can look at it from different perspectives.”*

Another participant, Sue, stated that her understanding of curriculum integration was crystallized by attempting to look for common ground in different aspects, so that the child can be educated in “totality”:

*“Integration is with all the learning areas ... when you’re looking at OBE, you’re looking at integration of all our different aspects ... to educate the child in totality.”*

Another participant, Maya, was concerned about whether they needed to teach each different learning area in the same sort of order or sequence and integrate the different learning areas’ contents to what the learner actually experienced in their daily real world:

*“My understanding is where you are going to use knowledge in the different learning areas to explain, to ... explain concepts, in order for children to understand things better, where you use knowledge from different learning areas, different disciplines and different eh ... areas of their lives and experiences.”*

There is no absolute, clinical definition of what an integrated curriculum is. The participants’ understanding of curriculum integration ranged on a continuum from a deep understanding, as in the case of Fay, to a level of superficial integration, Sue, which was supported by the participants’ level of academic experience, years of teaching and understanding of the art of teaching and learning to meet the essential needs of the learner.

The participants understood the term “integration” as the bringing together or the mixing of ideas or concepts.

Maya: *“How you integrate your learning areas, for example, if you are teaching Measurement in maths, the Learning Outcomes from maths can also be achieved in NS [Natural Science] because NS also has the same LOs, measurement, eh, in my opinion that is what integration is about.”*

Sue: *“Integration is with all the learning areas, then you’re looking at OBE, you’re looking at integration of all our different aspects, to educate the child in totality.”*

Fay: *“Well, from what we have learnt from the workshops, integration was trying to relate one learning area to another, and relate a given topic in two different learning areas ... how you can look at it from different perspectives.”*

Kim: *“For me it is where you integrate all other subjects.”*

The common factor in the above definitions of curriculum integration is the emphasis on the integration of different learning areas over a theme or concept. For example, Maya spoke of “measurement” in mathematics, “measurement” of liquids in NS, “measurement” of body mass in Life Orientation and “measurement” as a descriptive adjective in English grammar.

Maya’s understanding of curriculum integration appears to be clinically narrow and restricted to what is available in terms of the text or DoE bulletins. Sue speaks of curriculum integration in terms of educating the child in “totality” regardless of the different learning areas. Sue felt that it was easier to integrate certain learning areas such as technology and NS. This view is supported by a study done by Ntoi (2007, p. 108), which states that “It is also apposite to mention that integration of the two fields, namely, science and technology is easier said than achieved in reality.”

Fay interpreted curriculum integration in terms of the content, arguing that if she could relate the content matter of one learning area to the next, then she could achieve a higher degree of curriculum integration. Fay’s understanding of

curriculum integration is that it is to reduce the boundaries between the different learning areas.

A common view among the four participants was that there was little or no difference between the old thematic approach and the integrated curriculum approach. Sue intimated that an integrated curriculum according to the DoE was one in which LOs and ASs were integrated across different learning areas. Kim alluded to curriculum integration and an interdisciplinary approach being the same.

Maya looked at what makes up curriculum integration. She contended that joining concepts together from different learning areas meant that there was a high degree of curriculum integration. She was of the opinion that the integrated curriculum was very much like the old thematic approach used prior to OBE being introduced in schools:

*“No, integration and thematic approach are different. It cannot be the same. Integration is how you are integrating your LOs and ASs and it has nothing to do with a theme. For example, a theme is like you are doing MY SCHOOL in English. Now you can’t do the theme MY SCHOOL in NS. The LOs and ASs may not warrant that type of teaching, right ... so that is what I feel.”*

Fay was of the opinion that the thematic approach and the OBE approach to curriculum integration were essentially the same, with only a change in terminology. Fay was of the opinion that whether you follow the OBE approach or the traditional approach, the same learning objectives could be achieved:

*“Ya... it is the one and the same. Slightly different ... I think some of the words they have been changing. Before we used to look at aims and objectives, now we look at LOs and ASs. There is not much difference ...*

*the same thing at the end of the lesson is achieved ... what are the aims of that lesson, what are the LOs of that lesson, what's the assessment standards, what things do they know at the end of the lesson ... but obviously it is more learner centred, the learner is more involved in learning. But when you look at curriculum delivery, the textbook ... we are still teaching from a theme ... modules."*

Sue felt that the educator needs to achieve a level of "better understanding" by looking for common LOs among the different learning areas:

*"Yes, you could look at it in that way, as a thematic approach... we are looking at, for example, a topic like HIV, you can look at it from a science perspective, from an LO perspective, from an English perspective, from an economic perspective, so that you can integrate it to your different learning areas and get a better understanding of what you are teaching."*

All four participants commented that support in terms of resources and follow-up workshops by the DoE was lacking. Sue stated that after completing her formal education there was no further training from the DoE with regard to the understanding and implementation of curriculum integration:

*"Not much but eh the present course that I am doing - I am doing my degree at the moment - we are doing a lot of integration with different learning areas and I can see the importance and the difference there is ..."*

#### **4.4.2 Contrived integration**

Fay's understanding of curriculum integration differed from the other participants. She appeared to have a deeper understanding of curriculum integration and was strong in her opinion that integration must not be done just for the sake of achieving some degree of integration or merely to please administrative requirements. Fay appeared to support the argument that superficial integration leads to superficial learning.

Fay went so far as to contend that curriculum integration must not be forced or contrived. She believed that curriculum integration must take into account contextual factors as well as available resources to support curriculum integration in the relevant learning areas.

In the following video extract from Fay's lesson, she makes an attempt to relate her NS lesson to a Social science (SS) lesson by referring to the concept of temperature:

*“Yes the Antarctic, think of your SS and you have done the different continents, isn't that so? And which of these are the coldest?”*

This level of integration can be considered superficial because it does not add to or develop the learner's understanding of the concept of temperature. The educator refers to a previously taught SS as a reminder to the learner. The learner is then required, according to the request of the educator, to make this connection between NS and SS and clarify their understanding of the concept being taught.

Fay was also very firm in her belief that curriculum integration will be highly contrived if the individuality of the educator is not respected and if the educator is “told” what to do rather than asserting her own experience and creativity:

*“Like I said before, we must not force integration but we have people from administration telling us why didn’t you put the integrated areas, related areas in the lesson plan ... so I found that it was of no real value to the lesson, so I didn’t want to add that on, that was the nuisance part I found ...but if it was definitely integrating then I most certainly would use it. I don’t like this top down approach where we are told that it has to be done.”*

In the above extract of the transcript Fay points out that she is against being bullied by either school management structures or the DoE advisors into implementing curriculum integration on a superficial level which has no meaning to the relevant teaching and learning experience. In her lesson plan (attached), Fay lists the LOs and ASs which she had strived to achieve. From an analysis of the video recording of her lesson, it is evident that she had achieved the LOs and ASs that she had planned.

Sue made an attempt to relate her NS lesson to an Arts and Culture (AC) lesson by referring to the colour chart, brightness and importance of the various colours in nature:

*“... they tell you here that most flowers are brightly coloured to attract Insects; now birds and insects like bright attractive colors. Do you think that they will want to go and pollinate flowers that are dull, brown and dark?  
Just like the birds and insects like bright colours. Nice bright red flower, will they want to go and sit on that flower?”*

In the lesson observation of Fay, she attempted to and used concepts and content from other learning areas such as Social Sciences and Mathematics. An extract

from the video recording of Kay's lesson indicates that she attempted to integrate different learning areas in the Natural Science lesson on Extreme Habitats, as revealed in the following transcript of her lesson recorded on video:

Teacher: *Yes the Antarctic, think of your SS and you have done the different continents, isn't that so? And which of these are the coldest?*

Learner: *The Antarctic.*

Teacher: *The Antarctic, the Antarctica, the place is called Antarctica, and what did you learn about Antarctica, is it in the Southern Hemisphere or the Northern Hemisphere?*

Class: *Southern Hemisphere* (chorus).

