

Understanding the ‘mixed ability’ program in Catholic secondary schools in Mauritius: Perceptions of educators for best practice in the middle years of schooling

Submitted by

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ABSTRACT

The mission of Catholic Education in Mauritius is to ‘humanise’ education and pedagogies to be consistent with Catholic values. The vision of a ‘humanised’ education explicitly teaches collaboration and cooperation. In January 2005, the Catholic Education Bureau (BEC) opted for a ‘mixed ability’ philosophy whose articulation fosters inclusiveness in all Catholic secondary schools. To achieve this, schools need to re-invent and restructure themselves into learning organisations to make obvious the ‘mixed ability’ philosophy at the middle level of schooling from Form I to Form III.

The first purpose of this study is to explore an integral model for an effective education for Catholic secondary schools in Mauritius that acknowledges diversity in the classroom particularly in Form I. The second purpose is to investigate the beliefs and understandings of educators in Catholic secondary education in Mauritius of this model. For the first purpose, a review of the literature was undertaken to understand the concepts of middle schooling, differentiation, learning theories and implications for practice, the enabling structures for Catholic secondary schools to develop into learning communities and the leadership role of key actors. For the second purpose, the perceptions of educators were investigated using a predominantly qualitative, interpretative methodology around an instrumental multi-site case study.

The study found a number of challenges faced by Catholic educators in Mauritius regarding the implementation of the integral model. These challenges present a new direction for these schools to focus on the human person, leading to the development and implementation of the ‘mixed ability’ program. The study concluded with a cogent set of recommendations and directions which need to be put in place in order to improve student learning outcomes at the middle level of schooling and achieve the vision of a human-centered education within the espoused Catholic mission.

DECLARATION

This is to certify that

- (i) This thesis contains no material published elsewhere or extracted elsewhere in whole or in part from a thesis by which I have qualified for or been awarded another degree or diploma
- (ii) No other person's work has been used without due acknowledgement in the main text of the thesis
- (iii) This thesis has not been submitted for the award of any degree or diploma in any other tertiary institution
- (iv) All research procedures reported in the thesis received the approval of the relevant Ethics/Safety Committee (where required)

Kathleen Dauguet
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I'M SPECIAL

I'm special. In all the world there is nobody like me.

Since the beginning of time, there has never been another person like me.

Nobody has my smile. Nobody has my eyes, my nose, my hair, my hands, my voice.

I'm special.

No one can be found that has my handwriting.

Nobody anywhere has my tastes – for food or music or art. No one sees things just as I do.

In all of time there has been no one who laughs like me, no one who cries like me.

And what makes me laugh and cry will never provoke identical laughter
and tears from anybody else, ever.

No one reacts to any situation just as I would react. I'm special.

I'm the one in all of creation who has my set of abilities.

Oh, there will always be somebody who is better at one of the things I'm good at, but no one in the universe can reach the quality of my combinations of talents, ideas, abilities and feelings.

Like a room full of musical instruments, some may excel alone, but none can match the symphony sound when all are played together.

I'm special. I'm rare.

And, as in all rarity, there is great value.

Because of my great rare value, I need not attempt to imitate others.

I will accept – yes, celebrate my differences.

I'm special. And I'm beginning to realise it's no accident that I'm special.

I'm beginning to see that God made me special for a very special purpose. He must have a job for me that no one else can do as well as I.

Out of all the billions of applicants, only one is qualified,
only one has the right combination of what it takes.

That one is me.

Because..... I'm special.

Thom Schultz (no date)

CHAPTER 1

INTRODUCTION TO THE STUDY

*“Leading the way: to go where there is no way and to leave a path”
(Chittister, 2001)*

The Journey Starts

In January 2005, a new journey began for Catholic secondary schools in Mauritius. The Bureau of Catholic Education (Bureau de l'Education Catholique or BEC) sought to articulate the so-called 'mixed ability' philosophy at the lower secondary level in all Catholic secondary schools, following decisions for new criteria of entry for students in Form I (Year 7). Based on a comprehensive review of the literature and recognised key concepts underpinning an effective and relevant model for best practice in the middle years of schooling, this study examines a range of factors that support or impede the 'mixed ability' concept being successfully implemented in Catholic secondary schools in Mauritius. In particular the study focuses on the understandings, attitudes and needs of the key actors - leaders and other educators - in the translation of the 'mixed ability' philosophy. The journey, still at its early stages, is establishing a new ecology of schooling at the middle school level from Form I to Form III (Year 7 – Year 9).

My Personal Journey

As a teacher and former head of French department of a Catholic secondary school in Mauritius, I am highly interested in this new orientation which I believe can initiate positive directions for teaching and learning in our current educational system.

Looking back on my personal journey, I can sincerely admit that I was born with a teaching vocation. As a young girl, I was always playing the teacher with my brother and cousins and as students, they would always ask for my help if they were having problems with their homework. This is how I started my “teaching career” and found it exciting. Out of generosity towards another human being, I was able to impart the little knowledge that I possessed to someone in need, and enjoyed finding ways and means to engage that person. In this way, I associate teaching with service. During my final year at secondary school, my extra-curricular activity consisted of giving free afternoon remedial classes to underprivileged students and a Religion class in a Port Louis college. Teaching for me is the art of giving freely with joy, passion and commitment and the passion for teaching is a most precious gift I received from my teachers at primary and secondary schools.

My teachers taught me not only to learn but most importantly they have made everything that I did and do possible. They were above all, devoted teachers and role models. They inspired not only hard work and achievement but they were able to communicate their enthusiasm for teaching. I still have memories of how I looked at my teachers in awe, with admiration and with respect, and became impatient to be in front of a class myself. Two other persons touched my life when I was young. My devoted aunt was always spending the afternoon teaching me the alphabet, numerals, and how to write and read. She was not highly educated but she had a vision for my future. My godfather was a self-taught person and I always admired him for being a brilliant man, who read and wrote a lot in beautiful handwriting. The Loreto Sisters also encouraged me in my studies and my interest for teaching and pedagogy.

I was educated in Catholic schools both at primary and secondary levels. The two schools, Notre Dame de Lorette and Loreto College Port Louis are both long-established girls' schools and during my time as a pupil and a student, the headmistresses were Loreto Sisters. From very young, I heard about the story and charism of Mary Ward (1585-1645), the 17th century foundress of the Loreto Institute. The two schools are very close to St. Louis Cathedral and L'Evêché, the Bishop's House. I was very proud to go to these two schools which were among the best schools in Mauritius and at the same time I was spending my school days in a location of the capital city that was at the heart of Christianity in Mauritius. My education has been deeply rooted in Catholic values and the Loreto spirit. I knew I belonged to the Loreto community and was nurtured by the educational and Catholic surroundings in which I was located. I also knew that one day I would teach in a Catholic school. But the dream was to teach as a French teacher in my secondary school, Loreto College Port Louis, (LCPL). I consider this school as my home. I have always felt a deep call for LCPL and I believe that this school is not the oldest school in Mauritius school for no reason. I believe, as Chittister (2001) puts it, that this school has the mission of leading the way where there is no path.

LCPL was the first secondary school opened on the island in 1846 with educational ideals based firmly on the life and work of Mary Ward, the founder of the Loreto Institute. After eight years as a student at LCPL, I began my studies to qualify as a primary school teacher, even though I preferred to be a secondary school teacher. But I was still clinging to my dream and during my Teacher's Certificate studies, I had the opportunity to start a three-year Modern Languages Degree which was offered off-shore by a French University. I graduated in both the Teacher's Certificate and the Modern

Languages Degree one year apart and began teaching in a Catholic Primary school. After that, while I was working as French teacher in a Catholic boys' school, a position became vacant at LCPL for which I successfully applied. The dream was fulfilled. A few years later I was appointed head of the French department and I felt that I had to find innovative ways for the teaching of French if I wanted to keep the fire burning.

The symbol of the fire is very important in the culture of Loreto schools. In the footsteps of Mary Ward, Frances Teresa Ball (1794-1861) set the mission for the Loreto sisters to "go and set the world on fire with the love of God." Teachers and students of Loreto schools are constantly reminded of the mission and vision. I was deeply moved by a short story which the rector (the appellation for principal in Mauritius) at LCPL used as introduction for a staff meeting one day. The "keeper of the fire" is a story about a tribal symbol in Kenyan culture which strongly personifies school reality. As I remember it she told us:

In Kenyan tribal culture, in the compound of the extended family, it is always one person's duty to be the keeper of fire, so that the fire will never go out and the food is always kept hot ready for serving. For me the fire represents the vision and values which must be kept constantly alight in the hearts of both students and parents. If the fire goes out then "the people without a vision perish." (author unknown)

The burning fire makes any dream possible. My dream is to be a keeper of the fire for Loreto schools and Catholic education in Mauritius, to continue what Mary Ward and later the Loreto Sisters in Mauritius started and to make Loreto schools and Catholic secondary schools in Mauritius respond to the educational needs of our youth.

The passion for teaching which I might have been born with has been sustained by the Loreto spirit. As a Loreto teacher, I have tried to live by the educational ideals of Mary Ward, to be "constant, efficacious and loving" in my vocation. Like every teacher, I

would ask myself how I would want my students to remember me. I knew I wanted to make a difference by high standards of teaching and by touching both the intellect and soul of my students. But I also realised that I had to give meaning to my work and affirm myself as an educator if I also wanted to overcome the syndrome of mid-career lack of motivation. I had to find ways to stay in love with what I was doing. Professional Learning for teachers is not in our culture in Mauritius. But I always kept studying and the Post Graduate Certificate of Education (PGCE) and the Master in Educational Leadership were opportunities for me to become a learner myself, to learn to be a better teacher, to reflect and to take action. As head of department I always wanted to research a new teaching program at the lower secondary. This was because of my previous primary teaching experience and my deep concerns about the needs of our students at lower secondary after often traumatic learning experiences in the Mauritian primary schooling system.

The Master in Educational Leadership has marked a cross-road in my personal journey. I was able to discern that while I enjoyed teaching French and French Literature, I enjoyed also the art of searching and writing. It was a tremendous opportunity to reach towards something new, to keep an eye on the future linked to imagination. This is why I found myself leaving Mauritius to move to Australia with my family to be able to enrol in the Degree of Doctor of Education. Settling in Australia was hard and I had to adapt to a different system of education, and to the Victorian Essential Learning Standards (VELS) curriculum which was being implemented. But it was a fantastic experience in comparative education. However there was a price to pay in my thirst for learning. I lost my beloved aunt, my first educator, two months after my arrival in Australia and my

beloved father in October 2006 and I have the painful memory of my data collection in Mauritian schools coinciding with his last days. He passed away in Mauritius, 12 days after I had left the country for Australia and I was not able to go back for his funeral. This deep sadness that I felt gave me pause to reflect on what was driving me to continue with this project. I found I had to cling to my dream because of this deep bond that I have with LCPL, the Loreto Institute and Catholic Education in Mauritius.

After this part of chapter 1 which sets the scene for my work through my personal journey, I shall next describe the context of my research.

Research Context

Mauritius

A former British colony, Mauritius is an island of 2040 square kilometers in the Indian Ocean which became independent in 1968 and has been a Republic since 1992. The population of about 1,200,000 is multi-racial, descendants of early settlers from Europe, Asia, China and Africa. English and French are the European languages in use in the island. Other languages are the Asian languages, Hindi, Tamil, Urdu, Arabic, Mandarin, Marathi, Telegu and Bhojpuri, while Mauritian Creole is the widely spoken language of “the street”. Mauritian Creole derives mainly from French, although more than 150 words are derived from English, more than 50 from Indian languages, and several from Malagasy and Chinese.

Geared towards a market economy, Mauritius has witnessed significant economic development and the economy now needs a skilled and productive workforce to continue this development in the context of the globalised world.

Thus, the future of Mauritius depends on the knowledge, skills, versatility and educability of its human resource which is essentially its only source of ongoing capital for economic prosperity (Ministry of Education & Scientific Research, 1997). The global economy exerts a pressure for future human capital to be problem solvers, critical, creative and lateral thinkers (BEC, 2005). The National Human Resources Development Plan (2006) has made a number of recommendations to promote a more critical approach to education. If people are the most valuable asset in Mauritius, education needs to play a key role and significant curriculum and structural reform are necessary in Mauritius.

Education in Mauritius: Traditional and Competitive

Education in Mauritius is compulsory from the age of 5 to 16 and is free since 1977 for public, Confessional (Catholic, Anglican, Hindu, Muslim) and private non-fee paying primary and secondary schools. The educational system bears the influence of British education and has a long tradition of being an elitist system with a culture of fierce competition, surface learning, summative assessment and high expectations of performance both at the primary level and secondary level. The Mauritian education system is further elaborated in chapter 2.

Human Centered Vision and ‘Mixed Ability’ in Catholic Secondary schools

The ‘mixed ability’ program is still at its early stages in all Catholic secondary schools and is an attempt at decreasing the burden of a highly competitive system which is in conflict with the human-centred vision and mission of Catholic schools. The mission of Catholic schools in Mauritius and the so-called ‘mixed ability’ philosophy are further described in chapter 2.

The research context is an examination of the ‘mixed ability’ program, an educational paradigm shift essentially new to Mauritius. It has been proposed by one of the partners in education in Mauritius, the Catholic sector. However it appears to be facing many challenges in its implementation and these challenges form one of the bases of this study. The following section discusses the research problem.

Research Problem and Research Questions

The research problem first looks at the integral model that underpins the ‘mixed ability’ program, based on the key principles that have emerged from a search of the International body of literature pertaining to best teaching practice of diverse learners at the middle level of schooling. The research then focuses on the perspectives and views of educators and leaders in Catholic education in Mauritius towards the new ‘mixed ability’ orientation of Catholic secondary schools that they have been charged with implementing, recognising that the new direction may herald difficult and turbulent times as teachers face the new and mounting challenge of designing meaningful and engaging learning opportunities for all students. The recognition that in a diverse classroom,

students bring different backgrounds and cultures to the classroom is the first step for the development of dynamic opportunities to enrich the learning experiences of all students.

In order to sustain the teaching profession in this paradigm shift, the following questions arise:

- How can the teaching of diverse learners become central to professional practice of teachers?
- What changes need to be made within the classroom and at school level for best practice?
- How will the school develop as a learning organisation in order to engage teachers in continuous learning?
- What will teachers and students learn for the most authentic results?
When? How?
- What educational objectives can be achieved through curriculum-based projects that allow for thinking and considerable differentiation?
- How will leadership in schools and at the BEC support these changes?

These preliminary questions about an effective education at the middle years of schooling that aims to improve current practice guided the development of the research questions for this study. As Punch (2000) puts it, research questions “direct empirical procedures, and they are the questions which are actually answered in the research” (p. 34). Based on an extensive literature review on best practice in middle years schooling that acknowledges diverse learners in the classroom, I wish to understand what supports or impinges upon the ‘mixed ability’ concept being successfully implemented in Catholic secondary schools in Mauritius.

Therefore the first research question is:

1. What are the characteristics of an integral model of education that will address diverse learners in the classroom?

Next I wanted to examine issues of theory into practice. While it may be possible to provide a model for effective ‘mixed ability’ education, it is only as successful as those who are charged with its implementation, wish to make it. Therefore I next sought to examine the perceptions of teachers, heads of department, rectors, school managers and the BEC of the integral model for ‘mixed ability’ teaching at the middle level of schooling in Catholic secondary schools in Mauritius.

The second research question is thus:

2. What are the perceptions of teachers, heads of department, rectors, school managers and the BEC of this integral model of education for ‘mixed ability’ teaching at the middle level of schooling in Catholic secondary schools in Mauritius?

For a clearer understanding of the second research question, it has been broken down into specific parts:

- 2a What is the understanding of the key actors, teachers, heads of department, rectors, school managers and Catholic leaders of the integral model of education, as discussed in the first question?
- 2b What do the key actors understand by the ‘mixed ability’ philosophy? What factors are assisting or impeding the effective articulation of the ‘mixed ability’ philosophy in Mauritian Catholic secondary schools?

- 2c To what extent are teachers empowered through effective professional learning programs to meet the exigencies of ‘mixed ability’ teaching?
- 2d To what extent are school structures flexible to meet the requirements of mixed ability teaching?

Finally, based on the answers of the research questions framed above, I wanted to provide a range of possible actions to be taken and I framed a third research question:

- 3. What recommendations can the study provide to enable transitions towards best practice within this integral model of education?

The research questions having been formulated for my study to answer, I shall look at the purpose and significance of this investigation.

Purpose and Significance of the Research

Purpose of the Research

The first purpose of this study is to explore the integral model of education that acknowledges diversity in the classroom and each learner’s individual needs in the middle years of schooling, particularly in Form I (Year 7) in Catholic secondary schools in Mauritius. In Mauritius this is called ‘mixed ability’ education, though it is perhaps better known as differentiation. This exploration draws from research in the areas of new pedagogical models and practices, particularly in the fields of the middle years, differentiation, constructivist perspectives on learning, assessment, school organisation for learning and leadership in times of change. The aim is to identify and articulate

diverse pathways through different learning programs that account for different and individual interests, abilities and learning styles.

The second purpose is to investigate the beliefs and understandings of educators (teachers, heads of department, rectors, managers and leaders) who are charged with implementing the integral model. Differentiation conceived as mainstream teaching challenges the notion of schooling currently in place in Mauritius that suggests that students should be taught in a “one-size-fits-all” approach. Educators in Catholic secondary schools in Mauritius have embarked on a journey which is ongoing in their mission of ensuring an integral development of students through the recognition and celebration of their individual talents and differences.

Significance of the Research

Catholic Education and National Level

This study aims to make a substantial contribution to the challenging journey of Catholic secondary schools in Mauritius in the move from a traditional teacher-centered, streamed approach to education to one that is more learner-focused and caters for diverse learners. It does so by providing a theorised integral model appropriate for Mauritius as well as providing some early research data on key actors’ perceptions of the model as they attempt to implement aspects of it.

This thesis is the first to explore and assess the articulation of the ‘mixed ability’ philosophy in the reality of Catholic secondary schools in Mauritius. It will be of significant value to Catholic education in assisting it to continue to make a difference to students’ lives. It will be of value to the whole secondary sector as it challenges the

traditional approach to curriculum design, pedagogy and assessment. It will also be an inspiration for a new education at primary level. My research is timely in the particular context of change not only in Catholic secondary schools but also at the national level with the proposed reforms by the Ministry of Education in 2006 yet to be implemented in the next three years. It is a significant response to diversity in its focus on a new learning culture that departs from

A type of encyclopaedic education practiced in oversized classes promoting chalk and talk types of teacher-pupil relationship to the detriment of real class teacher leadership, character building, personality development, critical thinking and knowledge acquisition (Ministry of Education & Scientific Research, Republic of Mauritius, 1991, p. 8).

Each student is special

Marsh (2004) believes that each person has a learning style as individual as a signature. Each student is unique, is special and that there are many ways to be intelligent (Gardner, 1993; McGrath & Noble, 2005). A low performer in the Mauritian Certificate of Primary Education (CPE) can be as equally intelligent as a high academic achiever but perhaps in different ways. After the trauma of a highly competitive primary schooling, young students should be given a second chance at another turning point in their life when they get into secondary schools. Students should not need to see themselves branded by arbitrary examinations results and live up to the expectations educators and parents have of them whether high or low, and perform accordingly. Teaching approaches should change accordingly to address the learner's individuality.

The teacher

There is the need to dispel two myths about teaching, that is good teaching follows naturally from subject mastery and a good teacher can teach anything at all (Smith & Lovat, 2003). My research fulfils this need. It is significant as its focus is the new paradigm of teaching with differentiated learning at the centre of the professional practice of teachers.

My Role

This study aspires to be a creative contribution to knowledge about practice and for practice, and will inform my own work as teacher and pedagogue. I wish to be able to relieve pressure on teachers and instead make teaching of diverse learners in the classroom, passionate, challenging and rewarding. I wish to share my experiences with teachers, heads of department and rectors and encourage professional dialogue and innovation in educational practices. We can all journey in a team spirit and make the school a learning community.

Searching the Literature

Four main sections that underpin the new paradigm have been identified from my literature search. They are:

1. Middle Schooling and Differentiation.
2. Key Concepts of Learning, Pedagogies and Assessment.
3. School Organisation for Learning.
4. Leadership.

I have searched the literature on middle schooling as my study focuses on the young adolescents' needs. The concept of differentiation discusses the relevance of both terms 'mixed ability' and diversity in education and highlights the individual needs of diverse students in the classroom. The key concepts of learning, pedagogies and assessment discuss the literature on a broad view of effective, engaged learning and the vehicles for such learning. I also searched the literature on enabling school operations and structures and the professional learning of teachers for the school organisation for learning, a framework without which effective learning is not possible. Finally, I discuss the role of leadership in relation to educational change and leadership for differentiation.

A Note on Language

As mentioned earlier, there are a number of languages spoken in Mauritius. Most people use Creole to communicate, but the language of school instruction is English. This factor alone makes education a frustrating and indeed impossible task for many children, particularly those from low socio-economic backgrounds who do not have access to English. At present the BEC is examining the language issue and considering introducing Creole as from 2010, in Catholic primary schools in the early years of schooling (the first three years). This is of course a fraught, complex and contested issue but is beyond the scope of this thesis to discuss further. However I recognise that it remains a key issue in Mauritian education that still needs to be addressed. For a full discussion on the role of Mauritian Creole and barriers to learning, see Boswell (2006).

Definitions of Terms and Key Concepts

For the benefit of the reader I define the following terms and concepts:

- **Mixed ability:** an inclusive classroom that embraces students of diverse needs and learning styles who learn together and from each other, regardless of their abilities, capacities, backgrounds and experiences (Mc Grath & Noble, 2005). It is a contested term which will be further discussed in chapter 2.
- **Middle years of schooling:** In the two-tier educational system in Mauritius, this study will focus on the three first years at Secondary level, that is from Form I (F I) to Form III (F III). Students move from primary schools to secondary schools and start in F I. The age range for these three years is usually from 12 to 14 years.
- **Manager:** The person registered under the Mauritian Education Act (1957) to manage a school (i.e. a private secondary school) and should conduct correspondence with educational bodies. The manager must run the school efficiently in accordance with existing laws and regulations and should not hold concurrently the functions of a manager while performing the duties of a rector.
- **Rector:** Generally responsible for the internal organisation, administration, supervision and control of the school and the effective dispensation of education to the students in the school. The rector's position is equivalent to that of an Australian school principal.

- Head of department: Responsible of the planning and coordination of a particular subject area in the school.
- CPE: Certificate of Primary Education administered by the Mauritius Examinations Syndicate for National examinations at the end of primary schooling.
- SC: School Certificate, delivered by an external body, the University of Cambridge Local Examinations Syndicate, UK for National examinations at the fifth level of secondary schooling, known as Form V.
- HSC: Higher School Certificate, delivered by an external body, the University of Cambridge Local Examinations Syndicate, UK for National examinations at the end of secondary schooling, known as Form VI² or Form VI Upper.

Site of the Research

The site of this research is three Catholic secondary schools in the Diocese of Port- Louis in Mauritius. Each of them has been given a pseudonym. The three schools are:

- Ste Therese
- Ste Claire
- Ste Bernadette

Both Ste Therese and Ste Claire are girls' schools under the same management, the Loreto Institute. Ste Therese has been chosen as a good example of a "star" girls' school with a long tradition of academic excellence; Ste Claire is a small girls' school

where teachers have always worked with low achievers in the CPE; Ste Bernadette is a Diocesan boys' school under a different Management which is the BEC and is also another school with the reputation of academic success. There were also teacher-participants from other Catholic secondary schools as they wished to manifest their interest in the 'mixed ability' project.

Research Framework: Epistemology, Methodology and Methods

I have opted for a qualitative research design as my study explores the understandings and experiences of teachers, heads of department, rectors, managers and Catholic leaders in best practices at middle school level that focus on diverse learners in the classroom. The qualitative approach will "make sense of, or interpret, phenomena in terms of the meanings people bring to them" (Denzin & Lincoln, 1994, p. 2). There is also the assumption that the numerous avenues of data collection will provide a collection of rich and varied materials to explore lived experiences in-depth.

The study adopts the epistemology of constructionism (Denzin & Lincoln, 2000; Gough, 2002) which sees reality as socially constructed through human interaction with the world (Crotty, 1998). An interpretivist perspective is the philosophical stance which is consistent with constructionism as I am interpreting how people create meaningful ideas, relationships, symbols and roles in their daily lives (Neuman, 2006).

Three perspectives are adopted from the interpretivist approach:

- Hermeneutical phenomenology as I am interpreting the daily life experiences of participants (Sarakantos, 2005).

- Critical hermeneutics and critical enlightenment as I am researching in a context of education where power is dominant (Kincheloe & McLaren, 2000).
- Symbolic interactionism as ‘an approach to understanding and explaining society and the human world’ (Crotty, 1998, p.3).

The instrumental multi-site case study methodology will give insight into an issue or will pull out a generalisation (Stake, 2000; Marshall & Rossman, 2006). The actual details of the case of each school participating in the research are of minor interest. I am mostly interested in the analysis generated for Catholic education at large in Mauritius. A range of different data collecting methods such as questionnaires, PMI sheets (Positive, Minus, Interesting), after de Bono (1992), focus groups and interviews are utilised.

Structure of the Thesis

My sense of belonging to my school and to Catholic Education in Mauritius has strongly influenced me in choosing the first person to write this thesis. Using the first person shows my personal investment in this research, and that I am not distanced from the researched as in a positivist study (Sarakantos, 2005).

Through an understanding of the ‘mixed ability’ program in Catholic secondary schools in Mauritius, this study intends to respond to the individual needs of diverse learners in the classroom. In chapter 1, I have demonstrated through my personal journey how I am committed to the Loreto spirit and Catholic education in Mauritius and how I believe in professional learning. I described the context of the research and both the

research problem and questions have been articulated. The two purposes of the study have been expressed. The first purpose is to investigate an integral model for a successful differentiated education in Forms I to III in Catholic secondary schools in Mauritius. The second purpose is to explore beliefs and understandings of teachers, heads of department, rectors, managers and Catholic leaders in Catholic secondary education in Mauritius of the integral model. From my literature search, I identified four main areas supported by a broad consensus for best practice for education in the 21st century. Terms and key concepts have been defined as well as the specific sites of the research communicated. I briefly described the epistemology, methodology and methods that I used to generate data.

Chapter 2 provides a situational analysis of Catholic education in Mauritius and the Mauritian education system evidenced mainly from Mauritian documents (Government and Catholic Education systems).

Chapter 3 presents a review of the broad International literature on education relevant to the four main areas which are:

1. Middle Schooling and Differentiation.
2. Key Concepts of Learning, Pedagogies and Assessment.
3. School Organisation for Learning.
4. Leadership.

The best practice model, derived from the agreed characteristics of best practice around the world addresses the first research question:

1. What are the characteristics of an integral model of education that will address diverse learners in the classroom?

In chapter 4, I describe the research framework which I use to investigate my research questions and I explain my choices of a qualitative approach through the epistemology of constructionism and the theoretical perspectives of hermeneutical phenomenology, critical hermeneutics and critical enlightenment and social interactionism. I explain the reasons for adopting the instrumental multi-site case study methodology and the methods for data collection. Text analysis (Sarakantos, 2005) and theme analysis (van Manen, 1990) procedures are used to interpret data from the responses and to answer the next research questions. I also discuss the validity, ethical issues and limitations of my study.

Chapter 5 presents the analysis of the data generated by the different methods that address the second research question:

2. What are the perceptions of teachers, heads of department, rectors, school managers and the BEC of the integral model of education for ‘mixed ability’ teaching at the middle level of schooling in Catholic secondary schools in Mauritius?

and the following sub-research questions:

- 2a What is the understanding of the key actors, teachers, heads of department, rectors, school managers and Catholic leaders of the integral model of education, as discussed in the first question?
- 2b What do the key actors understand by the ‘mixed ability’ philosophy? What factors are assisting or impeding the effective articulation of the ‘mixed ability’ philosophy in Mauritian Catholic secondary schools?

- 2c To what extent are teachers empowered through effective professional learning programs to meet the exigencies of ‘mixed ability’ teaching?
- 2d To what extent are school structures flexible to meet the requirements of mixed ability teaching?

In chapter 6, I answer the second and third research questions:

- 2. What are the perceptions of teachers, heads of department, rectors, school managers and the BEC of the integral model of education for ‘mixed ability’ teaching at the middle level of schooling in Catholic secondary schools in Mauritius?
- 3. What recommendations can the study provide to enable transitions towards best practice within this integral model of education?

I draw conclusions and make recommendations for this study to enable transitions towards best practice within this integral model of education.

The journey now moves to chapter 2 where I present the situational context for the study, Catholic education in Mauritius and the prevailing system of education in the island nation.

CHAPTER 2

CATHOLIC EDUCATION AND THE EDUCATION SYSTEM IN MAURITIUS

“We need a sound Education System. A system that does away with cut-throat competition, destruction of self-esteem, intellectual segregation, parochial learning and memorisation, and narrowed vision.” (Pillay, 1998).

In chapter 1, I indicated the context of my research, educational change in Catholic secondary schools in Mauritius. I provided a brief socio-economic description of the island and I mentioned the traditional system of education which prevails. Chapter 2 is the second phase of the journey and focuses on a situational analysis to provide a broader picture of the Mauritian education system in general and the Catholic educational system in particular.

I will start by discussing the Mauritian education system which provides the background context for this study.

The Mauritian System of Education: A Synopsis

An overview of the structure and organisation of the education system in Mauritius is presented below (Figure 2.1).

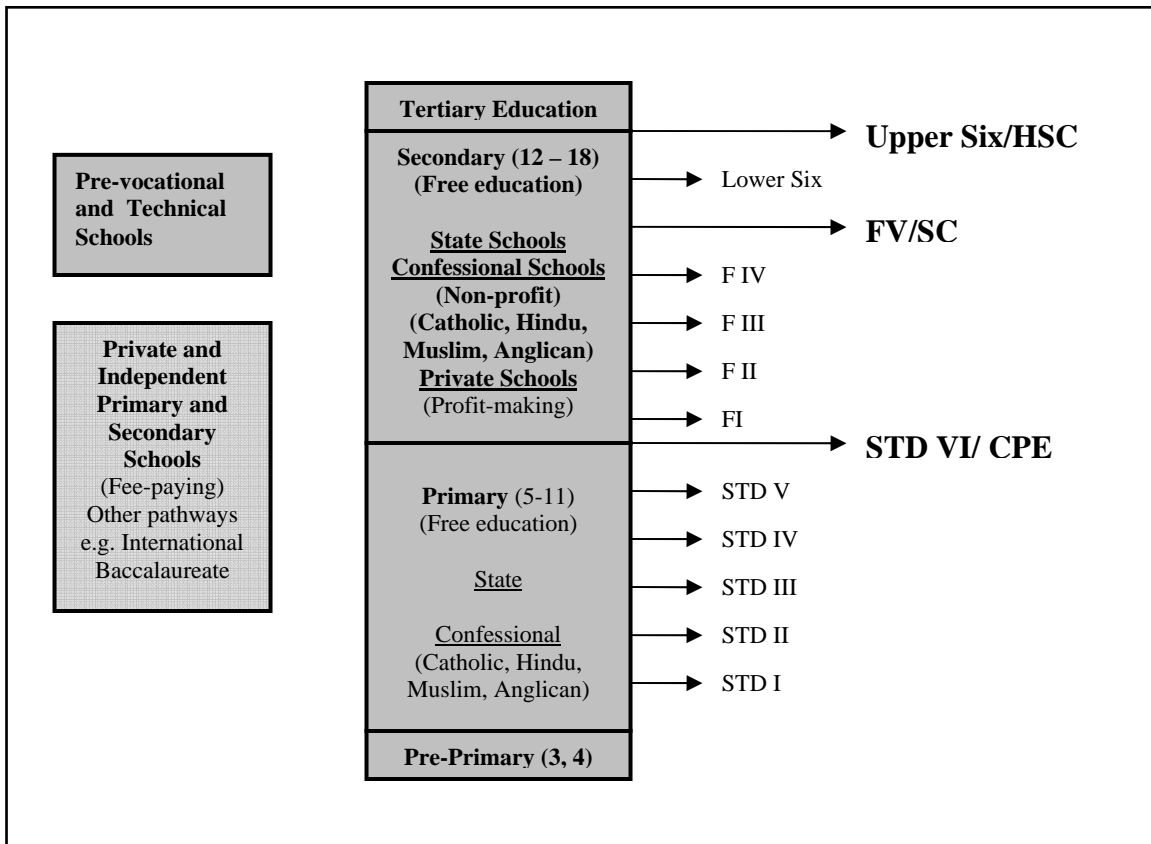


Figure 2.1. *Structure and Organisation of the Education System in Mauritius.*

The Mauritian system of education is a two-tiered one with a primary and secondary level as pre-primary is not compulsory. English is the medium of instruction and compulsory at both primary and secondary levels. Both French and Asian languages are taught. French is compulsory at primary and secondary levels up to Form V (Year 10) whereas Asian languages are electives. There are three National examinations, the CPE, SC and HSC which have been defined in chapter 1.

Education at primary level in Mauritius is largely dominated by the CPE. The CPE was introduced in 1980 to serve a dual function, certification and selection for admission to secondary colleges. The CPE ranking became a determining factor for

candidates to be enrolled in secondary schools and a direct consequence was the emergence of “star” schools, that is, the best schools academically and the less well-performing ones, both in the primary and secondary sectors. In 2001, the ranking system was abolished and replaced by a grading system, designed to ease the pressure on pupils as it was implemented with a comprehensive strategy which involved regionalisation of admission in secondary schools, construction of new state secondary schools and transformation of “star” state secondary schools into Form VI colleges. The 2001 grading system has now been replaced by the 2006 grading system which is currently in use and explained below in Table 2.1.

Table 2.1

Existing Alphabetical Grade System of the CPE

Grade	Units	Marks
A+	6	90 and above
A	5	75 and above but less than 90
B	4	60 and above but less than 75
C	3	50 and above but less than 60
D	2	40 and above but less than 50
E	1	30 and above but less than 40
U	-	Below 30

Ministry of Education and Human resources, 2006

The CPE Overall Grade Aggregate is calculated from the sum of units obtained by a candidate in the four best examinable subjects out of Mathematics, English, French, Science, History/Geography and Asian Languages (Ministry of Education & Scientific Research, 2006a). The CPE Overall Grade Aggregate is the first criterion for access to Catholic secondary schools.

The 2006 grading system was proposed by the then new government in the context of the development of a so-called world class education for Mauritius. It was believed that the system of education had to also consider the best CPE performers and therefore the 1,260 top performers at the CPE would be enrolled as from January 2007 in nine national colleges, all of them state secondary colleges. Currently, there are indications that the Ministry of Education is looking to increase the number of places reserved for the top CPE performers by adding up two more State secondary schools to the list of National Colleges. With the introduction of the A+ grade in 2006, the impact has been that the system is even more competitive, as parents strive to see their child enrolled in a national college.

The competitive and elitist education system which has prevailed in Mauritius since 1980 with the introduction of the CPE is evidenced by pertinent quotes from several Ministry of Education documents published in Mauritius, with different Ministers of Education in office (Table 2.2). These quotes most importantly make it very clear that education decision-makers and policy-makers are very aware of the severe impact of the CPE on the educational system.

Table 2.2

Selected Quotes from Documents Produced by the Ministry of Education, Mauritius

QUOTE	CPE	ISSUE CRITICISED
“World Class Quality Education to which everyone has access” (Strategy for Reform, 2006, Foreword).	2006 Grading	Mere academic achievement
“Such competition results in a ‘rat race’ beginning right from the lower primary years” (White Paper, 2001, p. 3).	2001 Grading	Rate of CPE failure Competition
“The whole educational process is thereby vitiated” (White Paper, 2001, p. 3).	Ranking	Competition
“The system is too examination- oriented. It promotes the development of memorisation and lower order thinking skills at the expense of creativity and higher order thinking” (Action Plan, 1998, p. 3)	Ranking	Inadequate approach for optimal performance Failure of system to cater for all
“A super competitive education system and a work environment that has no place for initiatives, adaptability and creativity but academic excellence” (White Paper, 1997, p. 7)	Ranking	Narrow teaching focus
“The functional/numeracy of many is not known” (White Paper, 1997, p. 10).		
“Over SIX THOUSAND kids are left without a future” (White Paper, 1997, p. 10).		
“Primary schooling is now a rat race competition on an unlevelled playing field” (White Paper, 1997, p. 12).		
“There is strong pressure on children – especially in standards V and VI – to take private tuition” (Master Plan, 1991, p. 26).	Ranking	One-size-fits-all approach
The CPE is “an inadequate indication of the child’s abilities” (Master Plan, 1991, p. 26).		
“The curriculum is extremely rigid, and makes insufficient allowance for children of different abilities.” (Master Plan, 1991, p. 26).		

This severely competitive and elitist education system, compounded by the fact that English is the medium of instruction, inevitably creates serious imbalances at the classroom level in all primary schools, with streamed classes and two additional national exams at the early stage of standards IV and V to stream the top performers. Cramming, memorisation and rote learning are encouraged at the expense of creative thinking and understanding. Labeling young children, pushing them into the trauma of a highly selective exam-oriented system in which the medium of instruction is not their mother tongue, cannot but short-circuit their overall development (Johnson, 2006). Such an elitist system of education is governed by examinations. The curriculum at primary level is “perceived as being very overloaded, not holistic or child-centred enough [and] does not take inclusion into account” (Association for the Development of Education in Africa [ADEA], 2006, p. 74).

For those that can afford it, private tuition is predominant after school hours in primary schools, provided by the primary school teachers themselves with the approval of the Ministry of Education. This represents a serious conflict of interest. Primary school pupils experience an excessive workload and long hours of homework in order to pass the CPE. But despite its many negatives, the CPE persists, as it acts as a convenient sorting tool and serves the interest of those in power whose children tend to be successful.

Moreover, the performance of candidates at the CPE is a national issue. The figures in Table 2.3 show that there is a high failure rate.

Table 2.3

Performance at Certificate of Primary Education (CPE) examination, 2003, 2004, 2005, 2006.

Year	No. examined	No. passed	% passed
2003	26, 491	16, 686	63.0
2004	30, 030	18, 013	60.0
2005	28, 432	17, 788	62.56
2006	25, 007	16, 987	67.93

Mauritius Examinations Syndicate, 2006

The 30-40% CPE failure rate is a serious issue and believed to limit the “integration of children into economically active labour participation later in life” (ADEA, 2006, p. 80). The two key factors highlighted in the CPE Examination Report are poor language skills of candidates with as many as 33.5% of students scoring zero in the English essay, and no acquisition of higher order thinking skills (Mauritius Examinations Syndicate, 2005). In 2006, the pass rate in English was 67. 9% and in French, 57. 2% (Mauritius Examinations Syndicate, 2006). The CPE examination report 2006 for Mathematics and Science has also stressed both a lack of understanding of English language and of relevant concepts (Mauritius Examinations Syndicate, 2006).

A note on educational inequality

There are 26 ZEP (Zone D’Education Prioritaire or Special Support) schools listed in 2007 in Mauritius. These ZEP schools are classified as such because their pass CPE rate has been less than 40% over the last 5 years. Thirteen of these schools are located in the outskirts of Port-Louis, the capital city: Cite Vallijee, Roche Bois,

Tranquebar, Terre Rouge, Sainte Croix, Baie du Tombeau, Cite La Cure, Pointe aux Sables, Cassis, Pailles, Vallee Pitot. Others are found in rural areas and poor regions of the island: Barkly, Camp Levieux, Stanley, Trefles, Plaisance, Cite Kennedy, Cascavelle, Bambous, Bois des Amourettes, Petite Riviere, Black River. What is significant is that all these regions share in common a high Creole population density with low income families, illiterate or poorly educated, a very poor standard of living and social problems. The majority of these pupils are 'drop-outs' after primary schooling, due to a lack of motivation, very low expectations from parents and teachers and their financial, social and educational milieu. As advocated by Foster, Gomm & Hamersley (1996), inequality of opportunity for young people's education is impacted by poverty, social class, ethnicity and race and cultural behaviour.

Therefore, these are the learners being produced by the Mauritian primary education sector. At the secondary level, there is little change. English as the language of instruction in the classroom is still a key issue and a barrier (ADEA, 2006). Best practice is not generally a consideration, and teachers are not equipped to teach 'mixed ability' classes, adapt to different learning styles and support a formative assessment culture (ADEA, 2006). The curriculum is overloaded with "over-emphasis on academic knowledge and not enough emphasis on practical know-how" (ADEA, 2006, p. 89). Assessment-oriented tasks are privileged because of the pressure of the SC and HSC examinations. The government awards 20 scholarships to top HSC candidates for study abroad, which are in high demand and fiercely competed for.

This elitist system inevitably results in many students not understanding their learning and becoming at-risk at the secondary level. The prevailing system of education

is analogous to Freire's (1972) "banking" concept of education which anaesthetises and inhibits the creative power of students and encourages the "narrative" character of the teacher-student relationship. A recent study showed that some students, even though they were successful at the CPE, underachieve at the secondary level, indicating that remedial steps need to be urgently taken at the lower secondary level to avoid at-risk situations later on (Paul, 2004).

However, even if the picture of the Mauritian education system seems dark because of being traditional and competitive, there are positive intentions in the 2006 proposed curricular reforms after a national debate on curriculum reforms was initiated by the Ministry of Education in 2005. The main curricular reforms consist of:

- Addressing the alarming CPE rate of failure.
- Introducing formative assessment for both certification and selection purposes of the CPE.
- Phasing out gradually the CPE and introducing the National Achievement Certificate at Form III.
- De-loading the primary curriculum to suit the developmental needs of the children at each phase.
- Using the language of the environment as a facilitator.
- Introducing a more comprehensive secondary curriculum.
- Teaching children of mixed abilities.
- Introducing continuous assessment, project work, port folio and group work in Forms I-III.
- Promoting teacher education and ongoing professional teacher learning.

It is against this background that Catholic education in Mauritius is attempting to introduce a more socially just system. Before I discuss this, I will sketch out the historical background to the Catholic schooling system.

Catholic Education in Mauritius

The Historical Context

The Catholic Church has been committed to education in Mauritius since the 18th century. Table 2.4 shows some important dates in the history of Catholic education in Mauritius and the ongoing commitment of Catholic education to Mauritian society.

Table 2.4

Historical Dates Relating to Catholic Education in Mauritius

Year	
1742	Opening of the first Catholic school in a presbytery
1845	Opening of Loreto College Port Louis, the first secondary school for girls, by Loreto Sisters, IBVM
1859	Arrival of the Brothers of the Christian Schools in Mauritius
1877	Opening of St. Joseph College, a boys' school, by the Brothers of the Christian Schools
1944	Foundation of Roman Catholic Education Authority (RCEA) for the primary by an Act of Parliament
1950	The Government subsidises Catholic secondary schools with a 75% grant for the salary of graduate teachers
1977	The Catholic Church accepts the system of free education, that is the State provides school fees instead of parents
1980	Introduction of CPE and students enrolled in Catholic secondary schools on the basis of ranking
1993	Foundation of BEC
1993	BEC recruits 50% of its population in Catholic schools using its own criteria
2001	The Catholic Church agrees to join the proposed governmental educational reforms
2002	A ruling of the Supreme Court denies the BEC the right to enrol 50% of students in Catholic secondary schools on the basis of religion
2003	Appeal at the Privy Council in London by the Catholic Church is rejected
2004	Catholic secondary schools are grant- aided private schools

Adapted and translated: <http://www.dioceseportlouis.org/organis/education.html> (retrieved 27/10/2006)

The Founders

Mary Ward and the IBVM/Loreto tradition

Mary Ward who came from an upper class Catholic family, was born in England in 1585 and received a formal education, in contrast to the upbringing of most girls at that time (Rofe, 1985). Mary Ward grew up with the conviction that women were capable of great achievements for the Church and society (Rofe, 1985). Inspired by the principles of St Ignatius of Loyola, Mary Ward founded a religious order called the Institute of the Blessed Virgin Mary (IBVM). Convents and schools were established in England and in Europe with a commitment to the education of girls which was well advanced for those times. Education in these schools was Christian, humanistic, modern and holistic with disciplines such as modern languages, drama, dancing and music (Wright, 1981). Mary Ward was committed to social justice, education for the poor and with her vision for women, was open to change (Rofe, 1985, McClory, 2000).

In Mauritius, the IBVM sisters, also known as the Loreto sisters, have worked in Loreto schools since 1845 to perpetuate the visionary work of the foundress in the education of young girls and for social justice. The philosophy of Loreto schools is explained in the Code of Discipline for Pupils of Loreto Schools in Mauritius (1997):

The educational ideals of each Loreto School, based firmly on the life and work of Mary Ward and inspired by the principles of St. Ignatius of Loyola, are firmly rooted in Gospel values. The goal of the Loreto School is the formation of young people for others, women of competence, conscience and compassionate commitment (p. 1).

St. John Baptist de La Salle (1651-1719)

St. John Baptist de La Salle was the founder of the Institute of the Brothers of the Christian Schools in 1680 in France, the first Roman Catholic congregation of male

non-clerics to be exclusively dedicated to schools, learning and teaching (Furniss, 1991).

De La Salle's achievement is described below in a memoir two years after his death:

Monsieur de la Salle had the idea of setting up gratuitous schools where the children of workmen and the poor could learn reading, writing and arithmetic, and would receive a Christian education through Catechism and other forms of instruction appropriate for forming good Christians (Furniss, 1991, p. 4).

The founder was deeply concerned with the personal formation and the pedagogical competences of his brothers, and the Institute spread to other countries (Furniss, 1991). In Mauritius, the Brothers of the Christian Schools opened three secondary schools for boys. For 130 years, the Brothers have been engaged in meeting the needs of the Mauritian society and have been innovated with “afternoon classes for young adults, technical formation in Port Louis, commercial studies at St. Joseph’s College, technical and agricultural streams at College de La Confiance” (Cardinal Margeot, cited in Furniss, 1999, p. ii). Since 1991, the Brothers have passed on the torch and the three schools are now under the management of the Diocese of Port Louis but retain de La Salle’s philosophy.

Mother Marie Magdeleine de la Croix (1810-1889)

Mother Marie Magdeleine de la Croix founded the Order of The Filles de Marie in 1849 in Reunion Island, a French Department in the Indian Ocean. Both Mauritius and Reunion Island are usually referred to as the twin islands due to their proximity. In January, 1864, Mother Marie Magdeleine de la Croix came to Mauritius for the first time and a few months later the first community was started in the island. The sisters of the Order of The Filles de Marie looked after the sick and the poor.

In 1954, Notre Dame School, now known as Notre Dame College, was opened by the sisters of the Order of The Filles de Marie in response to the educational mission

of the Church in Mauritian society. The mission of Notre Dame College is the education of girls with a particular attention to the poor. This mission is deeply rooted in the ideals of Mother Marie Magdeleine de la Croix whose mission in her times was to educate the children of ancient slaves after the abolition of slavery in Reunion Island.

The Journey: From the Founders to the Present

In Mauritius, there are 46 Catholic primary schools with a school population representing 20% of the whole primary population. The 17 Catholic secondary schools represent some 10% of the population of secondary schools in Mauritius and are in high demand. These Catholic schools are non-fee paying, non-profit making, except for one, and are allocated grants for running and maintenance costs by the government. Salaries and conditions of service of teachers are under the aegis of a para-statal body, the Private Secondary School Authority (P.S.S.A). The BEC is responsible for the general administrative and academic policies of Catholic education in Mauritius and manages only the Diocesan schools. The Loreto schools are under the management of the Loreto sisters and Notre Dame College is under the management of The Filles de Marie Order. However all these schools work in collaboration with the BEC and are represented on the Board of the BEC when common policy decisions are required.

In 1993, an agreement was reached between the government and Catholic authorities in regard to the enrolment of students in Form I. At this time, there was an issue of the primacy of religious education in Catholic secondary schools as there were very few Catholics in these schools as a consequence of the selective nature of the CPE. As a result of this arrangement, Catholic secondary schools were able to keep 50% of their Form I intake and the remaining 50% places in these schools were for allocation by

the government. Catholic secondary schools were free to enrol students of their choice and all Catholic secondary schools filled their 50% of reserved seats on the basis of religion. However, students who were enrolled were still those candidates with good CPE results. As a result, it was understood that all students from both Government and BEC lists enrolled in Form I would be of similar ability since they have all been successful in the CPE examinations.

However, in 2002 and 2003, both the Mauritian Supreme Court of Justice and the Privy Council in the UK denied the BEC the right to enrol students on the basis of religion, since it is stated in the Mauritian Education Act (1957) that a secondary school in Mauritius “shall be open to pupils of any race or religion” (Section 35) and it “shall not refuse admission to any pupil on the grounds of race or religion” (Education Regulations, 1957, #52). Consequently, the BEC’s policy of filling its 50% intake with Roman Catholic students overall was seriously compromised. At the same time, Catholic education had been under pressure since the 2000 Synod reflections, where it was clearly stated that Creoles of Catholic faith but of modest income were generally not able to be admitted to Catholic secondary schools. Only middle class and wealthy students were enrolled because their parents could afford private tuition as well as access resources to obtain a better CPE grade for their children. The Synod (2000) made the following recommendations for a new orientation for Catholic education:

- The Catholic school should promote the human values inspired by the Holy Gospel.
- The Catholic school should promote the preferential option for the poor by being more open to poor students.

- Academic success should not be the unique goal of the Catholic school.
- The Catholic school should use pedagogies which foster inclusion.

Ultimately, the situation had developed where there was no choice left but to change the criteria for admission to Form I in Catholic secondary schools for the 50% reserved seats allowed by the government. Table 2.5 shows the new criteria for admission that were developed (BEC, 2003).

Table 2.5

Criteria for Admission in Form I in Catholic Schools in Mauritius

Aggregate of 15 to 20 units at the Certificate of Primary Education
Zoning: The Secondary School where application is lodged should be in the same zone as the Primary School attended
Social cases: on Humanitarian grounds
Individual results in English, Mathematics, Science, French or History/Geography (in that order) will be used for candidates with the same aggregate
Aptitude tests/ Interviews/ Random selection if there are too many successful applications

BEC, 2003.

With the new criteria for access to Catholic secondary schools there was now in Form I classrooms, a much more diverse group of students than before, who had scored a wider range of aggregates at the CPE. This is an underlying reason behind the articulation of the 'mixed ability' philosophy in Catholic secondary schools which the Catholic leaders decided they needed to implement in the aftermath of this challenging time, to cater for all students. The following is an explanation of how the BEC articulated the 'mixed ability' philosophy.

Human Centered Vision and ‘Mixed Ability’ in Catholic Secondary schools

The mission of Catholic education is clearly defined in the following quote (in French with English translation):

La mission de l'éducation catholique est d'humaniser l'éducation. Humaniser la pédagogie, les méthodes, les moyens en vue de permettre aux élèves, aux enseignants, aux parents de devenir plus humains ... Une éducation qui humanise c'est apprendre à s'entraider, à être solidaire ... (Mgr. Piat, Le Mauricien, jan. 2006)

The mission of Catholic education is to humanise education. Humanise pedagogies, methods, means for students, teachers, parents to be more human ... A human education is a collaborative and creative approach to learning (Bishop Piat, Le Mauricien, Jan. 2006).

Two current initiatives of the BEC which reflect its concern for a human-centred education are:

1. The Creole pilot project, mentioned in chapter 1, which is currently being implemented in Catholic pre-vocational schools where Creole is used as a medium of instruction for the first three years, that is FI-FIII, for students who have failed the CPE. An intention is to use the learnings from this pilot project to introduce Creole in Catholic primary schools for the first two years starting in 2010.
2. The ‘mixed ability’ philosophy, the subject of this thesis, coupled with the identification of an holistic and human-centred education which is deeply rooted in social justice and inclusiveness, irrespective of ability, creed, religious, social and economic background. This type of education aims to enable the fullest possible growth of the person of the student and rejects labels being attributed to students at the age of eleven in regard to performance.

Generally the purpose of Catholic schools, where ever they are located, is to build an educational environment rooted in the Catholic concept of personhood to promote authentic humanity (McLaughlin, 2000). As the Vatican puts it, “the Catholic school sets out to be a school for the human person and of human persons” (Sacred Congregation for Catholic Education, 1997, # 9). The Vatican’s Congregation of Catholic Education document (1997) describes the challenges of education and schooling in the context of new knowledge in the sciences of education. These call for new content, new capabilities and new educational models which depart from the traditional ones. The identity of the Catholic school, which is non-negotiable, is revealed in aspirations which are to:

- Be a place of integral education of the human person through a clear educational endeavour of which Christ is the foundation;
 - Be an ecclesial and cultural identity;
 - Have its education mission based on love;
 - Be a service to society;
 - Generate an inclusive community
- (McLaughlin, 2000, p. 150).

The ‘mixed ability’ direction of Mauritian Catholic schools is totally consistent with the identity of Catholic education grounded in the human person as depicted in the literature. Groome (1996) states that the qualifier “catholic” is inclusive since it has its roots in the term *kata boulou*, meaning “embracing the whole”, or better still “including everything and everyone” (p. 123).

The commitment of the founders, Mary Ward and St. John Baptist de La Salle to social justice is to be translated in the present-day reality and culture of the Mauritian Catholic secondary schools in the response to the poor and the oppressed of the Mauritian

society. In the context of change, there is however the need for Catholic education to ask what would be the response of the founders to the challenges of the 'mixed ability' orientation. As D'Orsa and D'Orsa (1997) put it:

If the pioneers of Catholic education were to come back today would they be able to grasp the scale, scope and structure of what confronted them? What critique would they offer of what they saw? What questions would they ask? (p. 72).

The 'mixed ability' approach is still at its early stages in all Catholic secondary schools and is an attempt to decrease the burden of the highly competitive system which is seen as in conflict with the mission of Catholic secondary schools. Low performers at the CPE are given another chance by being enrolled in Catholic secondary schools where education purports to understand their human condition. For an effective education of diverse learners at lower secondary, there is a need for the whole curriculum to "promote their dignity, to honor their fundamental rights, and to develop their gifts to the fullest – as God's reflections" (Groome, 1996, p.111). The 'mixed ability' approach in Mauritian Catholic schools calls for a "pedagogy that engages students as active and creative participants in the teaching/learning dynamic, that draws upon their experiences and learning from life, that gives them direct access to enriching disciplines of learning" (Groome, 1996, p. 112).