Teacher: *Right, in the Southern Hemisphere. In other words it is below the Equator which is the Southern Hemisphere. Above the Equator is the Northern Hemisphere, and you find Antarctica to be the coldest part in the Southern Hemisphere, right so. ... any idea on what line of latitude it lies on? How many degrees? Anybody know? Ok. You're going to find out. You can see that Antarctica the is the lowest part of the Southern Hemisphere where it is very cold, very very cold. Right, so where else will it be cold? Where else will it be cold? Anyone else know any other*

*place where it is cold? In the world, we are talking about the world?*

Learner: *Cape Town.*

Teacher: *Cape Town is very cold. What can you tell me about Antarctica? You have the Arctic Circle and the Antarctic.*

The dominant focus of Kay's lesson was NS. She did discuss concepts such as temperature and habitats common to both NS and SS, but returned to NS. The boundaries of Kay's lesson appeared to be less rigid than the implementation of

Sue's boundaries in the following lesson. Although Kay attempted to integrate NS and SS, her level of integration was superficial and loose, and did not emphasise the LOs and ASs that she had indicated in her lesson plan that she intended to integrate.

Sue was of the opinion that if curriculum integration is being contrived for the purpose of recording it on the lesson plan in order to meet the requirements of management, then there is no real value in the learning experience:

*“Sue commented that “Well ... basically we see how it relates to another learning area; although we put it down in the lesson plan, I find it actually quite ...nonsense ... because sometimes we are forced to integrate where there is really no integration.”*

Sue attempted to rigidly enforce the boundaries of her lesson by not using examples from other learning areas relevant to the topic she was teaching. She did not entertain any questions or lead any discussion that digressed from her planned topic. Sue did not indicate any level of integration in her lesson plan. When questioned on this intentional omission, she responded: *“I do not see the need for any form of integration nor is integration relevant in my lesson”*. This response supported Sue's view that curriculum integration is of minimal usefulness to her. Sue kept the dominant component of her lesson in strict adherence to focusing exclusively on NS.

#### 4.4.3 Feelings of abandonment

Another strong contention that came through from the interviews was that the educators felt alienated. They felt that the DoE, which initiated curriculum integration, did not make good on promises of follow-up workshops or Departmental Circulars with adequate guideline for effective implementation of curriculum integration.

Kim was of the opinion that the educators needed further clarity and more effective guidance from the DoE, and the school management structures did not provide adequate leadership with regard to curriculum integration. Sue's response was similar: *"Surely as new teachers we need more support from our Education Department?"* Sue stated that she felt "rather disillusioned" about the lack of support to new educators entering the profession. She suggested that the institutions preparing educators to enter the profession should develop adequate courses to help them *"because they will not get this help once they have entered the profession."* Sue's approach to curriculum integration was superficial. In her lesson preparation she stated the necessary LOs and ASs because this was a minimum requirement as stipulated by senior management at school.

LESSON PLAN - 2009

LEARNING AREA NATURAL SCIENCE GRADE 5

TOPIC: LIFE AND LIVING

LEARNING OUTCOMES	1	1				
ASSESSMENT STANDARDS	1	2				
INTEGRATION						

(Extract from Sue's lesson preparation.)

Although Sue did indicate her LOs and ASs, she did not include any which she could integrate into the lesson. When questioned in this regard she responded: *"I*

wasn't sure about what concepts to integrate ... and it takes too long thinking about integration." Sue went on to state that because of her poor understanding of curriculum integration, she did not have the necessary skills to prepare, develop and deliver her teaching skills with regard to curriculum integration. Kim, on the other hand, did indicate LOs and ASs which she felt could be integrated in her lesson.

**LESSON PLAN - 2016**

LEARNING AREA: NS GRADE: 7

TOPIC: Adaptations of plants and animals in extreme

LEARNING OBJECTIVES	2				
ASSESSMENT STANDARDS	1, 4				
INTEGRATION	SS LO 1	AS 1	LO 2		

(Extract from Kim's lesson preparation.)

Kim stated that the DoE and school management could enhance educators' understanding of curriculum integration if there were more regular contact sessions: "I attended a few workshops on curriculum integration." She felt that she did benefit from these "few workshops," but contended that this was not enough. Kim believed that she could enhance her teaching skills if the textbooks were either linked or even closely related to the workshops that she attended. She felt that the workshops were not relevant to her everyday experiences in the classroom environment. To compensate for her lack of understanding of curriculum integration, Kim had embarked on an attempt to empower herself by reading more about curriculum integration in *DoE Bulletins*.

#### 4.4.4 Textbooks help with integration

In the absence of adequate support material and guidance from the DoE, Maya and Sue commented that they relied on the DoE Policy Document, while the other two participants contended that they relied on the new OBE textbooks to help them find their way with regard to achieving a greater degree of curriculum integration.

However, Maya later stated that she also relied heavily on textbooks with regard to her lesson preparation:

*“RNCS (Revised National Curriculum Statement) documents help me because when I am doing my long-term and my work schedule, I actually refer to that, for my LOs and ASs, and that is how I manage to do my preps.”*

Sue stated:

*“It [RNCS documents] has been helpful, especially at the beginning of the year when we’re doing planning, and we consult the document to do our lesson plan and our schedules as well as our learning programme.”*

In the video recording of her NS lesson on “New plants from plant parts”, Sue used the learners’ textbook as part of her lesson. The following extract from the transcript of the video recording reveals the educator’s reliance on textbooks: *“Teacher: Reads from text book p.18. Unlike those birds, what do other birds do when winter comes?”* On enquiry on the usage of the textbook, Sue and Fay pointed out that the textbook was used as a resource to assist in curriculum integration. Sue also relied heavily on the textbook, as revealed in the following extract from the transcript of the video recording:

*“All of you read together sexual reproduction in plants. [Chorus reading from text.] Right, turn over to the fern. The fern is one of the oldest plants on earth and they usually grow from spores. [Teacher reads from text.]”*

Fay: *“Just take out your science textbooks, you only need one per desk, you don’t need more than that, leave one on the table, does everyone have a textbook? Leave one on the table.”* [Extracted from transcript of video recording.]

Maya further added that at first she also felt overwhelmed by the introduction of OBE curriculum integration, and then sought solace through the use of OBE textbooks supplied by the DoE:

*“Initially it was very difficult, because I had to find my way to do integration. I had to rely a lot on the textbooks to assist me as well, and fortunately we have quite a few textbooks that actually show you how to do integration and they actually have the learning outcomes and assessment standards that you need to integrate with from the other subjects... so I have managed to kind of find my way through.”*

The participants were then able to qualify their understanding of what makes up the integrated curriculum in terms of their planning with regard to their work schedules, lesson preparation, resources and ASs.

Fay was of the opinion that the developmental needs of learners were not taken into account when drawing up an integrated curriculum with the DoE’s introduction of OBE, and that the learner must receive a holistic education (which she refers to as “totality”):

*“When you’re looking at OBE, you’re looking at integration of all our different aspects ... to educate the child in totality.”*

The common response among the participants was that if OBE provided relevant resources and was made more relevant to learners' experiences and needs, then the application of an integrated curriculum would be more fruitful in enhancing both the teaching and the learning experience:

Maya: *“Nothing, absolutely nothing, besides ... a few hours of workshops where they tell you do this, do that, but they give you no clear direction.”*

Maya's comment encapsulate her feelings with regard to the level of support from the DoE, and this view was shared by the four participants. All four felt that the DoE needs to clarify what it believes is an adequate definition of curriculum integration.