The articulation of the 'mixed ability' philosophy in Catholic secondary schools is challenging in regard to best practice, knowledge about how students learn, the creation of an enabling classroom environment, assessment, ongoing professional development and leadership. It raises questions about

The quality of education within a distinct religious ethos, the maturity of pastors, the preparation and ongoing education of teachers, the centrality of justice in terms of addressing issues of identity and diversity and the critical importance of wise leadership in mediating the difference between

Church and school in ways that provide coherence and unity and respect critical pedagogy over imposed didacticism (McLaughlin, 2001, p. 6).

Catholic secondary schools are at crossroads in their capacity to manage the 'mixed ability' approach. In 2004 the BEC began to prepare for the intake of children from more diverse backgrounds with initiatives to educate teachers for more effective differentiated teaching and learning.

BEC Assisting Initiatives

The 'mixed ability' approach in Catholic secondary schools departs from traditional and standardised teaching and is expected to change teaching and learning culture. Change in school culture, though, is generally experienced as confusion and anxiety, fear of the unknown and stress (Fullan, 1993; Thompson & Thompson, 1996). Tomlinson and Allan (2000) note that change tends to be slow, difficult, uncertain and begets tension, conflict and skepticism, as teachers believe that their professionalism is being harmed by the process of change (Thompson & Thompson, 1996; Caldwell, 1999). For schools to be innovative and implement new policies, the concept of educational change needs "a new mindset" (Fullan, 1993, p. 3), *metanoia*, the Greek word meaning a "fundamental shift of mind" (Senge, 1990). McLaughlin (1997) highlights what he considers to be the right attitude of the Catholic school towards change, which is "ideally, the Catholic school, like all expressions of Church, does not merely invite change but readily accepts its necessity ... Consequently, school leaders should not only welcome but should initiate processes that regularly critique the school and its community" (p.21).

My own experience and other anecdotal evidence suggest that in Mauritius, teachers who are used to working with the top CPE performers in a content-heavy,

teacher-centred “one-size-fits-all” approach, find ‘mixed ability’ teaching demanding and tend to have a negative view of it. While they are not against the first criterion for admission in Form I in Catholic secondary schools, they would prefer ‘mixed ability’ schools instead of ‘mixed ability’ classrooms, that is “streamed” classes with students of more or less the same aggregate in the same class. Many teachers are frustrated, pessimistic and reluctant to change and have high expectations of the BEC in terms of training and education.

In 2004, to assist teachers in the context of change, the BEC in collaboration with an Australian University organised a large scale, three-day intensive training session for about 450 Form I teachers which focused on multiple intelligences and invitational education. This initial formation was supposedly to be followed by reflection and planning time where teachers would discuss and develop an action plan for their own school with their respective rector. In 2005, the professional learning of teachers continued with the help of Australian University lecturers who returned to Mauritius to conduct some subject-based workshops. An assessment of these workshops showed the expected resistance of teachers but the most serious concerns were about lack of teacher education and a culture of teacher professional learning (Smith, 2005).

Smith (2005) reported:

Pedagogical issues regarding best practice, knowledge of how students learn and the creation of an enabling classroom environment tend not to be understood by many teachers. At the same time there are few opportunities for teacher networking and no significant professional associations or conference opportunities.

At the same time, rectors met and discussed their individual experience of the ‘mixed ability’ approach in their respective schools. A meeting of rectors in 2005 assessed the constraints and challenges of ‘mixed ability’ teaching in Catholic secondary

schools (BEC, 2005). A brief summary of the constraints (BEC, 2005) identified is listed below:

- Overcrowded classes
- Academic-based curriculum
- Time
- Language issues
- Lack of ongoing teacher professional learning
- Lack of communication between all key actors
- Syllabus
- Resources
- Assessment

The constraints and challenges document was sent to one of the Australian lecturers who later returned to Mauritius and made further recommendations including the suggestion that the BEC set up learning networks across schools.

Subject-based and regional networks were set up and teachers met under the leadership of a rector to talk about the difficulties and their experience of the ‘mixed ability’ approach in the classroom. A significant initiative of these clusters was the review and reduction of the level of content in English, French, Mathematics and Social Studies Form I syllabuses and even Form II syllabuses in a few cases. In 2005, after meetings with 5 clusters of schools, the BEC assessed positive aspects of the ‘mixed ability’ approach at the administrative, pedagogical and parents’ level. Their document showed that out of the 17 schools involved in the ‘mixed ability’ program, only a few had undergone significant changes at these three levels (BEC, 2005).

Other positive initiatives in some secondary schools are:

- Integrated Project on the theme of “The Sea” in 2005 and “200 Years Ago, Mahebourg and its Treasures” in 2006.
- Sketches for a better understanding of English Comprehension.
- Action Plan for an English-friendly environment.
- Paper on teachers’ experience of reading, agriculture theory and practice.

To show the progress made by one school, next I will briefly describe the integrated project undertaken in 2005 by the teachers and students of Loreto College Mahebourg on the theme of “The Sea.” This was a significant and successful application of the principles of differentiated education in content, process and product (Tomlinson, 1999; United Nations Educational, Scientific and Cultural Organisation [UNESCO], 2004) that will be discussed at length in the next chapter.

“The Sea”

Loreto College Mahebourg is located on the South East coast of Mauritius and because the sea is the physical environment of the students and relates to their interests, it was chosen as the theme to differentiate the content. Teachers from different subject departments were involved in planning and students worked on different activities in their different subjects all related to the theme of the sea. Learning processes focused on multiple approaches such as the exploration of the theme, group work, oral and hands-on activities, authentic tasks, independent design and development of tasks and the students’ interests and learning profile so that they could understand the content in their own terms. The final work, the product, was presented to the school, parents and other guests as a

musical performance and exhibition of paintings and food. The following is a list of the products through which the students displayed their understandings of their learning:

- Art: Paintings and collages of sea views
- Home Economics: A fish curry
- Science: Water cycle; distillation of sea water
- Social Studies: Interview of a fisherman
- Languages: Poems about the sea
- Musical Performance: Drama about the pollution of sea life; Songs about the sea in different languages

An Australian University lecturer was able to attend the performance and the exhibition and discuss its merits with the rector and teachers. The success of the project was such that in 2006, the same school presented a similar integrated project on the theme “200 Years ago, Mahebourg and its treasures.”

From an anecdotal perspective, this innovative project is believed to have made a significant contribution to the ‘mixed ability’ approach in Catholic secondary schools and presents a significant outcome of the BEC’s assisting initiatives and serve as a model for other Catholic secondary schools, particularly those who are drifting back to some sort of disguised “streaming” in Form II, following pressure from teachers.

In this section, I introduced a brief history of Catholic education in Mauritius, following the journey from the founders to the current situation. I explained the ‘mixed ability’ philosophy of Catholic secondary schools which fosters a human-centered and an holistic education. I also described the assisting initiatives for teachers in Catholic secondary schools to depart from traditional instruction.

The situational analysis discussed in this chapter has highlighted the complexities and paradoxes of education in Mauritius. There is the proposal by a partner in education, that is the Catholic system, for an inclusive schooling grounded in the concept of whole personhood, but which appears to be facing many challenges in its implementation given the prevailing and entrenched competitive and selective system but which is also being challenged by other propositions for reform. The situation of Catholic education, then, cannot be seen in isolation, but needs to be viewed within the whole context of Mauritius and its place as a newly developed small island state in a globalised world. Figure 2.2 illustrates the situational context of my study discussed in this chapter.

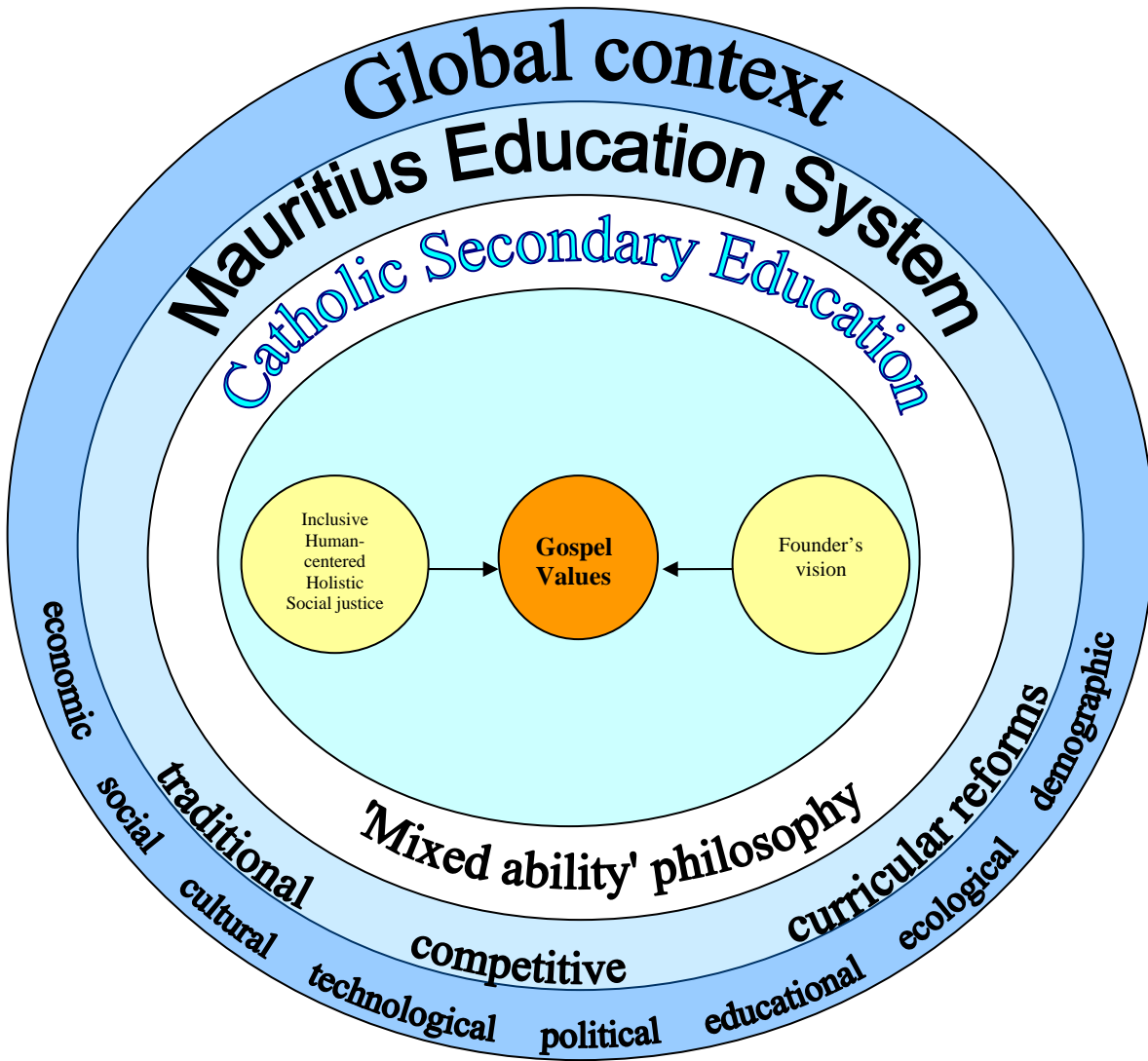


Figure 2.2. *Situational Framework of Mauritian Education, adapted from Bronfenbrenner's Ecological Systems Theory (Addison, 1992).*

The journey now moves on to chapter 3 where I present and discuss the International literature review to answer my first research question.

CHAPTER 3

LITERATURE REVIEW: MIDDLE SCHOOLING, DIFFERENTIATION AND RELATED AREAS

*“I’m 9% math; 10% soccer; 2% clean locker; I’m 21% wilderness; 6% blue; I’m 6% braces; and 2% shoe; I’m 33% smiles; 3% brown hair; 4% pineapple I’m very rare!”
(100% Me Poem, Kersley – Grade 6, Halbhook, 2005)*

Introduction

As I stated in chapter 1, the first purpose of this study is to explore an integral model of education that acknowledges diversity in the classroom and each learner’s individual needs in the middle years of schooling, particularly in Forms I to III, in Catholic secondary schools in Mauritius. In chapter 2, I depicted the situation of Catholic education in the Mauritian educational system, the ‘mixed ability’ philosophy of Catholic secondary schools in Mauritius in regard to the foundational principles of Catholic teaching which are the human person, the preferential option for the poor, and lastly, the challenges of translating and articulating that philosophy into the physical activities of these schools for the best ways to accomplish Catholic vision and mission.

In this chapter, I discuss the related International body of literature in order to attain the first purpose of my study and to answer my first research question:

1. What are the characteristics of an integral model of education that will address diverse learners in the classroom?

I have described in the first two chapters the background to the ‘mixed ability’ philosophy of Catholic secondary education which, translated in the reality of the school, would need to consider:

- Young adolescents in FI, FII and FIII (the middle years of schooling).
- The diverse nature and needs of these students.
- An appropriate pedagogy in the classroom.
- The school as an enabling organisation and the role of leadership.

Based on a literature search of the areas above, I will now discuss an integral model for an effective education for diverse learners in the classroom, in the lower forms in Mauritian Catholic secondary schools. It is clear that as they stand, schools would need to re-invent and restructure themselves into learning organisations to address the core Catholic values and make obvious the ‘mixed ability’ philosophy at the middle level of schooling as stated above.

First, I will discuss the concept of middle schooling based on the premise that an understanding of early adolescents’ distinctiveness and learning is essential as it is students from FI to FIII (12 to 14 years) that are being targeted by the program. I also discuss the concept of differentiation because, as I explained in chapter 2, the ‘mixed ability’ philosophy in Catholic secondary schools in Mauritius aims at grouping diverse learners in the classroom.

Second, I will discuss learning theories which present themselves as alternatives to the conservative and competitive Mauritian system of education. I also discuss their implications for practice, that is the pedagogical and assessment stances consistent with the philosophies outlined for an effective education.

Third, I will discuss the enabling structures for the Catholic secondary schools in Mauritius which are necessary for them to develop into learning communities. I discuss the structural changes and the professional learning of teachers which would help schools move towards enabling best practice to be part of their culture.

Fourth, I will discuss the leadership role of key actors, school managers, rectors, heads of department and teachers in managing and leading educational and differentiating schools and the classrooms.

Last, I will present an overall discussion and a conclusion for this chapter.

The Middle Years of Schooling

“There are many cues to suggest that middle-schooling has ‘arrived’: that it is a legitimate site for learners, teachers, teaching and teacher educators to inhabit”
(Pendergast, 2005)

I begin by examining the literature on middle years of schooling and the MYRAD project in particular. The Australian Middle Years Research and Development (MYRAD) executive summary (Russell, Mackay & Jane, 2001) identified a model which consists of an integrated set of whole-school design elements for schools to improve student learning outcomes in the middle years of schooling. Three areas in particular are focused on addressing the critical aspects of the middle years. They are:

- Teaching and learning practices in the classroom: based on a constructivist theory of learning, they provide for individual differences in interest, achievement and learning styles.
- Curriculum and assessment: more time for thinking and learning; students are involved in deciding content, structure, process and assessment.

- School organisation for learning: time-table, team-teaching, professional learning and leadership team development.

These areas have directed my literature search and have inspired the development of the framework I have adopted for this chapter.

The Middle School Learner

The middle school learner, in the critical early period of adolescence, (10 to 14 years) faces a myriad of physical, cognitive, intellectual and social-emotional changes (Bawden, 2004; Beane & Brodhagen, 2001; Howard & Fogarty, 2004; Repetto, Webb, Neubert, & Curran, 2006). Early adolescents “live in a world and culture that is fast paced, global, media rich, mobile and technological” (Repetto et al., 2006, p. 25). They are challenged by pressures such as changing family structures, continued poverty or economic prosperity for certain sectors of society (Mather & Rivers, 2003; Queen, 1999 cited in Repetto et al., 2006). Beane and Brodhagen (2001) emphasise the need for adolescent studies to take into account cultural and class diversities of young adolescents.

Beane and Brodhagen (2001) note that literature on the perceptions and understandings of young adolescents include being rebellious, antisocial and delinquent, to issues of self-esteem, academic achievement, boredom and motivation. Repetto et al. (2006) refer to early adolescence as “a time of contrasts, extremes, and similarities. Adolescents are maturing, but not yet grown up, changing yet sometimes the same, independent but still reliant” (p. 39). The move from childhood to adolescence is one of the most difficult young people will encounter (Howard & Fogarty, 2004). At this stage, young adolescents,

Are seeking more autonomy and independence, are engaging in more self-assessment based on social comparison, are becoming more capable of

using higher level cognitive strategies, are increasingly concerned about peer relationships, and are in need of close adult relationships outside the home (Eccles et al., cited in Beane & Brodhagen, 2001, p. 1160).

The middle school learner is curious, open to learning and enthusiastic, but may be confused when exploring abstract concepts (Repetto et al., 2006). It is a time of self-discovery, self-esteem development and independence with questioning and learning by trial and error (Abbott & Wilks, 2004).

I have already discussed the profile of learners and the shortcomings of primary schooling in Mauritius in chapter 2. An effective middle level program in Catholic secondary schools in Mauritius which takes into account knowledge of young adolescents' stage of development as described above, should be able to depart from traditional schooling. Instead it needs to develop a specific middle school program which will provide broader learning experiences for students and allow them to explore, discover, question, negotiate and design their learning instead of being only examination-focused and develop mechanistic and rote learning skills.

The literature also highlights the emergence of middle schooling as a “sustainable shift in educational approaches for young people aged from around 10 to 15 years” (Pendergast, 2005, p. 3). Middle school programs need to address the developmental, physical, intellectual, social, and emotional needs of early adolescents (Manning, 2002). In fact middle schooling is a new concept that “refers more to a particular type of pedagogy and curriculum than a particular type of school structure” (Chadbourne, 2001, p. iii, cited in Pendergast, 2005, p. 4). Repetto et al. (2006) believe that “the unique needs of the diverse population of early adolescents have shaped the rich history of middle schools” (p. 4). The following are brief summaries of International and

Australian reports informing the vision of middle schooling with the key findings highlighted.

Middle School Reports: Vision and Purpose

Pendergast (2005) has outlined a range of both International and Australian reports that together provide a direction for middle years schooling. While differing in focus, they are generally consistent in their approach to adolescent education. Seven of these are outlined next.

1. Turning Points: Preparing American Youth for the 21st Century (Carnegie Council on Adolescent Development, 1989).

This report outlines eight interrelated elements which provide a vision for middle schooling. These are:

- Creating a community for learning;
- Teaching a core of common knowledge;
- Ensuring success for all students;
- Empowering teachers and administrators;
- Preparing teachers for the middle grades;
- Improving academic performance through better health and fitness;
- Re-engaging families in the education of adolescents;
- Connecting schools with communities

(Pendergast, 2005).

2. *Shaping Middle Schooling in Australia: A Report of the National Middle Schooling Project* (Barratt, 1998).

The values that support middle schooling practices are: Learner centred; collaboratively; outcome based; flexibly constructed; ethically aware; community oriented; adequately resourced; strategically linked. Identity, relationships, purpose, empowerment, success, rigour and safety are all needs of young adolescents. Powerful knowledge, integrated curriculum and authentic assessment are three key strategies to meet the needs of young adolescents (Pendergast, 2005).

3. *Systemic, Whole School Reform of the Middle Years of Schooling* (Hill & Russell, 1999).

The guiding principles for the development of middle schooling identified in this report have provided the conceptual basis for the Australian Middle Years Research and Development (MYRAD) project. The general design elements are the characteristics and needs of young adolescents, holistic approach to change, partnerships with students, collaborative teaching, flexible use of time and space, involvement of parents and community, fair and adequate share of resources, theories of change (Pendergast, 2005).

4. *Turning Points 2000: Educating Adolescents in the 21st Century* (Jackson & Davis, 2000).

This report provides seven recommendations for middle schooling which focus on curriculum, instruction and assessment. They are:

- A learner-centred, integrated and exploratory curriculum;
- An alignment of pedagogy and assessment;

- Knowledge and expertise in middle school concepts such as advisor-advisee programs, interdisciplinary teaming and positive school climates;
- Student-teacher relationships, collaborative partnerships with colleagues and involvement of parents to build learning communities;
- Democratic government;
- A safe and healthy environment;
- Community partnerships for support
(Pendergast, 2005).

5. Middle Schooling in the Middle Years (Chadbourne, 2001).

For Chadbourne, the principles of middle schooling are:

- Higher order thinking, holistic learning, critical thinking, problem-solving and lifelong learning;
- Students taking charge of their own learning and constructing their own meanings;
- Integrated and disciplinary curricula that are negotiated, relevant and challenging;
- Cooperative learning and collaborative teaching;
- Authentic, reflective, and outcomes-based assessment;
- Heterogeneous and flexible student groupings;
- Success to every student;
- Small learning communities that provide students with sustained individual attention in a safe , healthy school environment;

- Emphasis on strong teacher-student and student-student relationships through extended contact with a small number of teachers and a consistent student cohort;
- Democratic governance and shared leadership;
- Parental and community involvement in student learning (Pendergast, 2005).

6. Middle Years Research and Development (MYRAD) project (MYRAD, 2002).

MYRAD (2002) concluded that strategies and practices which will enhance the middle years are: primary-secondary cluster cooperation; whole school commitment; three-year action planning; targeted ongoing professional learning; data-driven evidence-based evaluation; provision of resources and specialist support. Three key areas are targeted: teaching and learning practices in the classroom, curriculum and assessment and school organisation for learning (Pendergast, 2005).

7. Developing Lifelong Learners in the Middle Years of Schooling (Pendergast, Flanagan, Land, Bahr, Mitchell, Weir, Noblett, Cain, Misich, Carrington, & Smith, 2005).

This model was developed using the following key elements: structures, cultures, curriculum, pedagogy, assessment, leadership and relationships. Three broad phases: initiation, development and consolidation made up a second model, a phased model of change to link middle schooling and lifelong learning (Pendergast, 2005).

The above research and related projects which are all representative of the considerable and growing body of literature on middle schooling, converge towards a new paradigm at the middle level of schooling. Overall, they represent a shift from traditional teaching to a transformation of curriculum, pedagogy and assessment which

coalesce to address young adolescents' needs (Pendergast, 2005). A learner-centred approach is believed to meet the uniqueness of the learner's age (Howard & Fogarty, 2004). These have wide-reaching implications for the organisation of schooling in Mauritius.

An effective 'mixed ability' program in Catholic secondary schools in Mauritius which will address the learner's stage development presents significant challenges in the key areas of curriculum, pedagogy and assessment and a complement of planning factors for best practice. Drawing from the above literature, the 'mixed ability' program, broadly, would:

- Be learner-centred, and be based in an understanding of the nature and needs of students in the first three years of secondary (FI to FIII);
- Foster developmentally appropriate curriculum and teaching and learning practices for young adolescents;
- Promote enabling school organisation and structures to support students in the middle years of schooling.

Next, I discuss the concept of differentiation, since catering for the diverse nature and needs of FI to FIII students is another objective of the 'mixed ability' philosophy in Catholic secondary schools in Mauritius.

Differentiation

“A story of differentiation

Imagine three mysterious intriguing prizes hanging on a wall. They are hanging from a level bar, all at the same height, which represents the idea of a standard. Now three students reach for the prizes. One student, the tallest of the three, reaches the prize with little or no effort at all. The second student reaches the prize, but only after stretching as high as he possibly can standing on his tip-toes. Finally, the third student is not able to reach the prize, even when standing on his tip-toes and stretching as much as he can. In terms of differentiated learning, the question is this: Does the teacher lower the prize or does he give the student a chair? That’s the essence of the concept of differentiation, in a nutshell!” (Fogarty, 2005)

‘Mixed Ability’

I have shown in chapter 2 how the term ‘mixed ability’ in Mauritius is related to performance-based groupings. The literature reveals that the concept of ‘mixed ability’ in primary and secondary schools began in the U.K. in the 1960s in response to the 1944 Education Act’s call for an egalitarian philosophy of education (Kelly, 1978; Bailey & Bridges, 1983). Before this, students were “streamed” by age and ability (Kelly, 1978). Critiqued as a “competitive and hierarchically ordered setting” (Kelly, 1978, p.1), streaming denied students equal opportunity and there was little evidence that high ability students were doing better in streamed classes or that the less able were performing better with more attention. Talents were being wasted in streamed classes; the self-image and self esteem of students labeled “intellectually inferior” (Kelly, 1978, p.1) were severely affected, and teachers of lower streams had low expectations for their students.

As far as teaching in streamed classes was concerned, there was little creativity. It was a simple and basic model of “a teacher, teaching a class the same material in the same way, at the same pace and at the same time” (Kelly, 1978, p.1). Streamed classes

were largely didactic with a whole-class teaching approach and organisation that made it unproductive (Kelly, 1978). The shortcomings of streamed classes and the advantages of classroom diversity have been much discussed in the literature as the rationale for ‘mixed ability’ classes in schools. With a ‘mixed ability’ grouping in a class, the whole range of ability is represented. As Kerry and Sands (1982) put it, in such a classroom, there may be students of very low, even remedial ability as well as students of very high ability.

From ‘Mixed ability’ to Differentiation

Even though the term ‘mixed ability’ is not in current usage in educational circles, I have kept the term in the title of the thesis because this is how it is known in Mauritius. However in searching the literature, I wanted to find a more appropriate concept which addresses some key concerns about the CPE and its impact on education in Mauritius, that is

- To dispel the myth that CPE grading and aggregates is the best criterion for students maximising their learning;
- To move away from homogeneity in the classroom in terms of the same or more or less the same CPE aggregates;
- To recognise that any homogeneous classroom is in reality heterogeneous;
- To celebrate the learner’s uniqueness as a human being;
- To signify an holistic and an inclusive learning;
- To describe best practice quality teaching in Forms I, II and III in Catholic secondary schools with the new criteria for admission.

I believe the concept of ‘differentiation’ encapsulates these concerns and at the same time addresses students’ differences in the so- called ‘mixed ability’ classroom in Catholic secondary schools in Mauritius. Differentiation is the educational term adopted in current literature that recognises the reality that in the classroom students differ in a myriad of ways (Fogarty, 2005; Standerfer, 2006; Tomlinson, 1999, 2000, 2001; UNESCO, 2004). Students’ differences are apparent through their diverse nature as “diversity means differences” (Tileston, 2004, p.13). A challenge for the future lies with both the concepts of individuation and human difference (Gardner, 1999). Gardner (1999) posits that “diversity is the order of the millennium” (p. 217). Nine kinds of diversity have been distinguished to assist teachers’ understanding of their classroom: cultural, linguistic, religious, motivational, intellectual, physical, socio-economic, behavioural and gifted (Paterson, 2005). According to Tileston (2004), learners’ differences stem from factors such as race, ethnicity, socioeconomic status, gender, learning, modalities, cognitive development, social development and the rate at which they take in and retrieve information (p. 1).

The philosophy or the concept of differentiation is defined as “meeting the individual needs of each learner, of customising instruction to help students learn” (Fogarty, 2005, p. 3). By meeting individual needs of students in the classroom environment, differentiation is the “recognition of and the commitment to plan for student differences” (Standerfer, 2006).

A broad lexical terminology is used to mean differentiation. Synonyms adopted are: “personalised, individualised, customised, tailored, ‘tweaked’, modified, adjusted, adopted, accommodated, stylised, manipulated and fine-tuned” (Fogarty, 2005, p. 4).

Differentiation is also known as multi-level instruction (Campbell, Campbell, Collicott, Perner, & Stone, 1988; Collicott, 1993; Perner & Stone, 1995; Perner, 1997). Fogarty (2005) suggests useful analogies such as, “differentiation is like a movie, because both leave the participant with different views. Differentiation is like a balloon, because both take you to new heights. Differentiation is like a mobile phone because both can be highly personalised” (p. 4).

I discussed in chapter 2 the “banking” concept (Freire, 1972) of the Mauritian system of education. This type of traditional response to education that is, quantitative, knowledge-based and examination-focused is no longer appropriate in the context of the global world and future demands (Delors, 1998). “It is not enough to supply each child early in life with a store of knowledge to be drawn on from then on” (Delors, 1998, p.85). The aim of Catholic secondary schools in Mauritius is to welcome all learners in spite of their CPE aggregates and their diverse nature and needs. A ‘mixed ability’ program largely influenced by the concept of differentiation would be consistent with the mission and vision of Catholic Education in Mauritius as it celebrates the uniqueness of the individual.

The competitive educational system in place in Mauritius is an example of an education system which leads to exclusion because of competition (Delors, 1998). Competition is perceived as encouraging intellectual development in certain cases but it “can also take the form of undue selection by academic results. Academic underachievement then becomes irreversible and frequently leads to social marginalisation and exclusion” (Delors, 1998, p. 57). The ‘mixed ability’ philosophy has been adopted by Catholic Education in Mauritius as an attempt to overcome the exclusion

of academic underachievers because of competition in schools. Instead it aims at learning which is inclusive, and where diversity is seen as a valuable asset (Delors, 1998).

The new paradigm of learning promotes an holistic view of learning that goes beyond an instrumental view of education “to enable each individual to discover, unearth and enrich his or her creative potential, to reveal the treasure within each of us” (Delors, 1998, p. 86). Standardised teaching shapes “all children into the same cultural and intellectual mould, without taking sufficient account of the variety of individual talents” with emphasis on the “development of abstract knowledge” (Delors, 1998, p. 56). For schools to cater for individual talents and ambitions, diversity and individuality are the principles which will develop the “imagination, the ability to communicate, leadership, a sense of beauty or the spiritual dimension of existence, or manual skills” (Delors, 1998, p. 56).

For learning to be holistic, four pillars of learning which together form a whole approach are, for Delors (1998), the basis of education throughout life. They are:

- Learning to know: Students acquire the tools of understanding.
- Learning to do: Students are taught to put what they have learnt into practice and work in teams.
- Learning to live together: Students work on joint projects and develop an understanding of other human beings and learn to respect the values of pluralism, mutual understanding and peace.
- Learning to be: All the aspects of a student’s potential such as memory, reasoning, aesthetic sense, physical capacities and communication skills

are important for the development of the student's personality, greater autonomy, judgment and social responsibility.

However the system in Mauritius is conservative in its approach, targeting mainly if not entirely, *learning to know* and to a lesser extent on *learning to do* (Delors, 1998).

A 'mixed ability' program in Catholic secondary schools in Mauritius would be holistic if it challenges a formal education system which tends to "emphasise the acquisition of knowledge to the detriment of other types of learning" (Delors, 1998, p. 97). The concept of differentiation would promote best practice at the middle level through "a richer curriculum, based on the varying talents and needs of all students, the realisation of each student's potential, and the development and nurturing of outstanding talent" (Al Mufti, in Delors, 1998, p. 194). This is exemplified by the case study on "The Sea" which I illustrated in chapter 2.

As Delors (1998) puts it, education is said to "promote cohesion if it strives to take the diversity of individuals and groups into consideration" (p. 56). In similar vein, the UNESCO Dakar *Education for All* (2000) goals endorsed the vision of the World Declaration on Education for All (Jomtien, 1990) for an "education geared to tapping each individual's talents and potential, and developing learner's possibilities, so that they can improve their lives and transform their societies" (UNESCO, Dakar Framework for Action, 2000, p. 1, no. 3).

An education which is inclusive of all learners is also a fundamental principle highlighted by the UNESCO Salamanca Declaration 1994 which declares that "all children should learn together, wherever possible, regardless of any difficulties or

differences they may have. Inclusive schools must recognise and respond to the diverse needs of their students, accommodating both different styles and rates of learning” (cited in McGrath and Noble, 1993, p.1).

One of the goals of the Dakar Framework for Action (UNESCO, 2000) reiterates the vision of the World Declaration on Education for All (Jomtien, 1990). The Expanded Commentary on the Dakar Framework for Action (2000) specifies:

The learners of the twenty-first century will require access to high quality educational opportunities that are responsive to their needs, equitable and gender-sensitive. These opportunities will neither exclude nor discriminate. Since the pace, style, language and circumstances of learning will never be uniform for all, there should be room for diverse formal and less formal approaches, as long as they ensure sound learning and confer equivalent status (p. 7, Art. 8).

The Contribution of Carol Ann Tomlinson.

Carol Ann Tomlinson has written extensively on the philosophy of differentiation and has made a significant contribution to the field. Her work is highly relevant to this thesis and is discussed below.

As she puts it, differentiation is a “way of thinking about teaching and learning” (Tomlinson, 1999). Tomlinson (2000) posits,

By definition, differentiation is wary of approaches to teaching and learning that standardise. Standard-issue students are rare, and educational approaches that ignore academic diversity in favour of standardisation are likely to be counterproductive in reaching the full range of learners (p. 6).

The shift from a one-size-fits-all approach to learning to differentiated learning to address students’ needs is supported by a wider definition of the concept of differentiation. According to Tomlinson (2001), differentiation is

- Proactive: a variety of ways are effective and “proactively planned by the teacher to be robust enough to address a range of learner needs in contrast with planning a single approach” (p. 4).
- Qualitative: “adjusting the nature of the assignment” (p. 4) is more effective than altering the quantity of the assignment.
- Rooted in assessment: students are not assessed at the end of a unit but instead assessment “takes place as a unit begins to determine the particular needs of individuals in relation to the unit’s goals” (p. 4).
- Multiple approaches to content, process and product: these three curricular elements are explored in depth. “By differentiating these three elements, teachers offer different approaches to what students learn, how they learn it, and they demonstrate what they’ve learned” (pp. 4-5).
- Student-centered: for learning to be engaging, relevant, and interesting, challenging learning experiences are provided to students.
- A blend of whole-class group and individual instruction: time is allowed in the classroom for whole-group instruction, that is all students sharing the same activity and then moving to group or individual activities.
- Organic: an ongoing collaborative process between teachers and learners results in a more effective learner and learning match as teachers continuously learn about their students.

Tomlinson (2001) believes that the growing interest in the topic of differentiation in education is “sparked by the realisation that it is no longer possible to look at a group of students in a classroom and pretend they are essentially alike” (p. v).

There is the reality of students in the classroom sharing things together because they are human beings, but how they differ makes them individuals (Tomlinson, 2001). The global interest of educators in the concept of differentiation supports the paradigm shift in the practice of education. Tomlinson (1999) writes that “differentiation is about high quality performance for all individuals and giving students the opportunity to develop their particular strengths” (p. 24). Consequently, “best-practice education should be the starting point for differentiation” (Tomlinson, 1999, p. 24). Tomlinson (1999) extends an important assumption that “classrooms grounded in best-practice education, and modified to be responsive to student differences, benefit virtually all students” (p. 24).

Tomlinson (1999) highlights three important principles of teaching and learning that educators may not have always considered. These key principles of teaching and learning, also discussed in another later section are:

- **Intelligence is Variable:** Drawing on Gardner’s (1991, 1993, 1997) and Sternberg’s (1985, 1988, 1997) work and before them other researchers such as Thorndike, Thurstone and Guildford (Horowitz & O’Brien, 1985), varied types of intelligences have been identified with clear implications for educators.
- **The Brain Hungers for Meaning:** New understandings of how the brain functions have rapidly developed the understanding of learning and implications for teaching.
- **Humans Learn Best with Moderate Challenge:** Developments in psychology and neuroscience research on how the brain works have demonstrated that individuals learn best when they face a moderate

challenge. However, “teachers must also remember that what is moderately challenging today won’t offer the same challenges to-morrow” (p. 19).

So far, I have discussed Tomlinson’s contribution to the field of differentiation from the perspectives of an inclusive and holistic view of learning. Next is an examination of Tomlinson’s application of the concept of differentiation in the classroom.

Tomlinson (1999) identifies a number of essential principles which guide the differentiated classroom. They are:

- **Respectful tasks:** A deep respect for the individual’s identity in the person of the student is shown when all students’ tasks “are equally interesting, equally important, and equally engaging” (p. 12). Different learning options “show[s] respect for learners by honoring both their commonalities and differences, not by treating them alike” (p. 12). Students are given the possibility “to explore essential understandings and skills at degrees of difficulty that escalate consistently as they develop their understanding and skill” (p. 12).
- **Quality curriculum:** By modifying content, process, or product, a differentiated curriculum is “coherent, important, inviting and thoughtful” (p. 13).
- **Flexible grouping:** “As in an orchestra composed of individuals, varied ensemble groups, sections, and soloists, the differentiated classroom is built around individuals, various small groups, and the class as a whole”

(p. 13). Various configurations are planned for students to work in the classroom: whole-group, individual, small group and peer.

- Continual assessment: “In a differentiated classroom, assessment is ongoing and diagnostic” (p.10). Every learning task is an opportunity to generate data and to “yield an emerging picture of who understands key ideas and who can perform targeted skills, at what levels of proficiency, and with what degree of interest” (p. 10).
- Building community: “Together, teacher and students plan, set goals, monitor progress, analyse successes and failures, and seek to multiply the successes and learn from failures” (p. 12).

These principles of differentiation appear in the organiser for thinking about instruction as shown in Figure 3. 1.

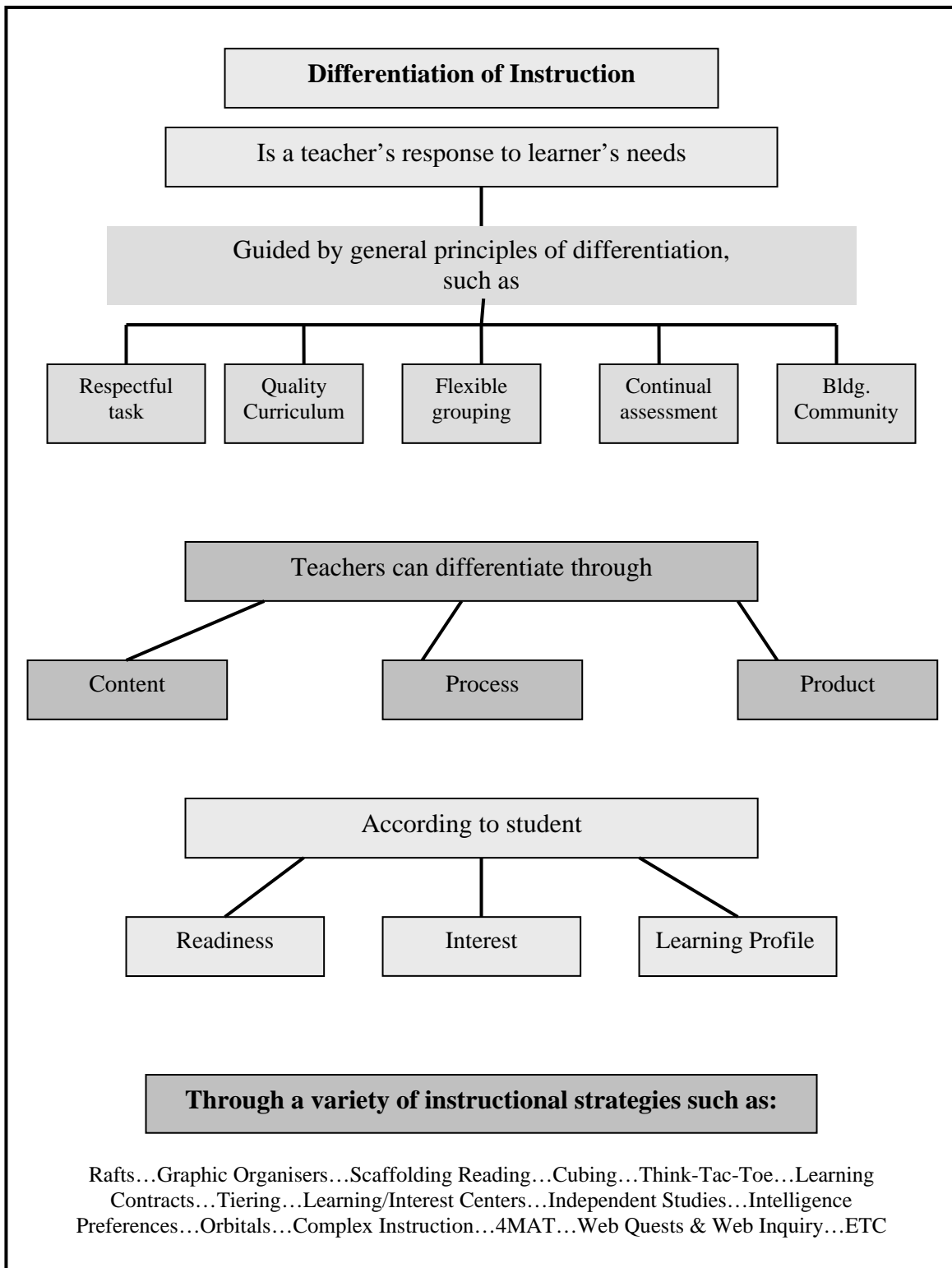


Figure 3.1 *Differentiation Flow Chart Organiser (Tomlinson, 2007)*

According to Tomlinson (1999), the organiser describes how the teacher's response to the students' learning needs is first guided by the general principles which lead a differentiated classroom. Then the teacher modifies the content, process and product according to the students' readiness, interests and learning profiles through a variety of instructional approaches. Tomlinson (1999) explains the key terms of the organiser thus:

- Content: What teachers want “students to learn and the materials or mechanisms through which that is accomplished” (p. 11);
- Process: “Activities designed to ensure that students use key skills to make sense out of essential ideas and information (p. 11);”
- Product: “Vehicles through which students demonstrate and extend what they have learned (p. 11);”
- Readiness: “A student's entry point relative to a particular understanding or skill (p. 11);”
- Interest: “A child's affinity, curiosity, or passion for a particular topic or skill (p. 11);”
- Learning profile: The student's preferred mode of learning is “shaped by intelligence preferences, gender, culture, or learning style” (p. 11).

Tomlinson (1999) proposes clear guidelines for a healthy learning environment that will promote respect for the learner and each learner's growth. It is an exploratory journey where the learner is invited by the teacher, individually, in a small group or with the whole class to join in. In her own words,

The anticipation for this journey is great. The pace is brisk. And then there is the point where the teacher steps back and says, “I've been there. It's

your turn. You think about it your own way and see what your eyes make of it. You'll know what to do." Then the teacher watches the learner learn, and in so doing the teacher becomes a learner all over again" (Tomlinson, 1999, p. 35).

Tomlinson (1999) considers that three questions are useful for analysis of differentiation in the classroom:

- What is the teacher differentiating?

Content, process, product or learning environment can be modified for any given learning experience.

- How is the teacher differentiating?

Differentiation in response to student readiness, interest or learning profile.

- Why is the teacher differentiating?

Access to learning, motivation to learn and efficiency of learning are the three key reasons why the teacher is modifying the learning experience.

To facilitate and support inclusive and holistic learning, UNESCO (2004) also describes four main processes of differentiation very similar to Tomlinson's. These are:

- Differentiation of content: Teachers are selective and differentiate content which is meaningful, based on students needs and interests, the learning environment and is more than just learning facts.
- Differentiation of process: Various techniques, methods and/or practices will help students understand the content in their own terms.
- Differentiation of product: The methods of assessment through which students will show their understanding.
- Differentiation of individual learning styles: An innovative teaching-learning environment will address the different needs, abilities, interests,

background and experience of students in the classroom because students have different ways of learning.

The shift from the traditional classroom to the differentiated classroom outlined in Table 3.1 (Tomlinson, 1999) describes the current situation in Mauritius and suggests what a differentiated classroom would look like in a differentiated model.

Table 3.1

Comparing Classrooms (Tomlinson, 1999, p. 16)

Comparing Classrooms

Traditional Classroom	Differentiated Classroom
<ul style="list-style-type: none"> • Student differences are masked or acted upon when problematic • Assessment is most common at the end of learning to see “who got it” 	<ul style="list-style-type: none"> • Student differences are studied as a basis for planning • Assessment is ongoing and diagnostic to understand how to make instruction more responsive to learner need
<ul style="list-style-type: none"> • A relatively narrow sense of intelligence prevails • A single definition of excellence exists 	<ul style="list-style-type: none"> • Focus on multiple forms of intelligences is evident • Excellence is defined in large measure by individual growth from a starting point
<ul style="list-style-type: none"> • Student interest is infrequently tapped 	<ul style="list-style-type: none"> • Students are frequently guided in making interest-based learning choices
<ul style="list-style-type: none"> • Relatively few learning profile options are taken into account • Whole-class instruction dominates 	<ul style="list-style-type: none"> • Many learning profile options are provided for • Many instructional arrangements are used
<ul style="list-style-type: none"> • Coverage of texts and curriculum guides drives instruction • Mastery of facts and skills out-of-context are the focus of learning 	<ul style="list-style-type: none"> • Students readiness, interest, and learning profile shape instruction • Use of essential skills to make sense of and understand key concepts and principles is the focus of learning
<ul style="list-style-type: none"> • Single option assignments are the norm 	<ul style="list-style-type: none"> • Multi-option assignments are frequently used
<ul style="list-style-type: none"> • Time is relatively inflexible 	<ul style="list-style-type: none"> • Time is used flexibly in accordance with student need
<ul style="list-style-type: none"> • A single text prevails • Single interpretations of ideas and events may be sought 	<ul style="list-style-type: none"> • Multiple materials are provided • Multiple perspectives on ideas and events are routinely sought
<ul style="list-style-type: none"> • The teacher directs student behaviour 	<ul style="list-style-type: none"> • The teacher facilitates student’s skills at becoming more self-reliant learners
<ul style="list-style-type: none"> • The teacher solves problems 	<ul style="list-style-type: none"> • Students help other students and the teacher solve problems
<ul style="list-style-type: none"> • The teacher provides whole-class standards for grading 	<ul style="list-style-type: none"> • Student work with the teacher to establish both whole-class and individual learning goals
<ul style="list-style-type: none"> • A single form of assessment is often used 	<ul style="list-style-type: none"> • Students are assessed in multiple ways

In this section, I have discussed the concept and application of differentiation as being able to meet the needs of a diverse population such as exists at the lower levels in FI, FII and FIII, in Catholic secondary schools in Mauritius. Previously, in chapter 2, I demonstrated how the human being, social justice and inclusiveness are the focus of Catholic education in Mauritius. Bringing these major themes together, it is clear that the concept of differentiation has enormous potential to lay the foundation for a new type of schooling at the middle level in Mauritian Catholic secondary schools. It fosters inclusive and holistic learning of all students by focusing on the diversity of students in the classroom. It focuses on the different learning styles and the academic, social and emotional needs of the students.

I will now continue the discussion with the related concept of learning and a praxis approach which will give insights into the third aim of the 'mixed ability' philosophy, the development of a human pedagogy.

Key Concepts of Learning, Pedagogies and Assessment for Differentiation

For effective differentiation in the classroom, the need for differentiation of content, process and product were discussed in the previous section (Tomlinson, 1999; UNESCO, 2004). This section aims at developing the story of differentiation through a discussion of the key concepts of learning, pedagogies and assessment. I focus on learning which would let the learners' imagination and creativity take over. I focus on pedagogies which would empower the learners to actively engage in their learning, "to become agents in their own learning" (Groome, 1998, p. 103). Lastly I focus on assessment which is integrated in the learning process (Earl, 2003; Victorian Curriculum

& Assessment Authority, 2005). The discussion begins with learning, the first key concept.

Learning: The First Key Concept

*“But the old man was wise
To show them before he died
That learning is the treasure”
(Delors, 1998)*

I have stated in chapters 1 and 2 and also at the beginning of this chapter the objective of the ‘mixed ability’ philosophy to promote a human-centred pedagogy, as Catholic education seeks to depart from the traditional and highly competitive Mauritian system of education. After having discussed the relevance of the concepts of middle schooling and differentiation for an effective ‘mixed ability’ program, my contention is to briefly review those theories of learning which I believe are relevant to the philosophy of differentiation. These learning theories are:

1. The learning theory of constructivism.
2. Brain-based learning.
3. Multiple intelligences theory.
4. The triarchic theory of intelligence.

These theories provide a basis for the application of differentiation in the classroom and allow for the development of pedagogies and tools that teachers can draw upon.

1. Constructivism

Constructivism is a theory of learning based on the premise that, by reflecting on our own experiences, we construct our own understanding of the world we live in (Wilson, 1994). As Henson (2004) puts it, the definite way to really learn is by connecting new information with previous knowledge, thus creating new knowledge. From the same perspective, Davis, Sumara & Luce-Kapler (2000) describe constructivist learning as a process where one's actions adapt to ever changing circumstances. Fogarty (1997) posits that one outcome of constructivist theory is that learning needs to be both active and empirical. The implications for learning is that in a constructivist classroom, students create learning, have a deeper understanding of fewer topics and develop concepts and interdisciplinary themes (Henson, 2004). For teachers, applying constructivism to daily planning at the school level promotes team planning and team teaching (Henson, 2004).

The constructivist approach to learning is drawn from Vygotsky's social aspects of learning and Piaget's genetic epistemology learning of theory. I discuss below both contributions to this theory of learning.

Jean Piaget (1896-1980)

The Swiss scientist, Jean Piaget, was one of the most influential researchers in the area of the developmental psychology during the 20th century. His work mainly concentrated on the primacy of the individual in learning and how children think. Piaget identified four stages in cognitive development: sensorimotor (infancy); pre-operational (toddler and early childhood); concrete operational (elementary and early adolescence) and formal operational (adolescence and adulthood).

Piaget's educational goals provide part of the foundation for constructivist learning,

The principal goal of education is to create men who are capable of doing new things, not simply of repeating what other generations have done - men who are creative, inventive, and discoverers. The second goal of education is to form minds which can be critical, can verify, and not accept everything they are offered. The great danger today is of slogans, collective opinions, ready-made trends of thoughts. We have to be able to resist individually, to criticise, to distinguish between what is proven and what is not. So we need pupils who are active, who learn early to find out by themselves, partly by their own spontaneous activity and partly through material we set up for them; who learn early to tell what is verifiable and what is simply the first idea to come to them (Ginsburg & Opper, 1969, p 231-232).

Ginsburg and Opper (1969), in their analysis of the impact of Piaget's work on education, suggest a few points. According to them, Piaget's findings and theories imply that traditional schooling ignores the fact that there are individual differences in the pace of learning and also in students' interest and engagement. Discovery learning is supported through the use of a variety of concrete experiences to help the student learn. The student's abilities are challenged but not far beyond the student's level. Students should physically act on their environment and should work individually at tasks which they freely choose.

Lev Vygotsky (1896-1934)

Vygotsky's developmental psychology draws from Marxist social theory. The Russian psychologist's approach to cognitive development is socio-cultural and is based on the assumption that "action is mediated and cannot be separated from the milieu in which it is carried out" (Wertsch, 1991. p. 18). Among Vygotsky's innovative work in psychology and several key concepts is the Zone of Proximal Development which has important implications for teachers.

The Zone of Proximal Development (ZPD)

For Vygotsky (1978), “human learning presupposes a specific social nature and a process by which children grow into the intellectual life around them” (p. 88). The ZPD falls within a socio-cultural context, defining the process through which students learn in cooperation with the ‘social other’, that is teacher, peers or others (Pass, 2004). Vygotsky (1978) describes the Zone of Proximal Development as the variance between the current developmental level of the learner and his/her level of possible development when assisted by adults or when collaborating with more capable peers. Vygotsky (1978) also believed that what a child can do with the help of others is even more suggestive of his/her intellectual development than when working alone.

For optimal use of the student’s Zone of Proximal Development, the teacher or the peer is a role model. This teacher-student and peer-peer interaction and imitation process occurs in the social which is the context in which the student constructs meaning. Here, there is no objective truth, rather it is subjective to the cultural beliefs of the teacher and the peers who are collaborating with the student. Vygotsky (1978) also stressed the importance of language in learning, and thus has deep implications for the language of instruction and adds weight to calls for Creole to be considered as the language of instruction in Mauritius at least in the early years.

The sociocultural theory of learning, an approach developed from Vygotsky’s (1962) ZPD, considers learning in a physical context. Vygotsky’s (1962) sociocultural theory of learning highlights that human intelligence stems from our society and culture. From a similar perspective, Rogoff (1990) believes that social agents initially act as guides in the individual’s cultural apprenticeship. Werstch (1985) posits that the child

not only learns from the social exchange with others but rather from language and gestures, which are the means of interaction, the tools for thinking and problem solving.

In the classroom, the teacher, by being a role model should act as a “scaffold”, providing the maximum support to the student and encouraging independent learning. Scaffolding has been conceptualised by Vygotsky but also by Bruner (1967) to “describe a student being brought from the bottom of his stage of development to the top by a caring ‘social other’ through the use of communication” (Pass, 2004, p. 90). The implication for learning is that it should be inquiry-based and student-led, clearly having implication for pedagogy.

Piaget-Vygotsky Pedagogy

Pass (2004) has combined both Piaget’s and Vygotsky’s work to look for intersecting lines to develop a combined pedagogy. This has provided an interesting hypothetical “conversation” between Piaget and Vygotsky about their parallel paths to constructionism where twelve points of intersection emerge. For Pass:

1. Both would focus on the individual within the group (e.g., where there is an individual assignment/grade within a group assignment/grade).
2. Piaget would agree to a more active role for the teacher. The teacher would brief before and after a lesson, but let the child create a mental construct by himself/herself to solve the lesson (Tudge & Winterhoff, 1993). This would be done in a group setting with both group grades/assignments and individual grades/assignments.
3. Both would have the student use inquiry-based instruction. The teacher is there to instruct before and debrief after the lesson but the student solves the problem.
4. Both would have external (talking) and internal language (thinking to oneself) as a tool of learning.
5. Both would have stages of development. Vygotsky would use Piaget’s terms and Piaget would agree not to set specific ages for the stages.
6. Both would agree to a rich learning environment correctly set at the child’s stage of development.

7. Both would agree to construct formation whereby a child constructs a mental model to solve the problem but this could be done as an individual within a group.
8. “Piaget’s equilibration is similar to Vygotsky’s idea of internalisation.” (Steffe, 1995, p. 510). I believe that Vygotsky would agree with Piaget’s term.
9. Vygotsky would be able to persuade Piaget that unstructured play includes learning.
10. Piaget would be able to persuade Vygotsky that error is acceptable and a child can learn from it. However, they recommend that lessons be set to the correct stage of development so that the child has a reasonable chance of success.
11. Both would agree that not all could reach the highest stage of development. Piaget would say it was because the learning environment was not correctly set to the stage of development and Vygotsky would say that it was because of the fault of the social milieu.
12. Both would agree to the concepts of optimal mismatch and scaffolding (Pass, 2004, p. 108).