Maya was of the opinion that according to the DoE Policy Documents, curriculum integration entails the integration of LOs and ASs across the various different learning areas. She added that the DoE's focus is therefore not on content as in the thematic approach, but on achieving LOs and ASs:

*“Maths and NS have got certain common sections. SS as well, the Geography part with NS, LO with English. In fact Life Orientation can be integrated with quite a few learning areas. Arts and Culture with English as well. In English we're supposed to be doing Drama, and in Arts and Culture. So there's a lot of scope to do integration there.”*

Fay stressed that the availability of resources will assist in effective curriculum integration:

*“First we need to have workshops ... you need to have a skilled educator who knows about integration who can workshop us and then come to our classrooms, and then maybe give us some guidelines on how we can do it in our classrooms with our learners and with the resources that we have.”*

Only one participant stated that she does consult the DoE Policy Documents, but that this was often futile and did not provide adequate guidance in preparing integrated lessons.

Maya: *“I use my RNCS document often, because I refer to the information in that, especially the LOs and ASs, when I am doing my preparation.”*

Another two participants reported that they relied on OBE textbooks for guidance only to some degree.

Fay: *“To some extent, to some extent ... we are fortunately using the Oxford series which allows for that, and the teacher guides in the Oxford series help and assist with integration, and the teacher is able to see which learning areas they can draw from.”*

Kim: *“The textbook is not actually the best resource; the kind of school that I am teaching in currently has become one of the resources that we use - we use things from the environment, we try to improvise and that’s how we manage.”*

All four participants reported that they did what they felt was right according to their level of understanding, but retorted that their level of understanding of curriculum integration could be enhanced if they received greater support from the DoE in terms of providing concrete examples to use as guidelines.

Kim supported Maya's sentiments and commented that the Policy Document needed to be more explicit on how curriculum integration could or should take place:

*“As we learn, there was no real training, they just gave us a Policy Document to follow and we had to figure it out ourselves ... and that was the kind of perception that I had ... of what curriculum integration entails.”*

From their responses one could deduce that the participants have not had nor are receiving adequate resources, clarity or any practical training in designing, organising, assessing and implementing curriculum integration in the GET phase.

All four participants shared the sentiment that they were prejudiced by the DoE which had left them stranded to determine their own definition, understanding and implementation of curriculum integration in the GET phase, without any follow-up workshops or training.

The youngest educator (who had been teaching for just over eight years) indicated that the tertiary institution that prepares future educators needs to look at the issue and concerns of curriculum integration seriously and in a more holistic perspective, and to assist future educators with adequate guidance and necessary skills to get to grips with curriculum integration before they actually step into the dynamic, intricate and confusing world of the traditional classroom.

None of the other participants mentioned or felt that tertiary institutions needed to be more supportive - the other three apportioned blame to the DoE for their not fully understanding the concept of curriculum integration.

## **4.5 HOW DID CURRICULUM INTEGRATION HAPPEN IN THE GET PHASE?**

In this section I present data from the empirical site on how educators attempted to implement curriculum integration via their teaching methodology and lesson preparation. I hoped to establish the nature and extent of the curriculum integration that occurred in the lessons that were video recorded. In order to respond to the above research question, I used data extracted from the video recording and observation of the educators' lessons.

The educators appeared to have some understanding of curriculum integration, as discussed earlier. Maya stated that: "Curriculum integration basically means how you integrate your learning areas; for example, if you are teaching measurement in maths, the LO from maths can be also achieved in NS because NS also has the same LO ... measurement. In my opinion that is what integration is about." Fay commented: "Well, from what we have learnt from the workshops, integration was trying to relate one learning area to another, and relate a given topic in two different learning areas... how you can look at it from different perspectives". Sue explained curriculum integration as follows: "For me it is where you integrate all other subjects." Kim referred to curriculum integration as "Basically it is all the learning areas and the subject matter which is to be integrated". From these accounts of what curriculum integration meant to them, it is revealed that the participants have multiple understandings of it. A common factor is their attempt to bring together content or concepts from different learning areas.

Observing the educators' lessons revealed that although they claimed to have an understanding of curriculum integration, their practical implementation of curriculum integration in their lessons ranged from superficial to non-existent.

The following extracts were taken from the transcripts of the observed lessons. The full transcript is attached in Annexure.... An analysis of these extracts from lessons follows.

#### **4.5.1 Extracts of transcript of lesson observation through video recording, participant one (Fay)**

If I had to place the level of curriculum integration on a continuum which ranged from superficial to substantial, then Fay's lesson could be leaning closer towards being superficial integration. Fay did indicate in her lesson preparation, as mentioned earlier, the LOs and ASs which she had intended to integrate. After observing her lesson, it becomes evident that curriculum integration was happening at a very superficial level.

She begins to talk about the different "hemispheres", but does not follow through with her argument and go any further. Her ensuing explanation does not attempt to link and integrate her subject area of NS to any other learning area. It is evident that there is very little that has been planned in order to assist her to follow through in discussion on "extreme habitats" so that a more profound level of curriculum integration could take place. She did attempt to integrate her NS lesson with content or concepts taught in the learning area of SS, by referring to the concept of temperature, and she used a world map from the SS lesson. The use of the world map and words such as "hemisphere", "continents" and "Antarctica" were attempts on her part to integrate her NS lesson with the SS learning area:

*"Right [pointing to world map], in the Southern Hemisphere. In other words, it is below the Equator, which is the Southern Hemisphere. Above the Equator is the Northern Hemisphere, and you find Antarctica to be the coldest part in the Southern Hemisphere, right so?"*

In her initial interview Fay's responses indicated that she felt very confident in her understanding of curriculum integration:

*"Well, from what we have learnt from the workshops, integration was trying to relate one learning area to another, and relate a given topic in two different learning areas ... how you can look at it from different perspectives."*

Fay's response does not appear to have the nuances of a deep conceptual understanding of curriculum integration.

#### **4.5.2 Extracts of transcript of lesson observation through video recording, participant two (Kim)**

In her maths lesson on proper and improper fractions, Kim stayed rigidly within the confines of her lesson without any deviation or reference to any other relevant concept from other learning areas. In this lesson curriculum integration is virtually non-existent. In her lesson preparation Kim did not indicate the relevant LOs and ASs that she intended to cover in her lesson. The following extract was taken from the transcript of Kim's video recorded lesson on the learning area of mathematics, where she focused on proper and improper fractions:

*“Now, we are coming to improper fractions. Right, we said that with proper fractions the numerator is always smaller than the denominator, and I also made clear to you what these letters stand for [educator points to chalkboard] - N for Ned and D for donkey, so your numerator is always on the top and your denominator is always at the bottom. Proper fractions means that your numerator is always smaller than your denominator. For example [chorus response] 1 over 2, 2 over 4, 6 over 8, those are proper fractions. Coming back to improper fractions we have [educator writes example on chalkboard] 8 over 2, 6 over 5, 7 over 12 [educator writes learner's example on chalkboard].”*

The remainder of this lesson continued in a similar kind of way, where the educator did not deviate from the mathematics lesson to any other learning areas. While the textbooks and DoE Policy Documents provide the educators with examples of how curriculum integration could be achieved in this particular section, Kim elected not to embark on any form of curriculum integration. In the post-discussion of her lesson, Kim indicated that especially since she was

teaching foundational concepts in mathematics, she did not want to confuse the learners. In this instance we see how the educator exercises her personal judgment to see at which point curriculum integration should be introduced or not.