Pass (2004) believes that the twelve points listed above highlight the similarities in Piaget’s and Vygotsky’s respective pedagogies, which she claims “enhance[s] the foundations of education and sheds light on the development of learning theory” (p. 117). Pass’ Piaget-Vygotsky pedagogy can be useful to guide learning in the middle years constructivist curriculum, in student-led discovery learning and inquiry situations.

Constructivist theory differs from traditional ideas about teaching and learning as the focus shifts from the teacher to the students. I have explicated in chapter 2 how the teacher in the Mauritian system of education is like a “fountain” of knowledge which pours knowledge into passive students. In the constructivist learning model, the students create learning, have a deeper understanding of fewer topics and develop concepts and interdisciplinary themes (Henson, 2004). The teacher no longer performs as the narrator, but as a facilitator and a conductor (Brooks, 1999).

In Table 3.2 below the traditional classroom is compared with the constructivist one. The significant differences in basic assumptions about knowledge, students, and learning are highlighted with emphasis on the student.

Table 3.2

Comparing School Classroom Environments

<i>Traditional Classroom</i>	<i>Constructivist Classroom</i>
Curriculum is presented part to whole, with emphasis on basic skills.	Curriculum is presented whole to part with emphasis on big concepts.
Strict adherence to fixed curriculum is highly valued.	Pursuit of student questions is highly valued.
Curricular activities rely heavily on textbooks and workbooks.	Curricular activities rely heavily on primary sources of data and manipulative materials.
Students are viewed as 'blank slates' on to which information is etched by the teacher.	Students are viewed as thinkers with emerging theories about the world.
Teachers generally behave in a didactic manner, disseminating information to students.	Teachers generally behave in an interactive manner, mediating the environment for students.
Teachers seek the correct answer to validate student learning.	Teachers seek the students points of view in order to understand students present perceptions for use in subsequent lessons.
Assessment of student learning is viewed as separate from teaching and occurs almost entirely through testing.	Assessment of student learning is interwoven with teaching and occurs through teacher observations of students at work and through student exhibitions and portfolios.
Students primarily work alone.	Students primarily work in groups.

(Brooks, 1999, p.17)

Brooks (1999) believes that the constructivist framework is challenging for teachers who have to create environments in which they and their students are encouraged to think and discover. According to Brooks (1999), teachers, when choosing the constructivist paradigm:

1. Free students from the monotony of fact-driven curricula.
2. Give students opportunities to focus on large ideas.
3. Empower students to follow paths of interest, to make associations, to create ideas, and to reach unique conclusions.
4. Share with students the essential point that the world is a complex place in which multiple views exist and truth is frequently a matter of interpretation.
5. Recognise that learning and the process of assessing learning are vague and not easily managed.

Brooks (1999) has identified five overarching principles which are obvious in the constructivist classroom:

1. Teachers inquire about and value their students' points of view.
2. Classroom activities challenge students' constructions of how their worlds work.
3. Teachers propose classrooms experiences which are relevant, meaningful and interesting to the learner to promote the creation of personal meaning.
4. Teachers plan academic problems that confront the learner to understand first the big ideas and then to discern for themselves, with the intervention of the teachers, the parts that require more exploration.

5. Assessment is embedded in learning and teachers assess student learning in the situation of daily teaching.

While the learning theory of constructivism requires the shift from a teacher-led to student- led instruction, recently another learning theory has recently emerged, and this theory is brain-based learning.

2. *Brain-based Learning*

New learning about the functions of the brain adds weight to a student-centred view of learning. The Mauritian traditional system which I compared with Freire's (1972) "banking" system in chapter 2, can also be likened to the "pour and store" model (Howard & Fogarty, 2004). As discussed earlier, it can be described as a "traditional model of schooling in which the teacher is the fountain of knowledge" (Howard & Fogarty, 2004, p. 19). On the other hand, the integration of research on the brain and learning is of great interest for educators since they are essentially trying to change the human brain every day. So, the more knowledge they have about how the brain learns, the more effective will be their teaching (Sousa, 2001). I have already noted Tomlinson's (1999) beliefs about the application of brain research in teaching and learning processes. The main learnings about the brain that would be useful to teachers are basic brain physiology and theories of control of the brain and their implications for the classroom (Howard & Fogarty, 2004).

Caine and Caine (1991) propose twelve principles relating to the brain and learning to help teachers make decisions about instruction, curriculum frameworks and assessment. The twelve principles are:

1. Learning is enhanced by challenge and inhibited by threat.
2. Emotions are critical to patterning.

3. Learning involves both focused attention and peripheral perception.
 4. The brain simultaneously perceives and creates parts and wholes.
 5. There are two types of memory systems: Spatial and rote.
 6. The brain is a parallel processor.
 7. Learning engages the entire physiology.
 8. Each brain is unique.
 9. The brain understands and remembers best when facts and skills are embedded in natural spatial memory.
 10. The search for meaning is innate.
 11. The search for meaning occurs through patterning.
 12. Learning always involves conscious and unconscious processing.
- (cited in Howard & Fogarty, 2004, p. 29).

Brain science can help improve teaching and learning as it provides information about when students remember best when learning; the importance of focus, meaning and transfer; how to teach motor skills effectively; and what classroom strategies are more prone to engage the brain (Sousa, 2001). Brain-based learning is pertinent for this study as it highlights the fact that the “pour and store” model is not adequate for the teaching learning process even though the teacher might be covering the content (Howard & Fogarty, 2004). The study of the brain and learning stresses the uniqueness of each brain, the differences in wiring of the brain because of different genetic inheritance and different environmental influences (Fogarty, 2005). For Fogarty (2005), the study of the brain and learning is believed to be the only logical response to the multitude of differences encountered in the academic world and the most convincing rationale for differentiation.

Another related theory which I believe is in the spirit of the philosophies discussed so far which are relevant to this study is Gardner’s (1983, 1999) multiple

intelligences theory. It was this that the BEC decided to focus on when it provided professional learning to teachers at the beginning of the introduction of 'mixed ability'.

3. *Multiple Intelligences Theory (MI)*

The MI theory was developed in 1983 by Howard Gardner, professor of education at Harvard University. It was proposed as an alternative to the traditional and classical notion of intelligence, based on the Intelligence Quotient testing which was considered far too limited. MI gave a broader perspective to a school culture which had traditionally valued only conventional verbal-linguistic and logical-mathematical approaches to teaching (Gardner, 1999).

Gardner (1999) found that human beings possess a range of capacities and potentials which he called multiple intelligences, which can be used constructively in education. The term 'intelligence' was appropriated from psychology and defined as "the ability to solve problems or to create products that are valued within one or more cultural settings" (Gardner, 1999, p. 33). In Gardner's (1999) view, the MI theory is the most convincing scientific support and the greatest benefit for the next millennium. It is a study of the "nature of various kinds of human faculties and the relationships among them" (Gardner, 1999, p. 33).

The original seven intelligences in the foundational book *Frames of Mind: The Theory of Multiple Intelligences* (1983), describe a broad range of human potential. As there are many potentials to intelligence, a new definition was proposed by Gardner (1999) which is "a biopsychological potential to process information that can be activated in a cultural setting to solve problems or create products that are of value in a culture" (p.

194). The original set of seven intelligences has been broadened and the theory now includes eight intelligences:

- Verbal-linguistic intelligence
- Logical-mathematical intelligence
- Musical intelligence
- Bodily-kinesthetic intelligence
- Visual-spatial intelligence
- Interpersonal intelligence
- Intrapersonal intelligence
- Naturalist intelligence

Gardner is currently hesitating about including a ninth intelligence, existential intelligence, and is continuing with “8 ½ Intelligences” (Gardner, 2006, p. 21).

Three conclusions of the MI theory of use to teachers are:

1. All of us have the full range of intelligences; that is what makes us human beings, cognitively speaking.
2. No two individuals - not even identical twins - have exactly the same intellectual profile because, even when the genetic material is identical, individuals have different experiences.
3. Having a strong intelligence does not mean that one necessarily acts intelligently (Gardner, 2006, p. 23).

Gardner (1999) established the connection between the human being as an individual and the MI theory as:

Granted only our species membership, we are fundamentally alike. Factoring in each person's unique genetic blueprint, we become capable of achieving different potentials, and our different family and cultural milieus ensure that we will eventually become distinct human beings. Because our genes and our experiences are unique and because our brains must figure out meanings, no two selves, no two consciousnesses, no two minds are

exactly alike. Each of us is therefore situated to make a unique contribution to the world (p. 219).

The MI theory of learning underpins the philosophy of differentiation which I have already discussed, by supporting key three educational goals (Gardner, 2006):

1. Individual-centered Education which considers the differences among individuals, their learning strengths and uses this information for the optimal education of each individual.
2. The Priority of Educational Goals which uses the concept or theory or hypothesis or claim of multiple intelligences to help achieve that goal.
3. Multiple Representations of Key Concepts when students are able to show genuine understanding in a number of key subjects.

These key educational goals are an invitation for schools to redesign teaching and learning and not promote only a linguistic and logical approach (Gardner, 1999). Rather it suggests that the praxis approach of the MI learning theory provides a wide variety of ways used in the classroom to reach all students needs and differences, not only those who are word and number smart. Pete and Fogarty (2003) posits that “using the eight multiple intelligences means creating lessons using at least three intelligences that are differentiated for the various learners and the various learning styles in the classroom” (p. 49).

The MI theory can lead to a range of practices and what should be taught and why (Gardner, 1999). Howard and Fogarty (2004) believe that the MI theory opens interesting repercussions for differentiated learning as, “by varying the teaching in ways that address the multiple intelligences, the teacher both provides teaching that uses

students' intelligence strengths as well as provides teaching that strengthens students' intelligence weaknesses" (pp. 134-135).

For Pete and Fogarty (2003), the MI theory promotes a practical differentiated approach as, "differentiation means to teach, re-teach in a new different way – try a visual, use a physical model, have students role play, or use music as the channel of choice" (p. 50).

Next is a presentation and discussion of a model of intelligence closely related to Gardner's MI, that of Sternberg's (1985) Triarchic theory of intelligence.

4. *Triarchic Theory of Intelligence*

Robert J. Sternberg, a leading figure in research in human intelligence, devised the Triarchic Theory of Intelligence. Sternberg defined intelligence as a "mental activity directed toward purposive adaptation to, selection and shaping of, real-world environments relevant to one's life" (Sternberg, 1985, p. 45). This means that intelligence relates to how well the human being adapts flexibly and effectively to the environment throughout his/her life. Intelligence is a developing ability rather than a fixed characteristic of the individual as measured by IQ tests. Sternberg's Triarchic Theory of Intelligence consists of three sub-theories: componential, experiential and practical (Sternberg, 1985).

The componential sub-theory comprises three components: the metacomponents, performance components and knowledge-acquisition components (Sternberg, 1985). The metacomponents tell the mind how to solve problems and make decisions. Performance components are the processes that carry out the actions decided

by the metacomponents. The knowledge-acquisition components select information from irrelevant information to complete tasks.

The componential subtheory is associated with analytical intelligence, which is the ability to evaluate ideas, solve problems and make decisions. 'Alice' is the example of a student given by Sternberg (1985) who was considered by the teachers to be extremely bright and who obtained excellent scores and grades. However, her performance in graduate school was hindered by her inability to create ideas of her own (Sternberg, 1985). "Alice's" analytical intelligence could not take her further than the school level where she would have to develop her own ideas and have her own opinions.

The experiential sub-theory is the second stage of Sternberg's Triarchic Theory of Intelligence. This sub-theory deals mainly with how well a task is performed depending upon the degree of experience. An individual can find new ways to solve a new problem which has not been experienced before, while a task which has been performed several times can be done with little or no thought.

The experiential sub-theory is associated with Sternberg's creative intelligence. Creative intelligence is the ability to develop new ideas and experiments (Sternberg, 1985). "Barbara" is a student with creative intelligence. Her tests scores were not as excellent as those of "Alice" but she was recommended to Yale University because of her ability to be creative, innovative and express new and interesting ideas (Sternberg, 1985).

Sternberg's third sub-theory of intelligence is called practical or contextual intelligence and it "deals with the mental activity involved in attaining fit to context" (Sternberg, 1985, p. 45). Through the three processes of adaptation, shaping and selection, human beings create an ideal fit between themselves and their environment.

Practical intelligence is the effectiveness and ability with which individuals adapt to every day situations. “Celia” is the third student Sternberg gives as an example. She did not have high analytical or creative intelligence but she “was highly successful in figuring out what she needed to do in order to succeed in an academic environment. She knew what kind of research was valued, how to get articles into journals, how to impress people at job interviews, and the like” (Sternberg, 1985, p. 44).

According to Sternberg (1985), a combination of analytical, practical and creative intelligence is necessary for successful intelligence. “The three aspects of successful intelligence are related and benefit people the most when the three intelligences are used together” (Sternberg, 1985, p. 127). The ability for the individual to recognise his or her strengths and weaknesses suggests that each person has to find his or her own path as there is no such path that works for everyone. (Sternberg and Grigorenko, 2000).

The triarchic theory of learning is yet another supporting learning theory for this thesis as its application in a diverse classroom with students of different strengths and weaknesses suggests that there is no single pathway for an effective teaching-learning process. Both teachers and students use successful intelligence every day, either inside or outside of the classroom and thus go far beyond the conventional definition of intelligence (Sternberg & Grigorenko, 2000). The three intelligences offer opportunities for differentiation (Fogarty, 2005). Componential intelligence targets the analytical or critical side of thinking while the experiential intelligence includes many possibilities for originality in products and performances and finally the practical intelligence is the most interesting intelligence when considering differentiation (Fogarty, 2005).

The learning theories presented and discussed above converge to change what Fogarty (2005) calls the complexity of the content. They enhance various levels of challenge for the learner to demonstrate his/her learning through the different tiers of learning: concrete (objects), symbolic (pictures) and abstract (words and ideas) (Fogarty, 2005). Next is discussion of pedagogies as a second key concept underpinning successful differentiation of Tomlinson's (1999) process.

Pedagogies: The Second Key Concept

“Accomplished teachers command specialised knowledge of how to convey and reveal subject matter to students. They have a ‘pedagogical content knowledge’ command of a wide repertoire of teaching strategies that enable them to organise, adapt, and present the curriculum in ways that take due account of the specific contexts within which they teach and their students learn.

(Smith & Lovat, 2003)

What is Pedagogy?

The term pedagogy, relatively uncommon in educational literature ten years ago, is derived from the Greek word *paidgogos*, meaning the teaching of children (Cavanagh et al., 2005). Pedagogy is defined as “a combination of knowledge and skills required for effective teaching” (Chapuis, 2003, p.1). The concept “covers a wider range of aspects of the teaching act than instruction” (Cavanagh et al., 2005, p.4).

Within the context of mixed ability classes in Catholic schools in Mauritius, the development of pedagogy as an art of teaching is the key to give teachers the confidence and tools to teach diverse learners in the classroom. In a constructivist perspective of learning, various teaching approaches will best suit the students' different learning styles

and abilities and their educational needs. The next section provides a brief overview of pedagogical models for best practice in the teaching of diverse learners.

Pedagogical Models

A number of pedagogical models have been developed as a response to constructivist theories of learning. Two of the best known are discussed next and their common elements are summarised.

1. Productive Pedagogies

The concept of Productive Pedagogies (Education Queensland, 2002) was developed as a result of the Queensland School Reform Longitudinal Study (2001). This study concluded that Productive Pedagogies is essentially a research tool for classroom observations situating the teacher as researcher. Teachers can use its theoretical framework to reflect critically on what they are teaching, to engage in professional discussion about their teaching practice with other teachers, and to focus on the individual student needs. Productive Pedagogies (Education Queensland, 2002) are composed of twenty elements grouped under four dimensions of classroom practice. These are:

- Intellectual Quality refers to engaging students in tasks of higher-order thinking, that is at the higher end of Bloom's Taxonomy - the analysis, evaluation and design levels. Students develop a deep understanding of knowledge which they apply to other aspects of the curriculum, thus constructing new knowledge.
- Relevance/connectedness refers to students engaging in real, practical or hypothetical tasks which have authentic value and meaning. Through

authentic experiences, students connect to the real world and link their own world to the classroom.

- Supportive Environment refers to the engagement of students in their study and having a degree of influence over their study. This involves considering their expectations, risk-taking and participation in all class activities.
- Recognition of Difference highlights sub-cultures in the classroom based on gender, race, culture, religion or socio-economic differences.

Classrooms are heterogeneous since learners are always diverse.

The elements of the four dimensions of Productive Pedagogies presented in Table 3.3 below are examples of how they can be applied in practice.

Table 3.3

Elements of the Four Dimensions of Productive Pedagogies

Intellectual Quality	Relevance/ connectedness	Supportive environment	Recognition of difference
Higher order thinking	Knowledge integration	Student Direction	Cultural Knowledges
Deep Knowledge	Background knowledge	Social Support	Inclusivity
Deep Understanding	Problem-based Curriculum	Academic Engagement	Narrative
Substantive conversation	Connectedness to the world	Student Self-Evaluation	Group Identity
Problematic knowledge		Explicit Criteria	Active Citizenship
Metalanguage			

Education Queensland (2002)

Teachers, when using Productive Pedagogies, focus on instruction, the individual needs of the students and the improvement of student outcomes. The relevance of Productive Pedagogies to this study is that they provide:

- The possibility for teachers to identify and build their repertoire of classroom tools practices and,
- The recognition of differences as a significant factor to justify improvement of outcomes of academically disadvantaged students because of their background.

2. Inquiry-based Learning Model – Integrated Curriculum

This pedagogy planning framework is essentially inquiry-based on the premise that “active involvement on the part of students in constructing their knowledge is essential to effective teaching and learning” (Murdoch, 1998, p.5). Inquiry is a basis for developing understandings about the world and has become a powerful device in the contemporary classroom (Murdoch, 1998). Here a sequence of activities and experiences build on and challenge student perceptions. The stages are as follows:

- Tuning in: time to engage students, determine their prior knowledge and prepare them.
- Finding out: time to discover new content, concepts and new experiences.
- Sorting out: students organise and process ideas in a different way
- Making connections: students draw conclusions, articulate new understandings and provide a point of comparison.
- Going further: alternative experiences or avenues of inquiry are provided to gain new insights; independent research.

- Taking action: students are empowered to act on what they have learnt, linking theory to practice and considering the bigger picture.

As the focus in this model is on the active involvement of students and the relationship between the different learning areas, the inquiry-based units of work are integrated across curricula and built around topics which are relevant and of interest to students in view of exploring and understanding the world. In this model, students consider themselves as learners, raise questions, are curious and are engaged in a discovery process. Teachers are facilitators of learning as they plan for inquiry learning, encourage students to put questions and value their responses. This model is relevant to this study as it empowers the learner, something which is contrary to the conventional image of the student in the Mauritian system of education.

Both pedagogical models discussed above would appear to be effective planning framework which cater for the students' individual needs and foster a praxis approach consistent with the concepts of middle schooling, differentiation and the theories of learning which underpin this study.

Differentiation of the Process

Tomlinson's (1999) organiser for thinking discussed earlier, includes a variety of instructional strategies for differentiation in the classroom. It is evident that the list is exhaustive and each one cannot be presented and discussed. However, I have chosen to present and discuss the following pedagogical approaches which are believed to assist teachers planning activities for differentiating the process. They are:

1. Bloom's Taxonomy of Educational objectives (1956).
2. MI/Bloom Planning Matrix (McGrath & Noble, 1995).

3. Cooperative Learning (Johnson, Johnson and Holubec, 1986; Slavin, 1983).
4. Thinking Hats (de Bono, 1985).
5. Habits of Mind (Costa & Kallick, 2000).

The following is a brief description of each these pedagogical approaches.

1. Bloom's Taxonomy of Educational Objectives (1956)

The Taxonomy of Educational Objectives was created by Benjamin Bloom in the 1950's as a means of expressing qualitatively different kinds of thinking. Bloom's Taxonomy has since been adapted for classroom use as a planning tool and continues to be one of the most universally applied models across all levels of schooling and in all areas of study. During the 1990's, Lorin Anderson (a former student of Benjamin Bloom) led a team of cognitive psychologists in revisiting the taxonomy with a view to examining the relevance of the taxonomy as we enter the 21st century (1994, 2001). As a result of the investigation, a number of significant improvements, including changes in terminology, structure and emphasis were made to the existing structure. Table 3.4 below describes both the 'old' and the 'new' taxonomies:

Table 3.4

Original and Revised Cognitive Taxonomies

Bloom's Original Taxonomy	Anderson's Revised Taxonomy
Knowledge	Remembering
Comprehension	Understanding
Application	Applying
Analysis	Analysing
Synthesis	Evaluating
Evaluation	Creating

Bloom's Taxonomy of Cognitive objectives for thinking at different levels provide a rationale for the use of tools and different levels of thinking in the classroom. Developing and implementing a thinking curriculum to guide learning in the middle years of schooling is important for learners to become critical thinkers (Wilks, 2004). For curriculum offerings in middle years classrooms to extend students' higher level thinking skills, new pedagogies and practices encourage higher order thinking (Bawden in Wilks, 2004). Fogarty (2005), however, stresses that using Bloom's taxonomy to differentiate curriculum "by having smart students use the higher levels and struggling students remain at the lower levels is not sound practice for differentiating curriculum" (p. 69). She believes that all students can and must think at higher orders (Fogarty, 2005). This means that while working at the same level of complexity advanced learners can work with sophisticated material and developing learners with basic material (Fogarty, 2005). The more students are taught with a variety of thinking strategies, the more they are empowered to become independent learners. As McGrath and Noble (2005) put it, "higher order thinking skills empower students to think flexibly and creatively, to make reasoned decisions and to critically evaluate possible strategies and solutions to complex problems" (p. 46). A thinking curriculum is the antithesis to the traditional education discussed earlier.

2. MI/Bloom planning matrix

The MI/Bloom Planning Matrix (McGrath & Noble, 1995a, 1995b, 1998, 2005a, 2005b) first published in 1995, was the first to integrate Gardner's eight intelligences with Bloom's six levels of cognitive complexity. A matrix of 42 cells has been produced to plan for a wide variety of learning tasks ranging from simple to

complex thinking. The revised version of the MI/Bloom Planning Matrix by the same authors has now 48 cells as shown in Table 3.5 below (McGrath & Noble, 2005a; 2005b).

Table 3.5

MI/Bloom Planning Matrix: Summary Version

The Eight Intelligences	Bloom's Levels					
	Remember	Understand	Apply	Analyse	Evaluate	Create
Word <i>Language</i> <i>Texts</i> <i>Reading</i> <i>Speaking</i>	Define/spell Make a word list Make a facts file	Retell Summarise Compare texts	Write a letter/game/report/puzzle	Debate Identify main issues	Suggest changes Conclude	Plan/write essay
Logic & Maths	List dates/number facts	Sort Predict Explain	Make/interpret a graph	Identify patterns	Evaluate statistics	Plan/ carry survey
Space & Vision	Draw picture	Visually summarise	Make a flow chart	Make a mindmap	Critically evaluate designs	Design
Body	Cut and paste Use hands to show	Mime Make a model to show	Use pattern and make	Use matrix to explain	Rank Assess skills	Act around a theme
Music	Sing	Name this song	Make sound effects	Analyse musical effects	Critically assess music	Write a song
Naturalist	Describe animals, plants	Collect examples	Observe Record	Identify patterns in nature	Review nature film	Make a garden
People	Describe person	Summarise this person Act like ...	Teach someone to	Do character analysis	Assess social skills	Act Direct a play
Self	Describe yourself	Explain your feelings	Set goals	Analyse strenghts	How do you learn best?	Plan ways to change

McGrath & Noble (2005, p. 56-57)

The MI/Bloom planning matrix has many advantages which are highlighted by McGrath & Noble (2005a). These are that tasks can be efficiently and easily planned

across all levels and within all key learning areas to reach the learning outcomes in a unit of work. It helps teachers to work in teams. It can be used in a diverse classroom when differentiating the curriculum and assessment to meet the students' individual needs. Students also benefit as they have the chance to be successful, are praised and gain respect.

3. Cooperative Learning (or Collaborative Learning)

The competitive nature of the Mauritian education system has been discussed in chapter 2. From a very young age, Mauritian students learn in an individualistic manner to be winners or losers and are not at all familiar with interacting with each other in learning. Cooperative Learning is proposed as an alternative to the traditional and competitive education as it has been demonstrated to be a more valuable way of learning than individualised or competitive learning (Slavin, 1983, 1990; Johnson & Johnson, 2004).

Cooperative learning theory originates with the work of Johnson, Johnson and Holubec (1986) with emphasis on five essential elements of cooperative learning groups: positive interdependence, individual and group accountability, face-to-face interaction, interpersonal and small group skills, and group processing (Howard & Fogarty, 2004). Cooperative learning means that students work together in small groups to optimise their own and other's learning (Johnson, Johnson & Holubec, 1998).

The cooperative approach in schools is enhanced by both the work of Slavin (1987, 1989, 1991) and Kagan (1989). Cooperative learning as a successful teaching pedagogical tool helps ensure the success of all students. Interaction in learning is

capitalised upon when students learn together. Indeed cooperative learning is believed to be crucial for differentiated learning (Howard & Fogarty, 2004).

The implications of cooperative learning in a diverse classroom where heterogeneity is the main characteristic, is that students of different socio-economic backgrounds, multiple intelligences, strengths and weaknesses encounter the value of diversity (Howard & Fogarty, 2004). There is no other pedagogical practice that generates such diverse positive results (Johnson, Johnson & Stanne, 2000). For cooperative learning to be successful, structural complexities need to be addressed and choices made. Teachers need to make decisions about communication, physical tools, learning group design, lesson supports, management strategies, success monitoring (Williams, 2002).

Johnson, Johnson and Holubec (1998) are able to highlight the benefits of cooperative learning after examining more than 550 experimental and 100 correlational studies. They found that there is academic progress as students achieve more, are more positive about learning, schools, teachers and others, develop interpersonal skills and greater self-esteem (Johnson, Johnson & Holubec, 1998). Johnson and Johnson (1987) posit:

If student-student interdependence is structured carefully and appropriately, students will achieve at a higher level, more frequently use higher level reasoning strategies, have higher levels of academic motivation, be more intrinsically motivated, develop more positive interpersonal relationships with each other, value more the subject area being studied, have higher self-esteem, and be skilled interpersonally (p. 9).

Howard and Fogarty (2004) conclude: “in other words, when carried out well, cooperative learning can help students academically, socially and emotionally” (p. 92).

In the Mauritian context, cooperative learning in the classroom as a pedagogical tool

would go a long way to encourage the development of interpersonal and collaboration skills.

4. *Thinking Hats*

Edward de Bono (1985) invented the Six Thinking Hats methodology to address all needs of students as individuals on the basis that human cognition and thought is of several types. The six modes of thinking used by individuals in problem solving courses are represented by six hats in a framework with a different colour given to each of the hats. The hats are described below:

- White Hat - Factual: It focuses on facts, figures and the information available.
- Red Hat - Emotional: It looks at a problem from the point of view of emotions, feelings and intuitions. The thinker does not have to justify his or her feelings.
- Black Hat - Critical: It assesses and judges the difficulties and problems.
- Yellow Hat - Positive: It focuses on the benefits and values of the problem.
- Green Hat - Creative: It looks at the alternatives and proposals when solving a problem.
- Blue Hat – Process Control: It is thinking about thinking (metacognition).

In the classroom, students working in groups can put on a coloured hat either actually or imaginatively. The Six Thinking Hats improve their communication and cooperative skills in problem-solving, brainstorming and creative lateral thinking.

Students can therefore solve problems in different ways, they can identify their strengths

and weaknesses in their approach and they are able to understand that different thinking is required in different learning situations.

5. *Habits of Mind*

Costa and Kallick (2000) formulated 16 Habits of Mind in their four book series *Habits of Mind: A Developmental Series*. Habits of Mind describe the characteristics of successful performers – cognitive as well as character traits - when they are challenged by something for which they do not immediately know the answer. Habits of mind are the characteristics of what intelligent people do when they are confronted with problems and the solutions are not obvious. The 16 Habits of Mind (Costa & Kallick, 2000) are:

- Persisting
- Listening with understanding and empathy
- Thinking flexibly
- Thinking about thinking (metacognition)
- Striving for accuracy
- Applying past knowledge to new situations
- Questioning and posing problems
- Thinking and communicating with clarity and precision
- Managing impulsivity
- Gathering data through all senses
- Creating, imagining and innovating
- Responding with wonderment and awe
- Taking responsible risks
- Finding humour

- Thinking interdependently
- Remaining open to continuous learning

In the classroom, the application of Habits of Mind is consistent with the spirit of the inquiry-based learning discussed earlier. When students are challenged by problems for which they do not have the solutions immediately, they may draw on the Habits of Mind to know how to act on them.

The repertoire of pedagogical models and approaches discussed above is based on philosophies of middle schooling, differentiation and learning outlined and discussed in the previous sections of the literature review. These concepts are discussed from the perspective of creative and innovative strategies to engage minds for a relevant and effective education for FI to FIII students in Catholic secondary schools in Mauritius. To complete this discussion of best practice, in the light of what have been outlined so far, there also needs to be a re-thinking and transfer of assessment procedures in the classroom. This is discussed in the following section.

Assessment: The Third Key Concept

*“To measure or to learn; that is the question”
(Broadfoot, 1996)*

The history of assessment reveals that formal and informal assessment of learning has existed for centuries and has developed into a major feature of schooling and a means to evaluate student achievement (Earl, 2003). The word “assessment,” derived from the Latin word *assidere* meaning “to sit beside or with” (Wiggins, 1993 cited in Earl, 2003), conjures up a too-familiar and traditional picture of the teacher in the

classroom, monitoring the students who are being tested. However there is a comprehensive list of definitions of assessment in the body of literature. Black and William (1998) define assessment broadly to include all activities that teachers and students undertake to obtain information that can be used diagnostically to alter teaching and learning. Assessment is “the process of gathering and interpreting evidence of learning to make informed inferences and decisions about how well students are progressing” (Office of Learning & Teaching, 2003). Burke (1999) defines assessment as the “ongoing process of gathering and analysing evidence of what a student can do” (p. xviii; italics in original).

In chapters 1 and 2, I described how assessment in Mauritian schools is largely summative, how school life is highly exam-driven and noted recent initiatives for new assessment practices. Earl (2003) described the summative role of assessment in schools which is “designed not only to report the achievement of individuals to parents, other teachers, and the students themselves, but also to make decisions about placements and life choices” (p. 7).

As Earl (2003) puts it, assessment in schools is the “local gatekeeper ... reinforcing the need to sort and select” (pp.7-8). This has been the objective of the CPE in Mauritius ever since its introduction, that is to be a selection tool.

However, in line with the more recent shifts to the learner-centred practices discussed earlier, there is also a transfer of assessment practices noted in the literature. The shift is from the “to sit beside” picture of assessment to it being a critical element embedded in learning (Earl, 2003). In 1971, Bloom, Hastings, and Madaus (1971) wrote a landmark book titled *Formative and Summative Evaluation of Student Learning* which

gave this other perspective on assessment (Earl, 2003). Bloom et al. (1971) observed that the development of the individual was the main purpose of schooling, and assessment and evaluation should both be identified as part of student learning (Earl, 2003).

In the light of the other key concepts already discussed in this literature review, as far as assessment is concerned, “we are at a turning point” (Gardner, 2006, p. 209).

Gardner (2006) observes that, “an increase in the breadth, or elasticity, of our concept of intelligence, then, should open the possibility for innovative forms of assessment that are far more authentic than the classical short-answer examinations (p. 209).

An immense challenge is the purposes and processes of assessment in classrooms (Earl, 2003). As Johnson and Johnson (2004) note, ‘instruction, learning, assessment and evaluation all take place in a network of interpersonal relationships in which people work cooperatively to maximise their learning and the learning of classmates’ (p.21). Earl (2003) identified three different approaches to classroom assessment that challenge the traditional concept and status quo:

- *Assessment of Learning*: Its main characteristic being summative, it is described as the prevalent type of assessment in schools. Designed in the form of tests, it is usually at the end of a unit or chapter, with results in the form of marks or grades which are reported to parents and students.
- *Assessment for Learning*: As an alternative to traditional assessment, the main purpose is formative which is to create “descriptions that can be used in the next stage of learning” (Earl, 2003, p. 24). Earl (2003) makes the assumption that classroom assessment can improve learning. Assessment

for Learning is embedded in learning, with teachers providing help and feedback to scaffold the next learning steps of their students.

- *Assessment as Learning*: The role of the student is enhanced as an active, engaged and critical assessor. Students personally supervise what they are learning and use the feedback from this monitoring to make alterations and even major changes in what they understand. Continued learning is the ultimate goal with the students reflecting on their own work.

In the classroom, the three assessment approaches have their place but Earl (2003) considers that in a balance between the three of them, *Assessment of Learning* should have the relatively smallest part while the other two approaches are integrated in a seamless way in the learning process occurring in the school day of the students.

The relevance of assessment *of, for* and *as* learning (Earl, 2003) for this study is that student learning is assessed in the context of teaching and is consistent with the constructivist theory which stresses the role of dynamic concepts in assisting learning (Howard & Fogarty, 2004). Within the philosophy of differentiation discussed earlier, there are implications about using what is known about learning and about each student to improve teaching and optimise each student's learning (Earl, 2003). Earl (2003) believes that assessment "becomes the mechanism for deciding what to do to push the learning forward" (p. 87). Fogarty (2005) observes that, "using the concept of a balanced assessment system, teachers employ three different kinds of assessment tools including traditional assessments, portfolio assessments and performance assessments" (p. 79).

Methods of Assessment

Traditional assessments have been discussed earlier. Portfolio assessment has been mentioned in the situational analysis in chapter 2. Described as a complement to traditional assessment, portfolio assessment is an assessment method which provides a visible record of the growth and development of the individual student as it is “an appraisal tool that engages students in the systemic collection, selection and reflection of their work over time” (Fogarty, 2005, p. 80).

Performance assessment is “an authentic task that demonstrates not only what a student knows but also what they are able to do” (Fogarty, 2005, p. 81). Through authentic assessment, students demonstrate their thinking and learning as their knowledge and skills needed for success in adult life are realistically assessed (Tileston, 2004, Marsh, 2004). For Marsh (2004), “authenticity arises from assessing what is most important, not from assessing what is most convenient... a reaction against narrowness in education” (pp. 56-57).

A wide range of assessment methods such as writing samples, drawings, charts, graphic organisers, pictures, audiotapes and videotapes are examples of learning materials which can be included in the portfolio (Howard & Fogarty, 2004). To demonstrate the knowledge and skills acquired by the student in presentations, portfolios and performances, rubrics are suggested as useful assessment tools and devices (Howard & Fogarty, 2004). The key to a good rubric is the development of the criteria used to assess (Howard & Fogarty, 2004, p. 173). Students discuss the criteria with the teacher and produce guidelines to follow when working on their product or their presentation (Burke, 1999 in Howard & Fogarty, 2004). Rubrics are found to make the assessment

tasks easier and more objective, giving more control to the student over his or her particular work (Howard & Fogarty, 2004).

Assessment as described above does not seek to label and categorise students but rather it extends learning and becomes a “mechanism for deciding what to do to push the learning forward” (Earl, 2003, p. 87).

The purpose of my literature search has been to describe how to sustain an effective education for diverse students in the lower forms of Catholic secondary schools in Mauritius through a discussion of the related concepts of middle schooling, differentiation, learning, pedagogies and assessment. A common attribute of the different theories, models and approaches discussed is that they all focus on two main points:

- The effectiveness of learning, which is in fact the core business of schools and,
- A departure from a traditional model of schooling currently in place in Mauritius.

These two points have implications for Catholic secondary schools in Mauritius to become school learning communities and involve enabling structures through school operations and the professional learning of teachers. In the next section I will discuss the enabling structures for Catholic secondary schools’ need to consider developing as school learning communities.

School Organisation for Learning

*“Learning organisations have an incentive structure that encourages adaptive behaviour”
(Brandt, 2003)*

Fogarty (2005) posits that “in essence, by changing the learning environment, the content inherently changes too” (p. 20). This section focuses on two aspects of the school organisation for learning, school structural changes conducive for differentiated learning and the professional learning of teachers. Next is a presentation and discussion of the school structural changes.

School Structural Change

*“Quality middle years schools are educational edifices with unique responses to the characteristics and needs of early adolescence”
(Howard & Fogarty, 2004)*

Central to this thesis is the consideration of the paradigm shift from traditional schooling to differentiated schools and classes that underpins effective implementation of the ‘mixed ability’ vision in Catholic secondary schools in Mauritius. Structural changes, drawn on the key concepts discussed above, are explored in this section to consider how effective differentiation and change might be enabled in these schools. These structural changes are systemic in nature and are mainly concerned with allocation of time and arrangements for students (Tomlinson, 2000). Structural changes are believed to be “particularly powerful ‘levers’ in providing momentum for differentiation” (Tomlinson & Allan, 2006, p. 74) and are discussed below.

Time

An efficient and effective structure for the school day serves the dual purpose of maximising teaching and learning benefits in the classroom as well as being beneficial to the education of middle school students (George & Alexander, 1993) For Ubben and Hughes (1992), time structure is designed to draw together people, materials, and curriculum at a chosen time and place for the purpose of instruction. For Hackmann and Valentine (1998), scheduling, is a tool to assist the school's goals and purposes in the areas of curriculum, instruction, student grouping, and staffing. And as Shurr, Thomason and Thompson (1995) put it, a quality schedule requires a balance between daily stability and the creative variety that is developmentally responsive to young adolescents.

Fogarty (1997), in discussing the issue of effective use of time in the classroom, posits, "it's not a question of time. It is a question of learning" (p. 7). In traditional schooling, time is related to the "traditional bell driven schedule" (Fogarty, 1997, p. 6). "The bell time refers to the traditional mailbox-slot design of departmentalised high schools in which the bell rings every 43-50 minutes to signal student rotation to the next class" (Fogarty, 1997, pp. 7- 8).

Fogarty (1997) raises the question of whether there is enough time for students to learn in depth in traditional schooling with the allotment of 40 to 45 minutes for each period. She highlights the shortcomings of the traditional 'bell driven schedule' (p. 6) where teachers cannot give meaningful attention to each student every day and the student may follow six classes in periods of about 45, consequently preventing teachers from teaching well and students from learning well. The rigid Mauritian school time allotment is a situation where students have, on average, seven classes a day and

sometimes up to seven different teachers, thus contributing to a confused learning environment instead of an engaged one.

Three issues for schools are the provision of quality time, the creation of a school climate and the provision of varying learning time (Canady & Rettig, 1995). It may be that blocks of time beyond 65 minutes are necessary to support the types of activities that promote in-depth learning (Hackmann & Valentine, 1998). Joseph Carroll, as long ago as in the mid 1960s, was interested in block scheduling as a kind of 'best practice' (Fogarty, 1997). Fogarty (1997) believes that the concept is based on concerns about allowing sufficient time to immerse students in the learning experience. Hackmann and Valentine (1998) propose three scheduling types:

- Traditional departmentalised schedule: a fixed number of daily periods of uniform length.
- Alternating-day block schedule: blocks of 90 minutes with fewer classes meeting daily, fewer class changes and no rush to complete instructional activities.
- Flexible interdisciplinary block schedule.

The 90 minutes block schedule organised in a four-day period supports the concept of differentiation as it is believed to allow students time to create their own learning patterns, think and reflect, question and discuss, challenge and create, develop skills, knowledge and understanding, and it supports a personalised education (Carroll, 1989, cited in Fogarty, 1997). Indeed, a well-crafted schedule reduces fragmented instruction in the middle years (Canady & Rettig, 1995). It is believed to produce a more effective use of time, space and human and material resources; enhance the instructional

climate; assist in solving problems related to the delivery of instruction and help setting up programs and instructional practices (Canady & Rettig, 1995).

The concept of the block schedule is believed to encourage more involved, more active, and more student-initiated learning (Fogarty, 1997). It provides sufficient time for learners to master content and skills in the core academic subjects and also for a variety of strategies such as interdisciplinary instruction, cooperative learning, ICT, experiments, authentic assessments, active learning, independent study, small or large group activities, development of critical thinking skills (Hackmann & Valentine, 1998).

Block scheduling also allows for opportunities for teachers to become learners. Time must be spared for teachers to be learners and build learning communities (Gabelnick et al., 1990). Efficient use of time is able to provide common release time for all teachers by shared subject areas and professional learning opportunities for teachers without sacrificing instructional time for students (Canady & Rettig, 1995).

The Physical Learning Environment

Marsh (2004) believes that the physical learning environment is a vital element in any effective teaching and learning process and the classroom should not be taken for granted. It follows then, that the physical learning environment is critical for teaching and learning for effective differentiation. However many classrooms have not changed much from when our parents were at school, with the arrangement of furniture and space encouraging didactic methods of teaching. Since the classroom environment is an integral part of the learning process and has an impact on both teachers and their students (Emmer et al., 2000), physical conditions and space allocations have an important impact on the attitudes, behaviours and even the achievements of students (Marsh, 2004).

One room arrangement principle is to create a classroom setting conducive for a teaching and learning style rather than impede it (Marsh, 2004). As Marsh (2004) notes, a standard classroom is 12 metres long and 8 metres wide and is designed to accommodate about 30 students. The 'action zone' (Brophy, 1981 cited in Marsh, 2004) is the space in front or in the middle of the classroom where the teacher and students interact.

As far as furniture is concerned, desks arranged in rows in the classrooms are the least economical way to use space, do not leave much room for the teacher to move round and are not conducive to cooperative learning (Howard & Fogarty, 2004). Marsh (2004) proposes three different arrangements:

- Students are seated in the classroom where they can comfortably engage in the learning activities;
- Students are located at desks or tables next to peers with whom they have a close and reciprocally positive relationship;
- Students are located so that can readily access the teacher and resources in the room.

As well, display of posters, charts and students' work is important and pin-up boards and cupboards sides can be used as display space (Marsh, 2004). In the context of differentiation, learning stations and workplaces are places where small groups of students come to work on a special activity (Marsh, 2004). Furniture is arranged accordingly for students to face each other to be able to work together. The design generates openings for discussion, interaction and builds a sense of community. There is more time for students to explore topics and move from surface learning to deep learning.

The physical and creative layout of a classroom, as depicted above is compatible with a constructivist teaching approach to learning.

Schools have been criticised as being “architecturally and environmentally sterile,” with “an insipid, cavernous and regimented structure” (George & McKinley, 1974, cited in Marsh, 2004, p. 133). Indeed, the “classroom environment is such a potent determinant of student outcomes that it should not be ignored by those wishing to improve the effectiveness of schools” (Fraser, 1986, cited in Marsh, 2004, p. 134).

After having discussed two elements of structural changes in schools which might be effective as enabling a school to become a learning organisation, I will now discuss the professional learning of teachers as another critical factor in the culture of the school organisation for differentiated learning.

Teacher Professional Learning

*“Successful learning for teachers requires a continuum of coordinated efforts that range from preservice education to early teaching to opportunities for lifelong development as professionals”
(Bransford, Brown & Cocking, 2005)*

Here, I discuss teacher professional learning as it relates to the concept of differentiation through best practice for quality learning. I have already mentioned in chapter 2 how the practice of professional development and learning for teachers both at primary and secondary levels is practically non-existent in Mauritius. This section discusses the literature on teacher professional learning and development and teacher empowerment as an effective assisting factor into making school organisations, learning communities.

Teacher Professional Learning and Development

Day (1999) describes the professional development of teachers as,

The process by which, alone and with others, teachers review, renew and extend their commitment as change agents to the moral purpose of teaching; and by which they acquire and develop critically the knowledge, skills and emotional intelligence essential to good professional planning and practice with children, young people and colleagues through each phase of their teaching lives (p.4).

The literature on teacher professional development describes it as activities which focus on teacher post-initial professionally related education and training with the ultimate purpose of improving student learning (McRae et al, 2001; Hughes, 1991; Fickel, 2002; Bellanca, 1996). Teacher professional development designed as in-service education has three models of delivery: the outside-in, inside-in and inside/outside models. The outside-in model of professional development is drawn upon the knowledge of outsiders to the school for teachers to reproduce in their everyday practice (Hatton, 1988). Within the inside-in model, teachers in the school community are responsible of their own learning and do not need the expertise of external staff developers (King, Hill & Rettalick, 1997) The inside/outside model uses the knowledge of both teachers and researchers to integrate both theory and practice (King et al., 1997).

Fullan (1991) discusses the flaws in teacher professional development and training and the seeming lack of power of teachers to transfer to the classrooms what they have acquired during workshops and conferences. “Nothing has promised so much and has been so frustratingly wasteful as the thousands of workshops and conferences that led to no significant change in practice when the teachers returned to their classroom” (Fullan, 1991, p. 315).

The ineffectiveness of in-service education is attributed to the following factors:

1. One- shot conferences are widespread but ineffective.
2. Topics are frequently selected by people other than those for whom the in-service is intended.
3. Follow-up support for the ideas and practices introduced in in-service programs occurs in only a very small minority of cases.
4. Follow-up evaluation occurs infrequently.
5. In-service programs rarely address individual needs and concerns.
6. The majority of programs involve teachers from many different schools and/or school districts, but there is no recognition of the differential impact of positive and negative factors within the systems to which they may return.
7. There is a profound lack of any conceptual basis in the planning and implementing of in-service programs that would ensure their effectiveness (Fullan, 1991, p. 316).

According to Bransford, Brown and Cocking (2000), “typical workshops tend to occur once, deal with decontextualised information, and often do not resonate with teachers’ perceived needs” (p. 204). Bransford et al., (2000) believe that the “typical approaches to formal teacher professional development are antithetical to what research findings indicate as promoting effective learning” (p. 204).

Even though teacher learning is a fairly recent research area, findings from new developments in the science of learning suggest new learning experiences for teachers are possible (Bransford et al., 2000). The Australian *Blueprint for Government Schools* (Department of Education & Training, 2003) highlights the complexity, demanding and dynamic nature of teaching as a profession, urging teachers to master new types of knowledge and skills and to be acquainted with new understandings of teaching and learning processes. The challenge for teachers is amplified by rapid societal changes which exert pressure for “creative, adaptable and self-directed learners” (Department of Education & Training, 2003, p. 4).

Professional learning of teachers is designed to be a lifelong learning process (Department of Education, Employment & Training, 2003, Fullan, 1991, Darling-Hammond, 2000). The vision outlined in the *Blueprint for Government Schools* (Department of Education, Employment & Training, 2003) enhances the ongoing process of teacher professional learning which is school-based and directly relevant to the daily work of teachers. The purpose of teacher professional learning is not to revise their knowledge and expertise but rather to make them lifelong learners with a view to “encouraging creativity, reflection and consideration of the best forms of education for the different needs of the children who they teach” (McCullough, Helsby, & Knight, 2000, p. 78). As Senge (1990) puts it, teacher professional learning means “expanding the ability to produce the results we truly want in life. It is lifelong generative learning” (p. 142).

The idea of generative learning put forward by Senge (1990) suggests that the ability of a person to create is only available when something is of deep interest to that person. Ingvarson (2002) posits that generative learning develops the teacher’s knowledge and understanding, with the content of the professional learning as important, if not more, as the process. Indeed, the learning curve of beginning teachers remains high for the first three or four years and then flattens as teachers become resistant to learning (Barth, 1996). It is astonishing how teachers “burn out” and become toxic to learning the longer they stay in schools (Barth, 1996).

Thus, effective professional learning needs to continue to inspire teachers to remain lifelong learners. Highly effective teacher professional learning needs to be significant to intervene in teachers’ daily life. This is discussed next.

Effective Professional Learning

Day (1999) believes that in an effective teacher learning project requires an understanding and consideration of teacher experience and expertise, professional knowledge, competence and capability as well as the developmental stage of the teacher.

Seven principles have been designed to support highly effective professional learning (Department of Education, Employment & Training, 2003). They are:

1. Professional learning is focused on student outcomes (not just individual teacher needs).
2. Professional learning is focused on and embedded in teacher practice (not disconnected from the school).
3. Professional learning is informed by the best available research on effective learning and teaching (not just limited to what they currently know).
4. Professional learning is collaborative, involving reflection and feedback (not just individual inquiry).
5. Professional learning is evidence based and data driven (not anecdotal) to guide improvement and to measure impact.
6. Professional learning is ongoing, supported and fully integrated into the culture and operations of the system – schools, networks, regions and the centre (not episodic and fragmented).
7. Professional learning is an individual and collective responsibility at all levels of the system (not just the school level) and it is not optional.

(pp. 14- 16)

Similarly, the *Professional Standards for Teachers* (Education Queensland, 2005) have been developed for teachers to design and implement learning experiences “that not only achieve common curriculum outcomes but also cater for the learning needs, styles and preferences of their students” (p. 1). With an intentional professional learning and development perspective, the standards:

- Provide a platform for teachers to identify their professional development needs and drive their continuing learning and development;
- Inform program development for pre-service education;

- Represent the aspirations of the teaching profession (p.2).

The development of teachers so that they are able to incorporate ‘mixed ability’ teaching (differentiation), the subject of this thesis, has specifically been addressed by Tomlinson and Allan (2006). They suggest eight characteristics of effective staff development for differentiation:

- Staff development should be built on a common vocabulary related to differentiation;
- Staff development should attend to teachers’ levels of readiness (Information, Comprehension, Skills, Commitment), Interest, and Preferred Learning Modes;
- Staff development should offer options directly focused on particular needs of particular grade levels and subject areas;
- Staff development plans must include school administrators and other district leaders who will work with teachers;
- Staff development on differentiation should consistently emphasise high-quality curriculum and instruction as the starting point for meaningful differentiation;
- Staff development should be planned to ensure transfer of knowledge, understanding, and skill into the classroom;
- Staff development offered by the school or district should be consistent and aligned with district differentiation goals;
- Staff development that asks much of teachers must recognize teacher efforts (pp. 79-82).

Tomlinson and Allan (2006) believe that variations in teacher proficiency must also be considered if teacher professional development is to be productive. On the basis of Gardner’s (2006) theory of multiple intelligences and how people learn, Brundage and MacKeracher (1980) suggest that a variety of teaching and learning activities for different types of adult teacher-learners will enable some of their creativity. Bransford et al., (2000) posit that programs will be successful when they engage teachers in similar learning activities to those they will use with their students. The Australian *Blueprint for*

Government Schools (Department of Education, Employment & Training, 2003) outline five approaches to help teachers study and think about the impact of their practice and produce generate ideas for improvement. The five models are: action research; examination of student work; study groups; case discussions; peer observation and lesson study. According to Tomlinson & Allan (2006), staff development opportunities for differentiation may include teachers working in teams working over extended periods of time. These are discussed next.

Professional Learning Teams

The context in which the professional learning teams operate is important as teachers mainly learn in the workplace which sustains that learning and, consequently, becomes an effective source of learning for all (Loucks-Horsley, 1998). Teachers are no longer expected to work in isolation, so learning opportunities are best offered through the professional learning teams. In Professional learning teams teachers work in a spirit of openness and critical reflection and they share their ideas, their knowledge and skills and their experiences with each other, thus engaging in an ongoing process of inquiry to foster deep team learning (Department of Education, Employment & Training, 2003).

The purpose of professional learning teams is to organise teachers into learning teams for problem-solving and learning and including a learning-application-refinement-application cycle (Department of Education, Employment & Training, 2003). Teachers in professional learning teams meet regularly over an extended period of time to analyse student learning data which will help in identifying the content of their professional learning and they have the opportunity to learn, reflect, refine and re-apply their learnings (Department of Education, Employment & Training, 2003). The collaborative nature of

professional learning teams is a characteristic which makes the school a learning community.

The PEEL Project as an Example of Learning

The Project for Enhancing Effective Learning (PEEL) (Baird & Mitchell, 1986; Baird & Northfield, 1992; Dusting, 1996, Mitchell, 2005) is an example of the effectiveness of a professional learning team approach based on an action research school-based project. In 1985, in Melbourne, Australia, a group of teachers and academics concerned about passive and dependent learners in the classroom decided to research effective classroom approaches that would stimulate and support active and independent student learning (Mitchell, 2005). Smith (2000) notes that in her own experience of a well-performing PEEL group, support from peers and others was an incentive to change as it offered encouragement, collaborative and interactive opportunities. PEEL teachers became highly aware and critical of their teaching practices and became confident in their efforts for change even if they failed and made mistakes. Though it took a very long and sustained process of learning, expertise was built up. PEEL empowers teachers to reflect and change their practices, particularly when facing difficult challenges like teaching mixed ability classes (Smith, 2000). Teachers are viewed as “generators of wisdom, who are proactive in promoting quality learning, who are prepared to problematise their practice and to generalise about effective practice and who are willing to document and share their ideas and experiences” (Mitchell, 2005, p.1).

PEEL provides a useful model for teacher professional learning in Mauritius. Professional learning teams of teachers which are either subject-based or interdisciplinary would be an enabling structure to assist a culture of ongoing effective learning of teachers

in Catholic secondary schools in Mauritius. A PEEL approach would give teachers time to reflect, share and discuss both positive and negative experiences of teaching in diverse classes, and the opportunity to try out and evaluate new approaches in a culture that supports teacher learning. This professional school-based action research would focus on the teachers' voice and empower them to take control of their own learning. Professional learning teams have the potential to assist schools to develop as professional learning communities, discussed next.

Professional Learning Communities

A schools that regards itself as a learning community will adapt and respond creatively to educational and societal changes (Hill, Pettit & Dawson, 1995). "The path to change in the classroom core lies within and through teachers' professional communities" (Talbert & McLaughlin, 1994, p. 18). The teacher professional learning communities literature draws on the earlier work of Talbert & McLaughlin (1994), Talbert, McLaughlin and Rowan (1993) and Hannaway and Talbert (1993). Continuous teacher professional learning communities where learning is the core business of schools is described in Darling-Hammond (2000), Basica and Hargreaves (2000) and Queensland School Reform Longitudinal Study (2001).

The literature reveals that both the terms "learning community" (Sergiovanni, 1994; Johnson 1995; Morrow, 2003; Department of Education, Employment & Training, 2003) and "learning organisation" (Senge, 1990; Argyris 1993; Watkins & Marsick, 1993) are used in relation to schools and other organisations which are attempting to learn continuously and transform themselves. Bransford et al., (2000) suggest that "teachers are key to enhancing learning in schools" (p. 203) while Ingvarson (2002)

concludes that learning occurs by the “collective power of the school staff to improve student achievement school-wide” (p. 12).