In her lesson preparation, Kim did not set out the LOs and ASs she had intended to achieve in this lesson - the lesson preparation sheet was left blank. In the post-discussion to this lesson, I asked Kim to enhance my understanding with regard to the above. She stated that the format of the lesson preparation was designed by management, and that this required the proposed integration to be stated for record-keeping purposes, even if these were not achieved in the lesson. Kim stated that she was merely “meeting administration requirements”. Her response contradicts an earlier one where she stated:

*“Like I said before, we must not force integration, but we have people from administration telling us why didn’t you put the integrated areas, related areas in the lesson plan ... so I found that it was of no real value to the lesson, so I didn’t want to add that on. That was the nuisance part, I found, but if it was definitely integrating then I most certainly would use it ... I don’t like this top down approach where we are told that it has to be done.”*

Terms such as “*nuisance*” could be viewed as a reflection of her feelings towards doing integration for “*record-keeping purposes*”. Although Kim hinted in her post-discussion of her lesson that her knowledge of curriculum integration was self-taught, and that she had a clear understanding as to what is required of her in terms of implementing curriculum integration in her lessons, in essence, there was no evidence to indicate that she has a substantial understanding of curriculum integration in her actual lesson delivery.

**4.5.3 Extracts of transcript of lesson observation through video recording, participant three (Sue)**

Sue’s lesson was on “Life and Living,” with a special focus on sexual reproduction in plants, to a Grade five class. The majority of learners (35 out of 40) were English second language learners whose mother tongue was IsiZulu but were learning through the medium of English. The rest (5 learners) were of Indian background and their mother tongue was Tamil, but they conversed at home in English.

In her lesson preparation, Sue did not indicate any level of integration that she hoped to achieve in the lesson:

LESSON PLAN – 2009

LEARNING AREA NATURAL SCIENCE GRADE 5

TOPIC: LIFE AND LIVING

LEARNING OUTCOMES	1	1				
ASSESSMENT STANDARDS	1	2				
INTEGRATION						

In the post-discussion of her lesson, Sue indicated that she was a novice educator and that her understanding of curriculum integration was limited to what she could read from textbooks in her relevant learning area. She stated that she deliberately did not indicate any integration in the lesson preparation. Her reason for this was that she saw little or no possibility of integration because of the content of her lesson. She then indicated that if she had integrated her lesson into other learning areas, then this effort would serve to confuse her learners, whom she considered to be below average in their learning capacity.

Sue also stated that: “... the present course that I am doing, I am doing my degree at the moment ... we are doing a lot of integration with different learning areas

and I can see the importance and the difference there is.” Sue felt that she was not integrating her lessons because of her lack of understanding of curriculum integration. She hoped that her current studies would help her to enhance her understanding of curriculum integration and its relevant implementation in the classroom.

#### **4.6 SUMMARY OF FINDINGS: HOW FAR DID THESE EDUCATORS PUSH THE BOUNDARIES OF CURRICULUM INTEGRATION?**

The interview transcripts revealed that the educators were able to explain what curriculum integration meant to them, although there were variations in their understanding. Their understanding of curriculum integration was also underpinned by the reservations they expressed, and anxiety on how curriculum integration should happen.

My observations and semi-structured interviews showed that there was only one educator who attempted to implement curriculum integration, but she barely went beyond the rigid boundaries of her lesson. The other educators in this research study did not make preconscious or planned links to the different learning areas.

Even though the educators claimed to use the textbooks as a resource material to help them with their curriculum integration, they still appeared to struggle with applying curriculum integration in any substantive way. The textbooks included various forms of integration with the other learning areas; it was up to the educator to digest this information and then use it in a relevant and meaningful way.

In trying to understand how curriculum integration occurs, it appears as if the educators have not taken ownership of the phenomenon of curriculum integration. The educators appear to be content to comply with the school's management requirements; this level of compliance remains largely at a technical level, where they simply fill in the lesson preparation forms in the right columns to appease senior management.

In essence, curriculum integration appears to be happening in a limited or non-existent way, and is far from being substantial.

#### **4.7 CONCLUSION**

This chapter attempted to analyse the participants' multiple understandings of curriculum integration, which were explored through semi-structured pre- and post- interviews and observation via video recordings of lessons. The following chapter looks at possible recommendations and possibilities for future study, and gives a brief synthesis of the research.

# **CHAPTER FIVE**

## **RESEARCH SYNTHESIS, FINDINGS, AND RECOMMENDATIONS**

### **5.1 INTRODUCTION**

The previous chapter looked at the data analysis of this research. This chapter highlights the research findings of this study, focusing on the results of my exploration of educators' multiple understandings and implementation of curriculum integration in the GET phase of education. My discussion will attempt to link my findings to the initial guiding research questions. I will also focus on my findings in the light of research studies I encountered in my literature review. Possible recommendations will be made, guided by my findings based on the pre- and semi-structured interviews and my classroom observation of the participants teaching in this specific empirical site. This chapter will also attempt to identify the limitations of this study and highlight possible opportunities for future research.

### **5.2 BRIEF SYNTHESIS OF THE RESEARCH STUDY AND KEY FINDINGS**

It was the intention of this research study to explore educators' understanding and application of curriculum integration in the GET phase of education. The central focus was on the educators' understanding and experiences in the implementation of curriculum integration. An in-depth literature review and the responses of educators to their experiences of curriculum integration in the GET phase provided the basis of this study. In this chapter the synthesis of this study is presented.

**This research study was guided by the following research questions:**

1. What are GET phase educators' perspectives of curriculum integration?
2. How does curriculum integration happen in the GET phase?

### **5.2.1 What are GET phase educators' perspectives of curriculum integration?**

With regard to the first research question, the following four key findings emerged:

- **Multiple understanding of curriculum integration**
- **Feelings of abandonment**
- **Contrived integration**
- **Textbooks help with integration**

#### ***5.2.1.1 Multiple understanding of curriculum integration***

This study revealed that there were multiple understandings of the complex concept of curriculum integration by the educators. The more highly qualified educators appeared to provide a deeper and fuller explanation of the concept of curriculum integration. The literature available from the DoE with regard to curriculum integration offered no definitive explanation of curriculum integration, and only minimal guidelines or structures which could be uniformly implemented. The result was that different educators interpreted curriculum integration in terms of their academic background and experiences. This finding is endorsed by the Naidoo (2006), who stressed the importance of the educator's academic background and training in understanding the needs of the curriculum. However, this did not mean that they were able to apply this understanding to the lessons they taught, or that they believed that curriculum integration was important.

It was evident that there were multiple understandings of the participants in how they interpreted and implemented curriculum integration in the GET phase. Participants who provided scanty explanations usually articulated verbatim what they may have read in the DoE Policy Documents, without showing any kind of in-depth understanding.

#### ***5.2.1.2 Feelings of abandonment***

All the participants in this study contended that they felt that the DoE had not done enough to ensure that educators understood the complex nature of curriculum integration and its implementation. Educators indicated that they would have benefitted from more structured support from the DoE and the leadership within the school. Educators were of the view that they were simply entrusted with this policy vision of curriculum integration, but were left in the lurch from there on. There was a general feeling of abandonment at a time when they needed support on curriculum development.

In the review of the relevant literature, Naidoo (2006) and Mtshali (2008) pointed towards the possibility that the DoE had not set effective structures in place to ensure that educators not only understand relevant policy documents but effectively implement curriculum integration to promote teaching and learning. The above assertion is made after a comparison of the available international literature, such as Lake (2009) on curriculum integration especially in the United States of America and the United Kingdom where curriculum integration is not based essentially on the integration of content matter but on the integration of concepts and common projects across different learning areas.

Peat (2009, p. 93) states that “decoding the Policy Document’s theoretical demands and their practical application” appears to be a stumbling block for many educators. Peat’s (2009) finding could be endorsed in the present study,

where educators had similar difficulties in integrating policy with practice, as well as the inability to go beyond the strict “framing” of knowledge into convenient learning areas as dictated by the DoE Policy Documents. A South African study by Mtshali (2008) supports Peat’s (2009) assertions. Mtshali (2008, p. 103) also identified educators’ lack of understanding of the new curriculum, which could be attributed to the lack of support from the DoE.

The available international literature, such as studies done by Alsharif, Shara and Roche (2001), Fogarty (2002) and Lenoir (2006), and Grant and Paige (2007) on curriculum integration suggests that for curriculum integration to be successfully implemented, there has to be continuous support from the DoE in terms of resources and practical examples relevant to the learners’ everyday experiences. This support was not evident in this specific empirical site.

#### ***5.2.1.3 Textbooks help with integration***

An important finding in this research study was that the educators relied on textbooks to assist with curriculum integration; they were able to identify specific examples presented in the textbooks. These examples provided specific connections between the different LOs and ASs in the various learning areas as to how curriculum integration should happen. While my study did not focus on how textbooks applied curriculum integration, there is however a sense that different textbooks applied curriculum integration in different ways, some being more substantive than others.

#### ***5.2.1.4 Contrived integration***

The data from this study revealed that while some educators indicated the LOs and ASs that they wished to integrate, others were of the opinion that indicating the integration in their lesson preparation was not necessary. Some educators revealed that they felt that integration was highly contrived and superficial, because they were merely meeting administrative requirements.

### **5.2.1 How does curriculum integration happen in the GET phase?**

This research question was answered through my classroom observation of the lessons taught, by focusing on the educator's lesson preparations, as well as through the pre- and post-lesson semi-structured interviews that were held with the participants. The data revealed that the extent of the implementation of curriculum integration in the GET phase ranged from being very limited to non-existent.

## **5.3 RECOMMENDATIONS**

After taking into consideration the findings from the data analysis and the research studies considered in the literature review, the following recommendations could be considered:

- There needs to be a greater degree of on-going professional development for educators through the efforts of the DoE.
- Institutions preparing future educators need to include curriculum integration as a module.
- The DoE need to provide more specific guidelines and workshops which demonstrate practical examples of how curriculum integration could take place across the various learning areas.
- The DoE could also provide relevant resource material to help educators with curriculum integration.
- Schools need to source more quality textbooks that engage the principle of curriculum integration.

## **5.4 LIMITATIONS**

This was essentially a case study of one specific school in the province of KwaZulu-Natal. The concern of generalisability was not a central focus and therefore not a limiting factor in this research study. The quest was to gather

as much rich data as possible from the participants in this specific empirical site.

Being a researcher as well as inherently an integral part of the field could be construed as a limitation. This was overcome by allowing the participants the freedom to express themselves in an already established atmosphere of mutual trust and confidentiality. In order to ensure trustworthiness, I had to constantly adopt a reflective and reflexive approach to all data gathered from the empirical site.

## **5.5 POSSIBILITIES FOR FURTHER RESEARCH**

The findings of my research study point towards several possibilities for future research, such as:

- Why do educators who understand the complex nature of curriculum integration not apply it in their teaching?
- Why don't some educators not believe in the value of curriculum integration.

## **5.6 CONCLUSION**

This study focused on educators' perspectives on curriculum integration in the GET phase of schooling. It was also supported by an attempt to observe and gather as much rich data as possible from the empirical site on how curriculum integration took place. The research was in essence an ethnographic study of the situation in a single school in KwaZulu-Natal. The educators' responses revealed that there were multiple understandings of curriculum integration in the GET phase and that the present status of curriculum integration is highly artificial and contrived.

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ANNEXURE A: Consideration of Ethical Clearance



RESEARCH OFFICE (GOVAN MBEKI CENTRE)  
WESTVILLE CAMPUS  
TELEPHONE NO.: 031 – 2603587  
EMAIL : [ximbap@ukzn.ac.za](mailto:ximbap@ukzn.ac.za)

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05 FEBRUARY 2009

MR. H ALI (205522259)  
LANGUAGES, LITERACIES, DRAMA & MEDIA EDUCATION

Dear Mr. Ali

**ETHICAL CLEARANCE APPROVAL NUMBER: HSS/0023/09M**

I wish to confirm that ethical clearance has been approved for the following project:

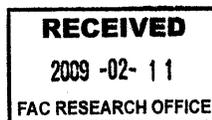
*"Curriculum integration in the get phase of education: A case study"*

PLEASE NOTE: Research data should be securely stored in the school/department for a period of 5 years

Yours faithfully

MS. PHUMELELE XIMBA

cc. Supervisor (Dr. SM Maistry)  
cc. Mr. D Buchler



Annexure B: Letter of application to the DoE to conduct research at school.

Box 56375  
Chatsworth  
4030

Student at UKZN: Edgewood.  
Student Number: 205522259

15 March 2008

Course of study: Masters in Education- Educational Technology.

ATT: Mr S.Alwar  
[sibusisoa@kznedu.kzntl.gov.za](mailto:sibusisoa@kznedu.kzntl.gov.za)

RE: LETTER OF APPLICATION FOR RESEARCH AT SCHOOL.

Sir

I am a Masters student at the above campus. My topic is:

TO EXPLORE EDUCATOR'S PERSPECTIVES OF CURRICULUM  
INTEGRATION IN THE FOUNDATION PHASE OF EDUCATION.

I need to carry out research at the following schools:

1. Shallcross Primary

Please grant me the necessary permission so that I can commence with my  
studies.

Thanking you most kindly.

Hassin Ali  
Cell: 084 5 786 0 92.

Annexure C: Letter of consent from DoE



PROVINCE OF KWAZULU-NATAL  
ISIFUNDAZWE SAKWAZULU-NATALI  
DEPARTMENT OF EDUCATION  
UMNYANGO WEMFUNDO

Tel: 033 341 8610  
Fax: 033 341 8612  
Private Bag X9137  
Pietermaritzburg  
3200  
228 Pietermaritz Street  
PIETERMARITZBURG

<b>INHLOKHOVISI</b>	<b>PIETERMARITZBURG</b>	<b>HEAD OFFICE</b>
<b>Imbuzo:</b>	<b>Reference:</b>	<b>Date:</b>
<b>Enquiries: Sibusiso Alwar</b>	<b>Inkomba: 0010/2009</b>	<b>Usuku: 19 February 2009</b>

**Mr. H. Ali**  
22 Canary Street  
Kharwastan  
4092

**RESEARCH PROPOSAL: CURRICULUM INTEGRATION IN THE GET PHASE OF  
EDUCATION: A CASE STUDY**

Your application to conduct the above-mentioned research in schools in the attached list has been approved subject to the following conditions:

1. Principals, educators and learners are under no obligation to assist you in your investigation.
2. Principals, educators, learners and schools should not be identifiable in any way from the results of the investigation.
3. You make all the arrangements concerning your investigation.
4. Educator programmes are not to be interrupted.
5. The investigation is to be conducted from 02 March 2009 to 02 March 2010.
6. Should you wish to extend the period of your survey at the school(s) please contact Mr Sibusiso Alwar at the contact numbers above.
7. A photocopy of this letter is submitted to the principal of the school where the intended research is to be conducted.
8. Your research will be limited to the schools submitted.
9. A brief summary of the content, findings and recommendations is provided to the Director: Resource Planning.