Teacher professional learning communities focus “particularly upon the ongoing professional collaboration and learning of the teachers in the school” (Ingvarson, 2002, p. 5). Six characteristics of teacher learning communities which operate synergistically are: shared norms and values; deprivatisation of practice; reflective dialogue; collaboration; a focus on student learning and teachers’ collective responsibility of student learning (Louis, Kruse & Marks, 1996; Queensland School Reform Longitudinal Study [QSRLS], 2001).

Hill et al., (1995) argue that the key feature of a school as a learning community is learning itself. There is a shift from some teachers who learn to all teachers who learn by having all reconsider their current traditional teaching practices, and who have a common goal in what they want their community to accomplish (Hill et al., 1995). Fullan (1993) believes that teachers actively acquire a strong ownership which occurs from their full commitment to solving problems.

In the light of the situational analysis and literature discussed earlier, it would appear that Catholic secondary schools in Mauritius would benefit from the culture of schools as learning organisation, as all teachers would support the change process involved in the implementation of the ‘mixed ability’ vision in their school through improvement and mastery of their teaching practices. They would be engaged in what Fullan (1993) referred to as reculturing and restructuring of their school.

In order for effective and authentic teacher learning to occur within a school as a learning community, effective leadership is critical and must adopt an enabling role,

particularly if resistance is to be encountered. In the context of the articulation of the ‘mixed ability’ vision and mission in Catholic secondary schools in Mauritius, I next discuss the leadership roles of the key actors in schools.

Leadership

*“A leader is a dealer in hope”
Napoleon Bonaparte (no date)*

As discussed at length, the ‘mixed ability’ approach which the BEC is seeking to implement implies a move from a traditional teacher-centred, streamed approach, to one that is more learner-focused and caters for diverse learners. As such, Catholic secondary schools in Mauritius are at the beginning of a process of profound and dynamic educational change. In this section, I will discuss the role of management and leadership in this change which is essential for effective differentiation within schools and classrooms.

Managing and Leading Educational Change

Altrichter (2000) refers to the kaleidoscopic character of change when he stresses the changing nature of leadership roles. A new language has emerged to manage the forces of dynamic change (Fullan, 1993). Related terms such as skills, creative thinking, committed action, critical thinking, innovation, mobilising, strategic planning, catalyst, generative learning, vision and problem solving have been highlighted. Resistance to change in schools, discussed in chapter 2, is best managed by the useful and related leadership concepts of transformational leadership, instructional leadership, pedagogical leadership and parallel leadership. These are discussed next.

Transformational Leadership

The influential theory of transformational leadership has been extensively researched and developed (e.g. Sergiovanni, 1984, 1990; Bass & Avolio, 1993; Leithwood, 1994; Leithwood, Jantzi, & Steinbach, 1999, Caldwell, 1999). The concept is described as the key for achieving excellence in schools (Gurr, 1999). The lasting power of the concept of transformational leadership for schools in times of change, is evidenced by Leithwood and colleagues (1999).

The dimensions of transformational leadership in schools are organised in different categories. These include:

- Setting directions (includes vision building, goal consensus and the development of high-performance expectations);
 - Developing people (includes the provision of individualised support, intellectual stimulation and the modelling of values and practices important to the mission of the school);
 - Organising (culture building in which colleagues are motivated by moral imperatives and structuring, fostering shared decision-making processes and problem-solving capacities);
 - Building relationships with the school community.
- (Leithwood et al., 1999, p. 39)

Similarly, Caldwell (1999) suggests five dimensions of transformational leadership:

- Cultural leadership, referring to a culture of excellence underpinned by the values of quality, effectiveness, equity, efficiency and empowerment, and effecting a shift from a culture of dependence in a centralised system to a culture of self-management;
- Strategic leadership, referring to a capacity to understand emerging trends in society at large and in schools generally, discerning their likely and preferred impact on their school; working with others to develop their capacity for state-of-the art learning;
- Educational leadership, referring to the building of capacity among teachers, parents and students by “nurturing a learning community;”

- Responsive leadership, effectively, ‘coming to terms with accountability’ by recognizing the right of different individuals and institutions to know how well the school is doing;
- Strategic management, which involved emergent strategy, strategic planning, entrepreneurship and strategic intent (p. 259).

There are detractors, however. Gronn (1995) and Lakomski (1995) both criticise the concept of transformational leadership. Gronn (1995) argues that the theory is greatly dependent on the figure of the charismatic leader in schools. Lakomski (1995) found that the concept cannot explain the kind of learning activity demonstrated by school leaders to be effective. However, Gurr (1997) notes that while these criticisms are pertinent to assess the value of transformational leadership, research on principal and teacher perceptions of principals as leaders show that the theory of transformational leadership remains important for education, and I believe relevant for the Catholic system of education in Mauritius.

McLaughlin (1997) positions the transformational leader as “one who motivates from the community a commitment to transcendental goals which incorporate notions of achievement, risk and self-actualisation over and above safety and security concerns” (p. 18).

McLaughlin (1997) significantly points out the relation between the concept of transformation and the notion of change when exploring the concept of leadership in the Catholic school. McLaughlin (1997) posits:

Leadership means change, which is the result of a constant realignment of the practices of the organisational culture with the organisation’s authentic vision ... The processes of renewal in Catholic schools are integral to their authenticity, if not their nature ... and are in accordance with Pope John XXIII’s call for ‘aggiornamento’ when he convened the Second Vatican Council. This ‘updating’ principle includes a consideration of the signs of the time with the historical perspective, since as a Pilgrim church

composed of fallible members, it is never perfect and is always in need of change and reform (pp. 20-21).

The transformational leader is persistently engaged with the change process, is positive about change and is the key person to sustain change in the school organisation. The dimensions of transformative leadership are demonstrated by highly knowledgeable, skilled, expert and competent school leaders and teachers (Caldwell, 1999). However in order to effect the major changes advocated for Mauritian Catholic secondary schools, transformational leadership also requires a specific focus on the relationship between leadership and pedagogy that is, pedagogical leadership. This is discussed next.

Pedagogical Leadership

During the 1980s, instructional leadership was the dominant and principal theory considered important for school effectiveness (Gurr, 1997; White, 2000). The problematic nature of instructional leadership as well as successful school leadership outcomes based upon the quality of pedagogy provided by teachers and students' engagement in learning and the difficulty of pedagogic change, has drawn attention to the topic of pedagogical leadership (Cavanagh et al., 2005). Sergiovanni (1998) proposes pedagogical leadership as a complement to current leadership strategies that is, bureaucratic leadership, visionary leadership, entrepreneurial leadership which have been described as limited in schools managing change.

Sergiovanni (1998) posits pedagogical leadership as a complement "that invests in capacity building by developing social and academic capital for students and intellectual and professional capital for teachers. Support this leadership by making capital available to enhance student learning and development, teacher learning and classroom effectiveness" (p. 38).

Inspiring and motivating followers in times of pedagogic change is an issue for all school leaders as they address issues of change (Cavanagh et al., 2005). Pedagogical leadership is a useful concept in educational change as it is an act which motivates others and takes into account the “Why?”, “How?”, and “When?” of learning, not just the “How?” (Cavanagh et al., 2005, p.6). The focus is not just on the role of principals in leading the change but seeing change in schools as a distributed multi-dimensional task (Hargreaves et al., 2001; cited in Cavanagh 2005). Distributed leadership is inherent in pedagogic leadership and emphasises the necessity to broaden knowledge finding and teaching by teachers in charge of their own learning and that of their colleagues (King, 2002; McEwan, 2003; Supovitz & Poglinco, 2001 in Cavanagh et al., 2005). In the same vein, educational change is also supported by another related concept of leadership, parallel leadership.

Parallel leadership

The concept of parallel leadership as a support for educational change emerged from a five-year study of schools which had experienced successful organisational reform (Crowther, Hann & McMaster 2001). The use of the metaphor “parallel” implies harmony, directionality, alignment and mutuality which are the principles guiding successful school reform (Crowther et al., 2001). Three principles of parallel leadership have been observed in successful school reform:

- Principle 1: When teacher-leaders and administrator-leaders engage ‘in parallel’ they share a sense of purpose.
- Principle 2: Parallel leadership connotes relationships that are grounded in mutual trust.
- Principle 3: Parallel leadership values individual expression.

(Crowther et al., 2001, p. 14)

These three principles are integrated in the definition of parallel leadership which is “a process of teacher-leaders and their principals engaging in collective action to build capacity. It embodies mutual respect, shared purpose and respect for individual expression and contribution” (Crowther et al., 2001, p. 14).

Researchers believe that parallel leadership is powerful as a new approach to school leadership (e.g. Crowther et al., 2001). Teacher-leaders and principal-leaders work in parallel to enable an integration of three processes that they believe will set free the power of teaching to build capacity and create new meaning systems. These processes are professional learning, culture building and school-wide pedagogy. These combined processes for enhanced school outcomes are presented in Figure 3.2 below.

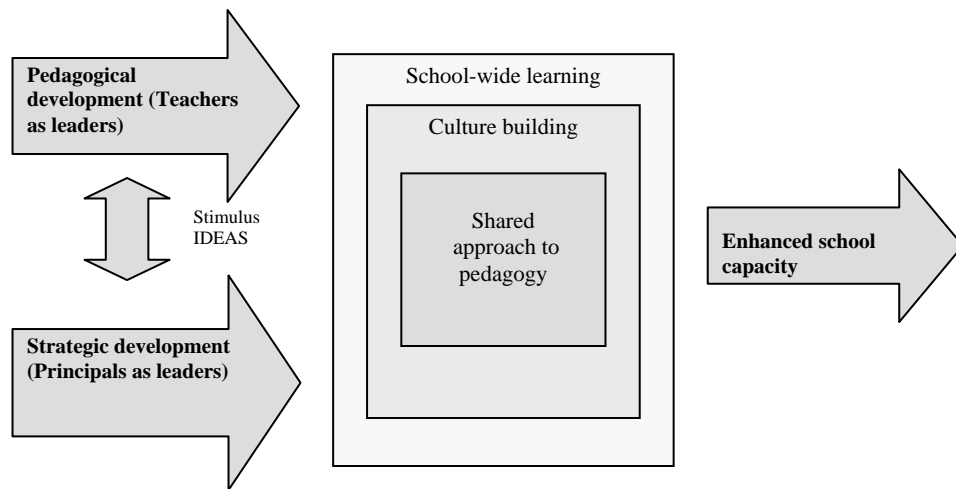


Figure 3.2 *Leadership for Enhanced School Outcomes: A Synthesis of the Research* (Crowther et al., 2001, p. 14).

In this section and previously, I discussed how constant change in society exerts pressure for change in schools. The kaleidoscopic character of change as described by Altrichter (2000) emphasises the changing nature of leadership roles. Resistance to change in schools can be managed by the conceptualisation and implementation in schools of these useful leadership concepts: transformational leadership, pedagogical leadership and parallel leadership. However, Fullan (1993) asserts that “systems do not change themselves, people change them” and “productive educational change will mean productive individuals” (p. 7). Consequently, the *transitive* (meaning “I change the situation”) image is most useful to articulate the literature in the following section on the various agents of change (Altrichter, 2000).

Leadership for Differentiating Schools and Classrooms

Earlier, I referred to the complex kaleidoscopic nature of change and the changing nature of leadership roles which have implications for various actors involved in leadership positions for differentiating schools and classrooms. These actors who have the role of agents of change are the school manager, the rector (principal), the head of department and the teacher. I will discuss each of these roles in turn.

The manager

In chapter 1, I gave a brief description of the role of the manager in Catholic secondary schools in Mauritius, who share administrative duties with the rector. Tomlinson and Allan (2006), discussing the role of an administrator as a facilitator of change in the context of differentiation, posit that the manager/administrative role has various responsibilities which include planning for change to become visible, budgeting, organising resources for change, working with teachers to clarify their needs related to the change process, and formally assessing both the process of change and its effect. The manager has the role of a transformational leader discussed above.

The rector (principal)

The rector is a key player as a school level leader who is charged with the following:

- Makes the vision a daily reality in the context of the school and classroom.
- Coaches for change.
- Guides individuals and the faculty as a whole in working on smaller facets of a larger vision with the goal of tempering tension and frustration as well as ensuring steady and observable successes.
- Deals with issues of accountability at a classroom level.
- Serves as a confidant for teachers and other building administrators related to the change.

- Articulates to district leaders and managers needs, feelings, and progress of school-level educators.
- Engages in team-building for change.
- Ensures that teachers are appropriately supported in and recognised for their efforts toward change.

(Tomlinson & Allan, 2006, p. 41)

The rector, as a key actor, would act as both a transformational and pedagogical leader in the change process of differentiating the school in order to support the change process and inspire the teachers. The need for key curriculum and pedagogical roles for a move towards best practice encourages a distributive and parallel role of leadership is a role for heads of department and teachers.

The head of department

The pivotal position of the subject head of department in relation to change and restructuring within the school is emphasised by a number of authors (e.g. Ogilvie & Bartlett, 1979; Glover & Miller, 1999; Hord & Murphy, 1985; Hannay 1994a, 1994b; Siskin, 1997). For Turner & Bolam (1998), the subject head of department is the key person in the school organisation responsible for the quality of teaching and learning. The tasks of the head of department include communication between the management team and the department; coordination, development, documentation and evaluation of the subject program; implementation of teaching standards of the members of the department; organisation of regular meetings with teachers in the department, formally and informally; encouragement of team spirit and a culture of collaboration in the department; management of resources and organisation of professional development for the teaching staff (Bell, 1996; Glover, Gleeson, Gough & Johnson, 1998; Wise & Bush, 1999; Turner, 2000; Dinham, Brennan, Collier, Deece, & Mulford, 2000; White, 2001;

Bolam & Turner, 2003). All these responsibilities can be grouped in four categories: academic, administrative, managerial and educative nature (Wise & Bush, 1999; Wise, 2001).

Heads of department are expected to encourage change and innovation, review and renew teaching practices (Bhindi, 1998). As a leader and a change agent, the head of department is the “emerging assister,” the “teacher improver,” the “program improver,” the “facilitator” and the mediator of change (Glover & Miller, 1999; Gleeson & Shain, 1999; Hord & Murphy, 1985; Hannay et al., 2001). The head of department as an effective professional and an expert in his /her own field would be a transformational, pedagogical and a parallel leader in the school organisation. A confident grasp of the subject matter and skills would help achieve high quality desired educational outcomes of the ‘mixed ability’ classes in Catholic schools in Mauritius and thus the subject head of department plays a critical and key role.

Finally, perhaps the most important key actors in differentiating the classroom are the teachers themselves. Teachers are the frontline, the people who immediately contact the students and decide whether or not to implement change.

Teachers

The emergence of a new leadership paradigm for teachers has been described by Katzenmeyer and Moller (1996):

Within every school there is a sleeping giant of teacher-leadership, which can be a strong catalyst for making change. By using the energy of teacher leaders as agents of school change, the reform of public education will stand a better chance of building momentum (p. 2).

The role of teacher leadership in enhancing school success is advanced by Crowther Kaagan, Ferguson and Hann (2002) in *The Teachers as Leaders Framework*:

Teacher Leaders

Convey convictions about a better world by

- Articulating a positive future for students
- Showing a genuine interest in students' lives
- Contributing to an image of teachers as professionals who make a difference
- Gaining respect and trust in the broader community
- Demonstrating tolerance and reasonableness in difficult situations

Strive for authenticity in their teaching, learning, and assessment practices by

- Creating learning experiences related to students' needs
- Connecting teaching, learning, and assessment to students' futures
- Seeking deep understanding of tacit teaching and learning processes
- Valuing teaching as a key profession in shaping meaning systems

Facilitate communities of learning through organisation-wide processes by

- Encouraging a shared, schoolwide approach to pedagogy (teaching, learning, and assessment)
- Approaching professional learning as consciousness raising about complex issues
- Facilitating understanding across diverse groups while also respecting individual differences
- Synthesising new ideas out of colleagues' dialogues and activities

Confront barriers in the school's culture and structures by

- Testing the boundaries rather than acquiring the status quo
- Engaging administrators as potential sources of assistance and advocacy
- Accessing political processes in and out of the school
- Standing up for children, especially marginalised or disadvantaged individuals or groups

Translate ideas into sustainable systems of action by

- Organising complex tasks effectively
- Maintaining focus on issues of importance
- Nurturing networks of support
- Managing issues of time and pressure through priority setting

Nurture a culture of success by

- Acting on opportunities for others to gain success and recognition
- Adopting a no-blame attitude when things go wrong
- Creating a sense of community identity and pride (pp. 4-5)

Teacher leadership embraces not only passion and commitment of teachers for their profession but is also consistent with the imperative of school transformation. Teachers as parallel leaders in the implementation of the ‘mixed ability’ program would have the potential to become good classroom practitioners and be proactive towards best practice in the differentiating the classroom.

Tomlinson and Allan (2006) believe that in the systemic change for differentiating schools and classrooms, leaders are dream keepers. All the key actors, managers, rectors, heads of department, involved in articulating the vision and mission of Catholic education in Catholic secondary schools in Mauritius are seen in their respective leadership roles as “active agents,” (Thompson & Thompson, 1996, p. 30). Their role is to liberate minds by being committed, imaginative and creative (Thompson & Thompson, 1996). In the light of the discussion earlier on schools as learning organisations, all key actors are leaders through their presence at all levels of the learning community (Hill et al., 1995). Leaders are designers, teachers and stewards (Hill et al., 1995).

Discussion and Conclusion

This presentation and discussion of the International body of literature in this chapter was aimed at answering my first research question, that is

1. What are the characteristics of an integral model of education that will address diverse learners in the classroom?

I am now able to answer this question by identifying an integral model for an effective education of students based on the unique characteristics of the student in the middle level of schooling that I believe can be applied in the Mauritian situation. This is summarised in Figure 3.3. It is based on and informed by the student's developmental stage in order to develop an approach which addresses the critical transition period of moving from childhood to adolescence, the inquisitive and exploring nature of the student and the cultural diversity within the classroom.

For the design to be effective, a learner-centered approach is advocated underpinned by the concept of differentiation (Tomlinson, 1999). This innovative paradigm shift implies the development of a personalised learning approach which targets the learner's individual needs. The classroom is to be reconceptualised as heterogeneous in terms of the learners' individual capacities, abilities, interests and readiness. This understanding and recognition of learners' individual differences is key to learning through the differentiation of content, process and product (Tomlinson, 1999; UNESCO, 2004) and departs from the current traditional, one-size-fits-all education in Mauritius.

The integral model is grounded in related theories of learning such as constructivist learning (Brooks, 1999), Multiple Intelligences (Gardner, 1999), the Triarchic Theory of Intelligence (Sternberg, 1985) and brain-based learning (Caine & Caine, 1991; Sousa, 2001; Howard & Fogarty, 2004). The goal is to move from a passive consumption of knowledge and memorisation of facts to active creation of knowledge and through meaningful cognitive tasks.

The vehicles of learning would, from the perspective of differentiating the process (Tomlinson, 1999, UNESCO 2004), engage the learner's mind. Examples of

creative and innovative strategies advocated were Bloom's cognitive taxonomy (Fogarty, 2005; McGrath & Noble, 2005a), the MI/Bloom Planning tool (McGrath & Noble, 2005a), cooperative learning (Slavin, 1993; Johnson & Johnson, 1987), Thinking Hats (de Bono, 1985) and Habits of Mind (Costa & Kallick, 2000). Differentiating the product (Tomlinson, 1999; UNESCO, 2004), on the other hand, suggested rethinking of assessment from merely measurement to embedding in the learning process. Formative and authentic assessments (Earl, 2003) would build the learner's confidence and motivation and extend his/her learning curve.

The integral model is contingent on the school reconceptualising itself as a learning organisation. The physical learning environment (Fogarty, 1997, 1999; Hackman & Valentine, 1998; Marsh, 2004), that is, time and space, is important for flexibility which is central to differentiated learning at the middle level of schooling. Another critical aspect is the professional learning of teachers which should be ongoing and under teachers' own control as they strive to become active teacher-researchers of their practice (Smith, 2000). Finally, to be fully operational, the integral model would require human resources such as the transformational and pedagogical leadership capacities of rectors and the pedagogical and parallel leadership capacities of heads of department.

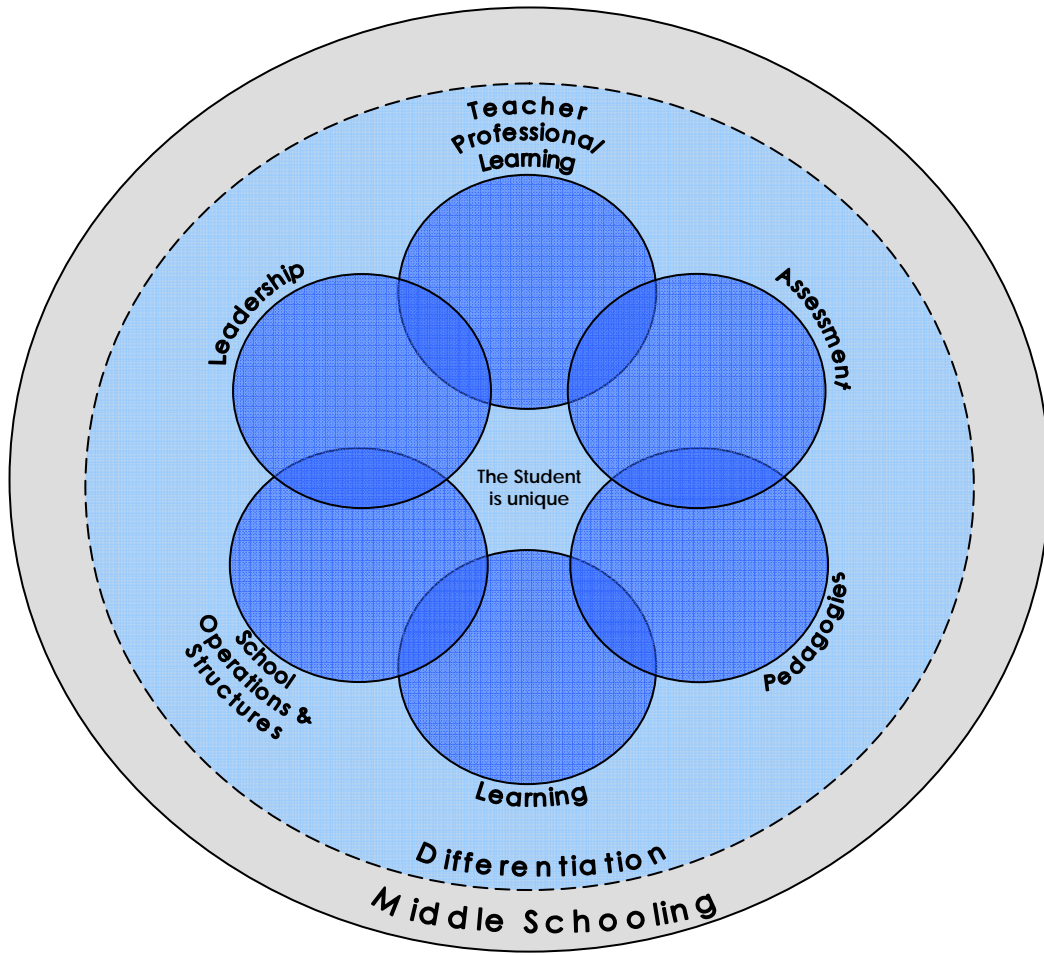


Figure 3.3 *A Theoretical Framework for Integral Design for Differentiation*

While the characteristics of an effective model of teaching that addresses diverse learners in the classroom are all identified in the integral model drawn from the International body of literature, clearly reservations need to be made about its actual application and effectiveness in the school and in the classroom in the Mauritian context. The possibility of applying the integral model for the articulation of the ‘mixed ability’ philosophy in Catholic secondary schools in Mauritius provides an opportunity to assess its efficacy in assisting the ‘mixed ability’ philosophy.

However, as noted in the last section, the key to successful transition to the integral model is the willingness and motivation of the key actors – Catholic leaders, rectors, heads of department and the teachers themselves, to understand its underlining and where necessary, change their practices. The second main purpose of this research is to examine the attitudes, understanding and willingness of these actors towards the integral model. Chapter 4 describes the research design and methodologies and methods of data collection and analysis adopted to answer the second research question and associated sub-questions, that is:

2. What are the perceptions of teachers, heads of department, rectors, school managers and the BEC of this integral model of education for ‘mixed ability’ teaching at the middle level of schooling in Catholic secondary schools in Mauritius?
 - 2a. What is the understanding of the key actors, teachers, heads of department, rectors, school managers and Catholic leaders of the integral model of education, as discussed in the first question?

- 2b What do the key actors understand by the ‘mixed ability’ philosophy? What factors are assisting or impeding the effective articulation of the ‘mixed ability’ philosophy in Mauritian Catholic secondary schools?
- 2c To what extent are teachers empowered through effective professional learning programs to meet the exigencies of ‘mixed ability’ teaching?
- 2d To what extent are school structures flexible to meet the requirements of mixed ability teaching?

CHAPTER 4

RESEARCH FRAMEWORK:

EPISTEMOLOGY, METHODOLOGY AND METHODS

“Research is diverse and pluralistic. This diversity is associated with a number of criteria such as its focus, its methods, its purpose and its underlying paradigm. Research may focus on people and the physical and social environments, or on hidden structures and meanings. It can aim to increase scientific knowledge or to emancipate people and change their life-world”
(Sarakantos, 2005).

Introduction

In chapter 1, I identified and described the research problem and the purposes of my research. The research context was depicted in some detail in chapter 2 which presented a situational analysis of the study. In chapter 3, I searched the International body of literature pertaining to middle schooling and differentiation and the related areas of learning, pedagogies, assessment, school organisation for learning and leadership to develop an integral model to assist the transition to differentiation in Mauritian Catholic secondary schools, and to answer the first research question.

In this chapter I will discuss the methodology adopted to answer the second set of research questions. This is structured around the basic elements of any research process that inform each other, as proposed by Crotty, (1998):

- What *epistemology* informs the theoretical perspective?
- What *theoretical perspective* lies behind the methodology in question?
- What *methodology* governs our choice and use of methods?
- What *methods* do we propose to use? (p. 2).

Crotty (1998) observes that /researchers must justify the choice and use of methodologies and methods to suit their particular research purposes. To substantiate the choice, the researcher brings a number of assumptions about how reality is constructed (Crotty, 1998). These suppositions contribute to the choice of methodology and methods employed. The first element that I will discuss is the epistemology that underpins this study.

Epistemology

A Qualitative Approach

Research is presented as a way of ‘re-searching’ or looking again at the world and making sense of it (Carter, 2005). Being a French native speaker and prompted by my undergraduate studies in French and background as a French teacher, I would add that in French etymology, ‘chercher’, the French word for ‘search’, is derived from the French word ‘cercle’ meaning ‘circle’ in English. The French expression, ‘le cercle des connaissances humaines’ (the circle of human knowledge) suggests that human knowledge is built on what is around us. Research as such is a process, described as a “systematic investigation to find answers to a problem” (Burns, 1997, p.1). Gough (2002) goes further, proposing a more open view of research by including “any means by which a discipline or art develops, tests and renews itself” (p. 2). This perspective informs my research process and in particular leads me to adopt a qualitative approach to answer the research questions.