10. The Department receives a copy of the completed report/dissertation/thesis addressed to

The Director: Resource Planning  
Private Bag X9137  
Pietermaritzburg  
3200

We wish you success in your research.

Kind regards



---

R. Cassius Lubisi (PhD)  
Superintendent-General



---

R Cassius Lubisi, (PhD)  
Superintendent-General



PROVINCE OF KWAZULU-NATAL  
ISIFUNDAZWE SAKWAZULU-NATALI

DEPARTMENT OF EDUCATION  
UMNYANGO WEMFUNDO

Tel: 033 341 8610  
Fax: 033 341 8612  
Private Bag X9137  
Pietermaritzburg  
3200

228 Pietermaritz Street  
PIETERMARITZBURG

**INHLOKHOVISI**

**Imibuzo:**  
**Enquiries: Sibusiso Alwar**

**PIETERMARITZBURG**

**Reference:**  
**Inkomba: 0010/2009**

**HEAD OFFICE**

**Date:**  
**Usuku: 19 February 2009**

**Mr H Ali**  
**22 Canary Street**  
**Kharwastan**  
**4092**

#### **PERMISSION TO INTERVIEW LEARNERS AND EDUCATORS**

The above matter refers.

Permission is hereby granted to interview Departmental Officials, learners and educators in selected schools of the Province of KwaZulu-Natal subject to the following conditions:

- 1. You make all the arrangements concerning your interviews.**
- 2. Educators' and work programmes are not interrupted.**
- 3. Interviews are not conducted during the time of writing examinations in schools.**
- 4. Learners, educators, schools, and other Departmental Officials are not identifiable in any way from the results of the interviews.**
- 5. Your interviews are limited only to targeted schools.**
- 6. A brief summary of the interview content, findings and recommendations is provided to my office.**
- 7. A copy of this letter is submitted to District Managers and principals of schools or heads of section where the intended interviews are to be conducted.**

The KZN Department of education fully supports your commitment to research: **Curriculum Integration in the get phase of Education: A case study**

It is hoped that you will find the above in order.

Best Wishes

R Cassius Lubisi, (PhD)  
Superintendent-General



PROVINCE OF KWAZULU-NATAL  
ISIFUNDAZWE SAKWAZULU-NATALI

DEPARTMENT OF EDUCATION  
UMNYANGO WEMFUNDO

Tel: 033 341 8610  
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3200

228 Pietermaritz Street  
PIETERMARITZBURG

**INHLOKHOVISI**

**PIETERMARITZBURG**

**HEAD OFFICE**

**Imbuzo:**

**Reference:**

**Date:**

**Enquiries: Sibusiso Alwar**

**Inkomba: 0010/2009**

**Usuku: 19 February 2009**

**Mr. H. Ali  
22 Canary Street  
Kharwastan  
4092**

**LIST OF (DISTRICT) SCHOOLS**

1. Shallcross Primary School

Kind regards

**R Cassius Lubisi, (PhD)  
Superintendent-General**

Annexure D: Request to conduct research: To Principal of school

22 Canary Street  
Kharwastan  
4092  
28 October 2008

The Principal  
Mr R.M.Pillay  
Shallcross Primary School  
1 Demat Road  
Demat  
4092

Sir

**RE: A REQUEST TO CONDUCT RESEARCH**

I am a Masters student conducting a research project titled; "***CURRICULUM INTEGRATION IN THE GET PHASE OF EDUCATION: A case Study.***"

I kindly seek your permission to conduct my study at your school. I need to interview 4 educators and observe them teaching.

The purpose of this study is to explore educators' understanding and application of curriculum integration in the General Education and Training (GET) phase of education. This study will focus on educator's perspectives and experiences of curriculum integration in the school.

I intend to conduct interviews and observations with teachers. All interviews will be conducted during non-teaching periods or once the learners are dismissed. The duration of each interview will be approximately 30 minutes. The length of each

observation will also be approximately 30 minutes. The observation of selected educators will be done only during my non-teaching periods.

*Attached to this letter is a list of ethical issues I will take into a consideration with my participants:*

**Notes to the participants:**

1. There will be no financial benefits that participants may receive as part of their participation in this research project.
2. Your identity will not be divulged under any circumstance.
3. All the responses of educators will be treated with strict confidentiality.
4. Fictitious names will be used to represent participants' names (real names of the participants /institution will not be used throughout the research process).
5. Participation is voluntary; therefore participants are free to withdraw at any time without negative or undesirable consequences to them.
6. The participants will not be under any circumstances forced to disclose what they do not want to reveal.
7. Audio recording of interviews can only be done through the permission of the participant.

This study is supervised by **Dr. S.M.Maistry. Tel: (031) 260 3457, Email address: [maistry@ukzn.ac.za](mailto:maistry@ukzn.ac.za)**

I thank you so much for your time and assistance.

My Contacts: Cell: 084 5786 092 or (031) 4011145

Email addresses: [205522259@ukzn.ac.za](mailto:205522259@ukzn.ac.za)

I thank you most kindly.

Yours Sincerely  
H. Ali

Annexure E: Consent letter from participants

**INFORMED CONSENT DOCUMENT : (PARTICIPANT)**

XX Canary Street

Kharwastan

4092

28 October 2008

Dear \_\_\_\_\_ (name of educator)

XXX Primary School

1 Demat Road

Demat

4092

Madam / Sir

**RE: A REQUEST TO CONDUCT RESEARCH**

I am a Masters student conducting a research project titled; "***CURRICULUM INTEGRATION IN THE GET PHASE OF EDUCATION: A case Study.***"

I kindly seek your kind assistance and permission to conduct my research study at your school. I will need to interview you for approximately 30 minutes with regard to your perspectives on curriculum integration. Thereafter, I will need to observe you in action as you teach for approximately 30 minutes.

The interviews will take place during your non-teaching periods, breaks or once your learners are dismissed. The interview will be audio recorded if you consent to this.

The purpose of this study is to explore educators' understanding and application of curriculum integration in the General Education and Training (GET) phase of

education. This study will focus on educator’s perspectives and experiences of curriculum integration in the school.

***PLEASE TAKE NOTE THAT:***

There will be no financial benefits that participants may receive as part of their participation in this research project.

- Your identity will not be divulged under any circumstance.
- All your responses will be treated with strict confidentiality.
- Fictitious names will be used to represent your names.
- Participation is voluntary; therefore, you are free to withdraw at any time without negative or undesirable consequences.
- You will not be under any circumstances forced to disclose what you do not want to reveal.
- Audio recording of interviews can only be done through your kind permission.

This study is supervised by **Dr. S.M.Maistry. Tel: (031) 260 3457, Email address: [maistry@ukzn.ac.za](mailto:maistry@ukzn.ac.za)**

**I thank you in anticipation of your esteemed co-operation.**

My Contacts: Cell: 084 5786 092 or (031) 4011145

Email addresses: [205522259@ukzn.ac.za](mailto:205522259@ukzn.ac.za)

Yours Sincerely  
H. Ali

---

**DECLARATION**

**I..... (full name) hereby confirm that I understand the contents of this document and the nature of the research project, and, I consent to participating in the research project.**

**I understand that I am at liberty to withdraw from the project at any time, should I so desire.**

.....  
SIGNATURE of PARTICIPANT

.....  
DATE

Annexure F: Sample of pre and post interviews

Pre-Interview: Conducted before the Lesson Observation

1. Would you like to state your name or remain anonymous ?  
*I would like to remain anonymous*
2. Where did you study to be an educator ?  
*I first studied at the Springfield College of Education.*
- 2.1 What year was this ? in 1981
3. Why did you decide to be an educator ?  
*Basically it was the very best next thing*
- 3.1 To what ?  
*What I really wanted to be... was to attend Medical School, but there was no opening for us as Indians living in South Africa.*
- 3.2 Is this because of Apartheid ?  
*Yes, it was because of Apartheid in South Africa*
4. How long are you teaching for ?  
*This is my 24 year.*
5. Did you attend any OBE workshops ?  
*When OBE was first introduced to us, through the cascade model, it was the first time I attended, so that was all that I got to in terms of OBE workshops. They first came about with it and wanted us to implement.*
6. What is your understanding of the term “curriculum integration” CI ?  
*Well, from what we have learnt from the workshops, integration was trying to relate one learning area to another, and relate a given topic in two different learning areas...how you can look at it from different perspectives.*
- 6.1 Is that not the same as the thematic approach ?  
*Yes, you could look at it in that way, as a thematic approach,... we are looking at for example a topic like HIV, you can look at it from a science perspective, from a LO perspective, from an English perspective, from an economic perspective, so that you can integrate it to your different learning areas and get a better understanding of what you are teaching.*

6.2 So what are you integrating ? the concepts ...the content...

*The concepts as well as the content so that the learners as well will see that HIV is not, if you are talking to them about diseases in science, it is not only that, it is also about how we can explain to them how it affects them in the different aspects of their life.*

7. What sort of training, did you acquire with regard to curriculum integration?

*As we learn, there was no real training they just gave us a policy document to follow and we had to figure it out ourselves...and that was the kind of perception that I had...of what curriculum integration entails.*

8. How do you implement CI in your lesson plan ?

*Well...basically we see how it relates to another learning area although we put it down in the lesson plan, I find it actually quite... nonsense...because sometimes we are forced to integrate where there is really no integration*

9. How does your RNCS document help with your lesson prep. ?

*The document basically spells out your learning outcomes and the relevant assessment standards. They are quite clear....eh...but we have to actually ...when it comes to content material for certain aspects find what fits in where.*

10. Do you think CI is important as an educator ?

*I think that it is important but we must not try to force integration. In the Intermediate phase we have eight learning areas, ...sometimes these cannot be integrated into all but it can be integrated into some ... so I do not believe in forced integration ...when you can draw from other learning areas you can use that.*

11. What do you see as the educational value of CI ?

*It gives learners a wider perspective of the concepts taught and it also gives many educators a wider concept of what they are doing and could also have been something that they have done before, and we tend to teach in compartmentalized ways where we had certain disciplines and we kept the content matter within the discipline, we did not look further, so this is with learners and teachers.*

12. How would you explain CI to a group of parents ?

*Very much the way I have been explaining it to you, I will also like discuss it in a similar way.*

13. What learning areas are easier to integrate / difficult to integrate / WHY ?

*I found that SS, EMS and NS and the languages, especially English those tend to integrate well... Certain subjects like maths and science and technology integrate well but not like other areas*

14. What difficulties, if any, do you experience with CI and how do you think one should go about implementing CI?

*Like I said before we must not force integration but we have people from administration telling us why didn't you put the integrated areas, related areas in the lesson plan ...so I found that it was of no real value to the lesson,..so I didn't want to add that on ..that was the nuisance part I found ...but if it was definitely integrating then I most certainly would use it ...I don't like this top down approach where are told that it has to be done.*

15. What changes if any will you like to see ?

*I think that when our management looks at it , they first see if it is practical to use it in that context... we don't want to be told when to use it. We must use it as and when necessary*

## Sample of SEMI-STRUCTURED POST INTERVIEW

(after Lesson Observation).

1. What is your real understanding of CI ? How do you see what is CI ?

*My understanding of Integration is where you have different subjects, learning areas or courses that that are integrated ,as the concepts that you choose allows you to integrate right...so that's my explanation, and I can give you an example: a teacher teaches maths in class. He does not only teach maths but say bonds and tables, you bring in language in maths... right, you bring in technology into maths, and to move away from something so simple to something more academic...science in the School of Science and Education you will see is not just full of language... you don't only teach science, you are also teaching academic literacy within the science module, the content to the learners at the University , everything is integrated within the science module.*

2. Do you think CI is forced or contrived or does it come naturally ?

*I think if you have been schooled in an environment where you have developed your understanding of integration, for eg. If you have gone to a university where they had critical thinking in all the different paedagogy, so somehow you imbibe all of that rather than filled into your cranium and thrown out then you will be able to integrate it into your class.*

3. Do you feel that the DOE has done enough to support your understanding of CI ?

*Well on the surface it appears that they are doing so much ... all the paper work and all the jargon, I am actually going to be really out spoken here and you must actually follow me through. I see a lot happening, I see a lot of movement but from my own understanding and from my discussion with my colleagues at university, academics at university and fellow PHD students that do the kind of research that we do ... we are not sure that the people are all collaborating, people that are sitting on the Committees are even themselves aware of what Education is all about.. or are they taking information from different sectors in the educational sphere and they are putting things together... the actual teachers who are sitting on those panels we are not sure whether they have the necessary research skills, editing ability, to actually move with this integration .*

4. In terms of resources and implementing CI, how do you manage ?

*It is quite a task without resources, but as an innovative teacher I try, one of the things I succeed in is because I am a Language expert , well expert in inverted commas, but I have Literacy expertise and Language inclination ok, I use my verbal language a lot , I try to use the chalkboard as much as I can because we don't have other resources and I indicate to learners using*

*different objects when I take them out of the classroom and relate things and incidents to them that are current events and occurrences and that is how I manage.*

5. To what extent do you rely on textbooks for your lesson preparation ?

*The textbook is not actually the best resource, the kind of school that I am teaching in currently has become one of the resources that we use , we use things from the environment, we try to improvise and yah, that's how we manage.*

6. What do you see as the advantages / disadvantages of CI w.r.t. the learner?

*I don't think that CI has any disadvantages, the only disadvantage it could have is if the educator is unable to understand Integration and attempt to teach it. Then it becomes a kind of disadvantage because you are kind of not doing justice to integration and the child gets confused.*

7. How often do you use / refer to your RNCS documents W.R.T. CI ?

*RNCS documents we have been reading it for so long, so I know a lot that is the content there so I rely on it when I do my lesson preps I rely on it as and when I need it but the RNCS document is not my bible.*

8. What assistance have you got at the school level W.R.T. CI ?

*I think that at managerial level you are expected to operate optimally but I wouldn't say hundred percent in the different subject areas but with the*

*current management in our school and in most schools that I know of there is definitely a lack in their understanding to CI. Very often what happens is that we find people that people get to positions but they have not gone through a system of academia. They would need to be operating at that level.*

9. How has CI helped you as an educator ?

*I think that it has helped me in the sense that it has made me very eh very innovative, it has broadened my understanding of CI, I am not sure if I have mentioned this earlier, my academic background has helped me a lot, because coming from an undergraduate situation from a very young age, because of the kinds of theories that they teach you.*

10. So what do you perceive as ideal CI ?

*I would say that there is no ideal CI, because if something is ideal, after a while it becomes non-ideal, it loses its integrity, it loses its importance like theories. I can have a theory personally myself today, and tomorrow it can change it can introvert, it can expand, and also what can be ideal in one situation might not be ideal in another situation so there is no ideal theory but of course you have to work with something and maybe that becomes your ideal at that point.*

Annexure G: Sample of Lesson Observation

VIDEO RECORDING OF LESSON:

LEARNING AREA: Natural Science

TOPIC: Extreme Habitats

GRADE: 7

T: Just take out your science textbooks, you only need one per desk, you don't need

more than that, leave one on the table, does everyone have a textbook?

Leave one on the table

C: Yes

T: Open to page 18 of the textbook, leave it in the middle, you don't need to refer to it all the time, page 18... everyone got a textbook, right, just leave it at page 18, right, plants and animals that live in a specific habitat. You all know what are plants, you all know what are animals. Plants and animals are the two living things that we have on earth, right, we are going to discuss some of the plants and some of the animals that live in extreme habitat. What do we mean by extreme or what is a habitat? Where plants or animals live. Right. Will you call the zoo a habitat?

C: no

T: Yes, it is a habitat, but is it a natural habitat?

C: No

T: It is not a plant or animal's natural habitat

Now when plants and animals are found naturally in a habitat they will be living under the conditions of that particular habitat, now we are talking about extreme habitats

What do we mean by extreme habitats? Yes.. say it loudly

P: Inaudible response

T: It does not matter, you mean the correct habitat

Yes, but what do we mean by extreme?

If it is an extremely cold place, what do I mean by that? Is it just cold or is it very cold?

C: It is very cold

T: Right, it is very cold, so extreme habitats mean where it is either very cold or can it be extremely hot?

C: Yes

T: Yes it can be extremely hot  
So you have extreme cold and you have extreme heat  
And what type of habitat or environment is extreme cold?  
Yah  
Where will you find it very cold?

L: The Antarctic

T: Yes the Antarctic, think of your SS and you have done the different continents, isn't that so? And which of these are the coldest ?

C: The Antarctic

T: The Antarctic, the Antarctica ,the place is called Antarctica.  
And what did your'll learn about Antarctica, is it in the Southern Hemisphere or the Northern Hemisphere?

C: Southern Hemisphere

T: Right, in the Southern Hemisphere. In other words it is below the Equator which is the Southern Hemisphere. Above the Equator is the Northern Hemisphere.

And you find Antarctica to be the coldest part in the southern Hemisphere, right so. On knowing that any idea on what line of latitude it lies on? How many degrees? Anybody knows? Ok. You're going to find out. You can see that Antarctica the is the lowest part of the Southern Hemisphere where it is very cold, very very cold. Right, so where else will it be cold?

Where else will it be cold?

Anyone else know any other place where it is cold?  
In the world, we are talking about the world?

L: Cape Town

T: Cape Town is very cold, what can you tell me about Antarctica?  
You have the Arctic Circle and the Antarctic.  
This place is inhabited by some plants and animals  
We also have extreme heat  
Where are those places?

L: the desert

T: Right the desert. Now we have different deserts. Some we have are totally arid and some we have are semi-arid.

Semi-arid means partially dry and so are totally dry with no vegetation. Now the Antarctic is one of the coldest places on earth. Now if you go in winter to the Drakensberg or if you go to the Swiss Alps, it would be cold but the Antarctica is much colder and 6m of snow all the time, so you find snow there throughout the year, so animals and plants that live in the Antarctica have to be very well adapted for that environment

What do you mean by adapted ?

Where else will you hear of the word adapted or adaptation?

Which other animal we did and we said how is this animal adapted to its environment?

How are we adapted to our environment?

Think about how we breathe...so where do we live ? on land right on land and we breathe in air.

So are we living on water?

No. because are we adapted to live in water? No

Why? Why would you say we are not adapted to live in water?

L: We cannot breathe underwater

T: Yes because we cannot breathe underwater, and because all our other characteristics of living we cannot live underwater. When we go to the beach, we play in the water and then that is it, we come out of the water.

So we are adapted to live where?

C: On land

T: On land right we are adapted to live on land and in places where there is not extreme cold. Right. Which other animal can live in water? We get fish, right and how are fish adapted to live in water ? right they can breathe in water , right , what do they have? They have gills, right they have gills through which the water goes through and they have blood vessels which absorb the oxygen , also, what makes it easy for a fish to be in water?

L: It can swim through water

T: It can cut through water easily and does anyone remember what that special word is that describes the shape of the fish?

L: Streamlined

T: Very good, the fish is streamlined. So you find that the fish is streamlined, so you find it has gills .

What else allows the fish to live in water? Yes it has fins for swimming, right, right what else ? what is the body covered with?

C: Scales

T: Right scales. What can you tell me about the scales? It protects the body from water getting inside and it getting shriveled. When you stay in the bath tub for too long, what happens to your toes and fingers? It shrivels, right, so you find that does not happen to the fish, the fish is protected by the scales .

Now all of these characteristics, we will say are the adaptations of the fish, right now, what can you tell me about what kind of plants and animals can be found in a place like Antarctica, a place which is extremely cold?

L: Polar bear

T: Yah not in Antarctica, right we have birds,

L: Wolves

T: Wolves... what kind of wolves? You have seals, penguins, you can have other certain sea animals which live in water .

Do you know of any plants that may be found in the Antarctic?

Does anyone know what are moss? Things that grows on rocks things that slide, it is a plant and these kinds of things can survive in the cold, right, now we are going to talk about the penguin and how it is adapted to live in an extremely cold temperature. Now the penguin we are going to talk about is called the Emperor Penguin

Is called?

C: The Emperor Penguin

T: Right is called the Emperor Penguin. If you look at page 19, you will see that it is quite a big penguin. Some of you would have seen penguins either on TV or those of you who have been to Ushaka you would have seen the penguins, but those are the small penguins right, if you have been to Cape Town there also there is a place called Bolders along the coast there also there are a lot of penguins.

The Emperor penguin is the very big penguin that can grow up to a metre in height .

Aakash come stand in front, don't be shy. The penguin I think is the only bird that can stand upright, and how much do you weigh, any idea? The penguin can weigh about 30 kg and 1m tall, quite heavy, so that height and that wide, and you find that the penguin has to be adapted to live in very very cold weather extremely cold weather. If we had to go into such cold weather what will we have to do? We can go with a nice summer dress out there?

C: No

T: Tell me, what will we have to do? What will we have to wear? Jacket? Scarves what else? Ok

Tomorrow if the temperature drops here to 20 degrees how many of you will come dressed like how you are ?

C: Inaudible response followed by laughter

T: The rest of you will you come dressed? You will be wearing your jersey, some will be wearing double jersey in my class if the sun is not shining never mind , so you find that this is normal temperature. Can you imagine what kind of temperature we get there?

L: Zero

T: Yes who said zero? You are getting closer, it has to be freezing like inside your freezer so it will be like zero and much below zero yes minus degrees like up to minus 55 degrees celcius. I cannot imagine how cold that must be and imagine if you had to go live in a place like that, you need total insulation.

When they talk about global warming, did you hear about global warming? What do we mean by global warming? When they talk about global warming, they talk about the earth's temperature rising and places like the Antarctic, the snow begins to melt there, can you imagine a whole land that is snowed up completely, and the ice melts, what will happen to the sea? It will overflow and become flooded and coast areas will get flooded. So that is the effect of global warming.

*Teacher: Reads from text book p.18. Unlike those birds, what do other birds do when winter comes?*

L: They fly away

T: What do you call this process where the birds go away or fly away to a warmer place?

L: Hibernation

T: No, not hibernation, what is hibernation? Anybody knows? Hibernation is where the animal goes to sleep for the winter. But when the bird goes from one area to another, to a warmer climate, what do we call that? It starts with m. when we talk about people going from one place to another

L: Migration

T: Very good.