Qualitative or naturalistic methodologies for conducting research, as opposed to the traditional positivist objective scientific method is an attempt to understand the

subjective and personal experiences of individuals. According to Burns (1997), the “naturalistic approach to research emphasises the importance of subjective experience of individuals, with a focus on qualitative analysis” (p. 3). Qualitative research is founded in “descriptive analysis, and is essentially an inductive process, reasoning from the specific situation to a general conclusion” (Wiersma, 2005, p. 13). Denzin and Lincoln (2000) define qualitative research as a “situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible” (p. 3). Moreover, “qualitative researchers stress the socially constructed nature of reality, the intimate relationship between researcher and what is studied, and the situational constraints that shape inquiry” (Denzin & Lincoln, 1994, p. 4).

This research about the participants’ perceptions of the integral model that addresses best practice for diverse classrooms is predominantly qualitative. Van Manen (1990) puts forward that “qualitative research (*quails* means “whatness”) asks the *ti estin* question: What is it? What is this phenomenon in its whatness?” (p. 33). I have opted for qualitative research because of its ability to provide the rich data necessary to answer my research questions. The following are a description of qualitative research:

Capture and discover meaning once the researcher becomes immersed in the data;

Concepts are in form of themes, motifs, generalisations, and taxonomies;

Data are in the form of words and images from documents, observations and transcripts;

Analysis proceeds by extracting themes or generalisations from evidence and organising data to present a coherent, consistent picture

(Neuman, 2006, p. 157).

The dominant strength of qualitative research is “the depth of understanding it permits” (Smith, 2000, p.6). For a collection of rich and varied materials to explore lived in-depth experiences of educators in the context of the ‘mixed ability’ situations, emphasis is on understanding through looking closely at human plurality, that is both action and speech (Maykut & Morehouse, 1994). Contextual findings can be discovered through patterns which emerge after close observation, careful documentation, and thoughtful analysis of the research topic (Maykut & Morehouse, 1994). Wiersma (2005) underlines other strengths such as an holistic view of the design and flexibility in design and in prediction.

Qualitative researchers are considered as philosophers based on the premise that human beings are guided by abstract principles (Denzin & Lincoln, 2000). These principles combine beliefs about ontology, epistemology and methodology (Denzin & Lincoln, 2000). Beliefs “shape how the qualitative researcher sees the world and acts in it” (Denzin & Lincoln, 2000, p. 19). Neuman (2006) defines a paradigm as a “general organising framework for theory and research that includes basic assumptions, key issues, models of quality, and methods for seeking answers” (p. 81). Lincoln & Guba (1994) distinguish four main research paradigms: positivism, postpositivism, critical theory and constructionism. The latter, constructionism, best describes the approach taken in this study.

Literature on educational research identifies three types of questions related to ontology, epistemology and methodology. According to Gough (2002), “words like ‘epistemology’ and ‘methodology’ cannot be avoided in talking about research” (p. 1). Gough (2002) defines these concepts as follows:

- Ontological: what is the nature of the knowable (or ‘reality)?
- Epistemological: what is the nature of relationship between the knower (inquirer) and the known (or knowable)?
- Methodological: how should the inquirer go about finding out knowledge? (p. 5)

For Gough (2002), “methodological and epistemological questions are strongly interdependent” (p. 5). The interconnectedness of these three concepts is highlighted by Denzin and Lincoln (2000). The investigator “approaches the world with a set of ideas, a framework (theory, ontology) that specifies a set of questions (epistemology) that he or she examines in specific ways (methodology, analysis)” (p. 18).

According to Denzin & Lincoln (2000), epistemology asks “How do I know the world? What is the relationship between the inquirer and the knower” (p. 157).

Sarakantos (2005) describes epistemology as the nature of knowledge and the kind of knowledge which research is looking for. It is the theoretical or “thinking” side of doing research as opposed to the “practical” side of research methods (Gough, 2002). Crotty (1998) distinguishes a range of epistemologies: objectivism, constructionism and subjectivism. This study adopts the epistemology of constructionism. Constructionism is “the view that all knowledge, and therefore all meaningful reality as such, is contingent upon human practices, being constructed in and out of interaction between human beings and their world and developed and transmitted within an essentially social context” (Crotty, 1998, p.42).

Truth or meaning is constructed by the participants in the research study as they engage with the context they are interpreting since,

Our constructions of the world, our values, and our ideas about how to inquire into those constructions, are mutually self-reinforcing. We conduct inquiry via a particular paradigm because it embodies assumptions about the world that we believe and values that we hold, and because we hold

those assumptions and values we conduct inquiry according to the precepts of that paradigm (Schwandt, 2000, p. 399).

Such an epistemology supports the researcher as concepts, models and schemes which are constructed to make sense of experience are continually tested and modified in the light of new experience (Schwandt, 2000). Knowledge will be created as I construct versions, develop and articulate findings that are mainly dependent on experience and social interactions with participants as the investigation is in process. The purpose of the research study is attained when constructions of reality by participants allow for new sophisticated constructions to emerge (Lincoln & Guba, 1994). A constructionist epistemology creates meaning through the engagement and interaction with all the participants who share their daily lived experiences and interpret those experiences.

Theoretical Perspectives

The theoretical perspective is “the philosophical stance informing the methodology and thus providing a context for the process and grounding the logic and criteria” (Crotty, 1998, p. 3). From a philosophical stance, the purposes of this research are to develop and explore an integral model for implementation of the ‘mixed ability’ program in diverse classrooms at the middle level and to investigate the beliefs and understandings of the integral model by the key educators who are charged with its implementation (Catholic leaders, rectors, heads of department and teachers). The theoretical perspective informs the research design and the methods applied to generate data for analysis. Researchers tend to adopt a single paradigm which is the dominant perspective of the research study (Creswell, 1998). For the purpose of this study, the

appropriate theoretical perspective grounded in a constructionist epistemology is interpretivism.

Interpretivism

Interpretivism as a social science or *Verstehen* tradition in the human sciences has evolved from the reactions of neo-Kantian German historians and sociologists like Dilthey, Rickert, Windleband, Simmel and Weber in the late 19th and early 20th centuries to the then-dominant philosophy of positivism (Schwandt, 2000). “*Verstehen*,” (Neuman, 2006, p. 87) that is “emphatic understanding” (Neuman, 2006, p. 87) is the desire of the researcher to “learn the personal reasons or motives that shape a person’s internal feelings and guide decisions to act in particular ways” (Neuman, 2006, p. 87).

Neuman (2006) differentiates the interpretive approach from the positivist approach as it is based on the uniqueness of humans and captures human social life. Human social life is more sensitive to the ideas, beliefs, and perceptions that people hold about the world than objective and factual reality (Neuman, 2006). As Sarakantos (2005) puts it, the researcher “explores the processes of constructing social situations and everyday structures that guide and explain personal views and opinions” (p.40). The main interests of interpretivism are “factors and conditions, cultural prescriptions and the social order in general that generate certain situations and social structures” (Sarakantos, 2005, p. 40).

An interpretive research is privileged in this study because of its strengths.

Interpretive research:

- Sets researchers close to reality
- Studies reality from the inside
- Uses open methods of data collection

- Employs a flexible research design
- Captures the world in action (Sarakantos, 2005, p. 46)

Neuman (2006) highlighted a number of postulates shared by researchers who favour the interpretive approach:

- Social reality is very fluid as human beings understand they are constantly constructing, testing, reinforcing or changing;
- An idiographic form of reasoning will give a detailed picture of a specific social setting;
- Empathy, instead of replication, is the best way to grasp social knowledge.

Considering the benefits of the interpretative approach, I recognise its ability to generate appropriate data that will lead to understanding the participants' lived experiences and perceptions of the mixed ability approach in Catholic secondary schools and classroom situations. As displayed in the Research Framework (Table 4.7), I have chosen three interpretivist perspectives for my study. In the following section, I discuss these: hermeneutical phenomenology, the critical perspective and social interactionism.

Hermeneutical Phenomenology

Originally applied in the 17th century to the principles of biblical exegesis, the term 'hermeneutics' etymologically derives from the Greek word *hermeneuein* meaning 'to interpret' or 'to understand' (Crotty, 1998). The term was extended beyond the realms of the principles of exegesis in theology during the 19th and the 20th centuries, with the work of the Germans Friedrich Ast, Friedrich Schleiermacher, Martin Heidegger and Hans-Georg Gadamer. Hermeneutics may be described as the theories of interpretation and understanding of texts. "Texts are means of transmitting meaning – experience, beliefs, values – from one person or community to another" (Crotty, 1998, p. 91). In the

interpretation of a text, hermeneutics entails basic problems such as the intentions of the author, the relationship between the author and the reader and the reader's contribution to a text's meaning.

Phenomenology investigates the ground and formation of meaning. The term "phenomenology" was first used by the German Philosopher Edmund Husserl who argued that the "relation between perception and its objects is not passive. Rather, human consciousness actively constitutes objects of experience" (Denzin & Lincoln, 2000, p. 488). Drawing on Husserl's 1931 work, Schutz (1962, 1967) contends that the social sciences should focus on the ways individuals experience the life world, that is the world every individual takes for granted (Denzin & Lincoln, 2000). Perceptions create meaning and deeper meaning is produced by the analysis of and reflection on these experiences. According to van Manen (1990), phenomenology "aims at gaining a deeper understanding of the nature of or meaning of our everyday experiences" (p. 7).

Husserl's phenomenology was further developed by his student Martin Heidegger and it became an important influence on the modern tradition of hermeneutics. Van Manen (1990) posits that hermeneutical phenomenology is a "human science which studies persons" (p. 6) and "the term 'persons' refers to the uniqueness of each human being" (p. 6). Hermeneutical phenomenology is defined as a "philosophy of the personal, the individual, which we pursue against the background of an understanding of the evasive character of the logos of other, the whole, the communal, or the social" (van Manen, 1990, p. 7).

Hermeneutical phenomenology is relevant to my study as it is a human science which will enable me interpret the daily life experiences of all participants in the content of their views, perspectives and attitudes to the integral model.

Critical Hermeneutics and Critical Enlightenment

Another pertinent perspective for my research study is a critical perspective, involving both critical hermeneutics and critical enlightenment. The term derives from Critical Theory, first defined by Max Horkheimer of the Frankfurt School in his 1937 essay, *Traditional and Critical Theory*. Critical theory is a social theory involved in particular with the strains of power and justice in relation to how social, political, cultural, economic, ethnic and gender perspectives and values interact to shape reality (Kincheloe & McLaren, 2000).

Critical hermeneutics is an outcome of the Frankfurt School's critical theory whose purpose is to "develop a form of cultural criticism revealing power dynamics with social and cultural contexts" (Kincheloe & McLaren, 2000, p. 286). Kincheloe & McLaren (2000) assert that interpretation is essential to qualitative research and because interpretation is historically and culturally situated, "critical researchers [must] study the ways both the interpreters ... and the objects of interpretation are constructed by their time and place" (Kincheloe and McLaren, p. 288). Critical enlightenment is depicted as the context in which "critical theory analyses competing power of interests between groups and individuals within a society" (Kincheloe & McLaren, p. 281). Criticalists claim that "privileged groups ... often have an interest in supporting the status quo to protect their advantages" (Kincheloe & McLaren, 2000, p. 281).

This is relevant in the educational context in Mauritius which largely functions to sustain entrenched power. Power sustained by the CPE mentality is formally and informally structured in the traditional mode of transmission. Education as an act of depositing/banking (Freire, 1972) has been discussed in chapter 2 and those who have been able to acquire more knowledge become the dominant forces in society. From an anecdotal perspective there are many examples, such as top CPE performers who through their social networks retain power over what happens in schools and refuse to consider a more inclusive community and cooperative learning; teachers who exert power when they refuse to change their beliefs about teaching and learning, and wealthy parents who believe that more private tuition will bring better results, a better school and a brighter future for their children. Against entrenched power the human-centred educational vision of Catholic education in Mauritius is trying to transform the classroom from its traditional constraints to a more socially just inclusive education. In considering this shift of power from the few to the many, a critical stance is appropriate in describing these significant forces.

Symbolic Interactionism

Symbolical interactionism “focuses on the human being and tries to understand human behaviour” (Charon, 2001, p. 12). It originates from the pragmatist American philosophers such as Peirce, Dewey, Cooley and Mead. Herbert Blumer developed the theory from Mead’s ideas. It consists of three core principles: meaning, language and thought. Blumer (1969) depicts three basics interactionist principles:

- That human beings act toward things on the basis of the meanings that these things have for them;
- That the meaning of such things is derived from, and arises out of, the social interaction that one has with one’s fellows;

- That these meanings are handled in, and modified through, an interpretive process used by the person in dealing with the things he encounters (p. 72).

I consider that the symbolic interactionist lens is relevant to this study as it considers the use of language and communication in interaction with the participants in interviews and focus groups. It focuses on the participants “who are involved in a constant process of interpreting the world around them” (Taylor & Bogdan, 1998, p. 12). Through their interactions, the educators who participate in this exploration create perceptions of each other and social settings. They largely act on their experiences and how they think about themselves and others is based on their interactions (Neuman, 2006). Teachers, heads of departments, rectors and leaders will act according to the interpretations and definitions they assign to the ‘mixed ability’ situation in which they find themselves.

Summary of the Theoretical Perspective

I have chosen the interpretivist perspective for its pluralistic and holistic basis. The three theoretical perspectives, hermeneutic phenomenology, critical hermeneutics and critical enlightenment and symbolic interactionism share a number of common elements. Van Manen’s (1990) definition of hermeneutic phenomenology which I described earlier, that is a human science which studies persons, results in Stryker’s (1976) view of the fundamental principle of symbolic interactionism that “the different ways in which individuals invest objects, events, experiences and so on, with meaning form the central starting point for research” (Stryker, 1976, cited in Flick, 2002, p. 17). Consequently, the “researcher has to see the world from the angle of the subjects he or she studies” (Stryker, 1976 cited in Flick, 2002, p. 17). Critical hermeneutics and critical

enlightenment relate directly to the shift in power which underpins the 'mixed ability' program.

Methodology

Literature Review

The review of the literature in chapter 3 was used as methodology to answer the first research question. Neuman (2006) posits that scientific research is a communal enterprise with each study contributing a tiny part in the creation of a reserve of knowledge. My study focused on an integrative review of the literature to pull together a complete picture of the research findings in the areas of middle schooling, differentiation, learning, school organisation for learning and leadership.

Case Study

The main concern of this investigation is to explore the participants' perceptions of teaching mixed-ability classes at the middle level of schooling. I am looking for the most appropriate design which serves both as an analytical tool and able to provide a generalisation of an in-depth exploration. The case study approach fulfills this need, which Stake (2000) defines as 'both a process of inquiry about the case and the product of that inquiry' (p.436). Stake (2000) identifies three types of case study:

- An intrinsic case study where the case itself is of interest to the researcher;
- An instrumental case study where the case is examined to help understand another interest;

- A collective case study which is an instrumental study extended to several cases.

I have chosen to use an instrumental case study for this research. For Stake (2000), an instrumental case study is useful when,

A particular case is examined mainly to provide insight into an issue or to redraw a generalisation. The case is of secondary interest, it plays a supportive role, and it facilitates our understanding of something else. The case still is looked at in depth, its context scrutinised, its ordinary activities detailed, but all because this helps the researcher to pursue the external interest (Stake, 2000, p. 437).

Stake (1995) supports the choice of the instrumental case study when “we will have a research question, a puzzlement, a need of general understanding, and feel that we may get insight into the question by studying a particular case” (p. 3). Stake’s (1995, 2000) position justifies the choice of the instrumental case study, as it is expected that the effectiveness of the integral model will be of value and help to all Catholic secondary schools in Mauritius.

Miles & Huberman (2002) argue for the increase in multi-site qualitative studies as an alternative approach to intensify the generalisability of qualitative research. For Marshall & Rossman (2006), multi-site case studies as “in-depth explorations of a single phenomenon, seek to understand that larger phenomenon through close exploration of a specific instance (p.180).

Consequently, I have chosen a multi-site instrumental case study as the most appropriate design. My research is situated in three Catholic secondary schools in Mauritius, but considering these as a unit for analysis and generalisation.

After a discussion of constructionism as a suitable epistemology and an interpretive theoretical perspective using an instrumental case study methodology, the next part of this chapter will present the methods employed in the research.

Methods

The participants

As described in chapter 1, three Catholic secondary schools participated in the research project: Ste Therese, Ste Claire and Ste Bernadette. The first two schools are girls' schools and the last one is a boys' school. Participants from these schools are the teachers working in the lower levels from F I to F III, heads of department of the core subjects (English, Mathematics and French) and Science, rectors, a deputy rector and a manager who is also the former Loreto Coordinator. As well, teachers from other Mauritian Catholic secondary schools who declared their interest in the mixed ability program were also invited to participate in the research. There were 97 teacher-participants in total.

Other participants in leadership positions were the Catholic leaders and decision-makers namely Brother Mark, Brother John, Sister Laura, Margaret, Gabrielle and David (pseudonyms used here).

The articulation of the 'mixed ability' philosophy in Catholic secondary schools ultimately relies on key actors: teachers, heads of department, rectors, school managers and Catholic leaders. The cooperation and active participation of these key actors in the research provides an opportunity for them to become "doers rather than whingers" (Thompson & Thompson, 1996, p. 30). Smith (2000) highlights the importance of using

data collection methods that are empowering, that “focus on the self-understandings and feelings of worth of individual” (p.166). Smith (2000) posits that

Researchers [must] adopt designs that enable participants to tell their story, reflect on their perceptions and understandings in terms of their validity, uncover, explore and resolve repressed feelings, question personal life goals or directions and identify specific skills or competencies (p. 166).

It is hoped and expected that participants will acquire a degree of ownership in the study if they are committed, imaginative and creative in their responses and they overcome any feelings of inadequacy, uncertainty and insecurity about their professionalism (Thompson & Thompson, 1996).

Recruitment of Participants

In order to recruit the teacher participants, I sent an information and request letter to each of the three schools participating in the study, and upon confirmation of their participation, I opted for the face-to-face method for the highest level of response (Fowler, 1993). This means that I requested a mini staff meeting of all F I to F III teachers in each school, where I presented an outline of the research project, its purpose and how I believed Catholic secondary schools would benefit from the outcomes of the study. After the power point presentation, the teachers were asked to complete questionnaires (see below). For the teachers of other secondary schools, I used similar procedures and for the data collection, I met the teacher-participants at the BEC. The other participants that is, Catholic leaders, rectors, deputy rectors and heads of department were recruited by an individual information and request letter.

Data Collection

The following themes from the literature survey were used to formulate the questions to the participants to generate data:

- Catholic Identity
- Middle Schooling
- Differentiation
- Learning
- Pedagogies
- Assessment
- Leadership
- Teacher Professional Learning
- School Operations and Structures

Data were collected using a number of tools. These are questionnaires and PMIs (de Bono, 1992), interviews and focus groups.

1. Questionnaires

Data from teachers of Forms I and II, as well as those who were interested in the ‘mixed ability’ project from the other schools, were firstly collected using a questionnaire. This was designed to inform the study about teachers’ insights regarding the nature of diversity in their classes, the significance of the professional development program provided by BEC and Australian University in 2004 and 2005 and their perceptions of other key concepts underpinning the integral model I have developed in this study. Two different types of teacher questionnaire were used, one with pre-coded

questions and the other based on de Bono's (1992) PMI (Plus, Minus, Interesting) tool with open-ended questions (Sarakantos, 2005). Pre-coded questions have been employed in the design of the questionnaire for the following reasons identified by Sarakantos (2005):

- The researcher is interested in classifying responses or respondents;
- The situation of the respondents is known;
- They can communicate;
- They are well informed and have formed an opinion (p. 246).

A set of responses have been included in the questionnaire (see Appendix 22) where the participant is required to tick only one box from a range of five possible responses:

Strongly Agree; Agree; Not Sure; Disagree; Strongly Disagree. The statements used in the first questionnaire generated information relating to the above themes.

Table 4.1

Statements and Underpinning Themes

Questionnaire Statement	Underpinning themes
1. A human-centred education includes all students irrespective of ability, capacity, creed, religious and economic backgrounds.	Catholic Identity
2. A human-centred education does not label students according to their CPE aggregates.	Catholic Identity
3. A mixed ability class is a class with students whose CPE aggregates range from 15 to 20 units.	Middle Schooling Differentiation
4. A mixed ability class is a class with diverse learners.	Middle Schooling Differentiation
5. Learners in the classroom have 2 or 3 intelligences usually stronger than others.	Learning
6. In a classroom there are as many differences in learning styles as there are students.	Differentiation
7. Streamed classes are the best way to teach students (FI – III) i.e. top performers of the CPE in one class and same for the low performers	Middle Schooling Differentiation
8. Top performers of the CPE are not performing to their full capacity and ability in mixed ability classes.	Middle Schooling Differentiation
9. Teaching through the Multiple Intelligences is an effective way to address low and top scorers of the CPE in the same way.	Learning
10. Teachers need to diversify what they teach, how they teach it and how they assess learning to cater for diverse learners.	Learning
11. It is necessary to reduce content and infuse thinking in the curriculum for learners to move from surface to deep learning and higher order levels of complexity in Bloom's taxonomy, that is analyse, evaluate and create.	Learning
12. Constructivist teaching strategies are important for student-centred learning.	Learning
13. Literacy must be taught through all key learning areas.	Learning
14. The use of ICT in teaching and learning is important.	Pedagogies
15. Assessment practices in our classrooms are arbitrary.	Assessment
16. Assessment practices should include formative and authentic assessments and students must learn to be critical assessors.	Learning Pedagogies Assessment
17. Teachers must build effective Professional Learning Teams.	Teacher Professional Learning
18. Team teaching can facilitate teaching overcrowded classes.	School Organisation for Learning
19. School operations are flexible for interdisciplinary team organisation, team teaching and longer blocks of time.	School Organisation for Learning

Questionnaire Statement	Underpinning themes
20. A school day must be organised around 2 blocks of 90 minutes in the morning and 3 periods of 45 minutes in the afternoon.	School Organisation for Learning
21. Your teacher education had focused on teaching through Multiple Intelligences.	Teacher Professional Learning
22. Teachers must share a repertoire of teaching strategies.	Pedagogies Teacher Professional Learning
23. You are familiar with the emerging pedagogies of the 21st century i.e	Teacher Professional Learning
• Collaborative learning	Teacher Professional Learning
• MI/Bloom Planning Matrix	Teacher Professional Learning
• Thinking Hats	Teacher Professional Learning
• Habits of Mind	Teacher Professional Learning
• KWHL (What do I know? Want to know? How? What have I learnt?)	Teacher Professional Learning
• Interdisciplinarity	Teacher Professional Learning
• Thinkers' Keys	Teacher Professional Learning
24. Teachers must go through on-going Professional Development Programs for new pedagogical models and practices.	Teacher Professional Learning
25. There is no culture of professional development for teachers in Mauritius.	Teacher Professional Learning
26. The Professional Development (PD) Program provided by BEC/ACU in 2004, 2005 was highly effective and addressed directly teachers' needs.	Teacher Professional Learning
27. Since the Professional Development (PD) Program provided by BEC/ACU in 2004, 2005, you have changed your teaching practices and you now teach through the Multiple Intelligences.	Teacher Professional Learning
28. The whole school must become a learning community.	Leadership School Organisation for Learning
29. Your rector is a pedagogical leader and supports change.	Leadership
30. Your Head of department is a pedagogical leader, gives advice for innovation.	Leadership
31. An independent research body for research to support teaching and learning is important.	Teacher Professional Learning
32. You are confident to implement change in your classroom.	Differentiation Learning Pedagogies Assessment Leadership

An example of the questionnaire is annexed in Appendix 22

2. PMIs

The second questionnaire type is an open type one. Designed using de Bono's (1992) PMI tool, the purpose of this questionnaire was to be able to benefit from the strengths of the open-ended questions espoused by Sarakantos (2005):

- They offer freedom to express feelings and thoughts, especially when complex issues are being studied (p. 245).
- They offer more details than pre-coded questions, especially qualifications and justifications (p.245).
- They offer information in areas that might not have been foreseen by the researcher (p.245).

The second questionnaire seeks answers from teachers of Form I to Form III to the following open-ended questions as shown in Table 4.2:

Table 4.2

PMI: A reflective response

Plus (P)	What has been successful in your mixed-ability class? What are the new learnings?
Minus (M)	What has not worked in your mixed ability class? What are the barriers?
Interesting (I)	What is interesting in your mixed ability class? What are your suggestions and recommendations?

An example of the PMI sheet is annexed in Appendix 23.

3. Interviews

Three types of interviews have been distinguished: structured, semi-structured and unstructured (Fontana & Frey, 2000). In structured interviewing,

The interviewer asks all respondents the same series of pre-established questions with a limited set of response categories. There is generally little room for variation in responses except where open-ended questions (which are infrequent) may be used... Thus all respondents receive the same set of questions asked in the same order or sequence ... There is little flexibility in the way questions are asked or answered in the structured interview setting (Fontana & Frey, 2000).

The semi-structured interview is different from the structured format even if “guided by a set of questions and issues to be explored, but neither the exact wording nor the order of questions were predetermined” (Merriam, 1998, p.93).

The unstructured interview format is the one that can provide a greater breadth of data (Fontana & Frey, 2000). It tries “to understand the complex behavior of members of society without imposing any a priori categorisation that may limit the field of inquiry” (Fontana & Frey, 2000, p. 653).

The interview design adopted for this study is the structured face-to-face verbal interchange. My purpose was phenomenological and each category of participants was asked the same set of pre-established questions with little room for variation in responses ((Fontana & Frey, 2000). Denzin and Lincoln (2000) remind us that “asking questions and getting answers is a much harder task than it may seem at first” (p.633). I tried to stay as close as possible to the questionnaire for consistency in the interview process to ensure the reliability and validity of the method.

Interviews have been chosen as a method to collect data in this investigation since they are consistent with the epistemology of constructionism, which is the nature of inquiry of this study (Cohen, Manion & Morrison, 2000). Interviews “generate useful

information about lived experience and its meanings” (Denzin & Lincoln, 2000, p. 633).

As Denzin and Lincoln (2000) put it, the “interview is a conversation, the art of asking questions and listening. It is not a neutral tool, for at least two people create the reality of the interview situation” (2000, p. 633).

For all individual and focus group interviews, I was looking to generate data that would directly address my second research question:

2. What are the perceptions of teachers, heads of department, rectors, school managers and the BEC of this integral model of education for ‘mixed ability’ teaching at the middle level of schooling in Catholic secondary schools in Mauritius?

and the sub-research questions:

- 2a. What is the understanding of the key actors, teachers, heads of department, rectors, school managers and Catholic leaders of the integral model of education, as discussed in the first question?
- 2b. What do the key actors understand by the ‘mixed ability’ philosophy? What factors are assisting or impeding the effective articulation of the ‘mixed ability’ philosophy in Mauritian Catholic secondary schools?
- 2c. To what extent are teachers empowered through effective professional learning programs to meet the exigencies of ‘mixed ability’ teaching?
- 2d. To what extent are school structures flexible to meet the requirements of mixed ability teaching?

Interview of Rectors

I conducted interviews with the following participants in rectorship positions:

- The Rector of Ste Claire.
- The Rector and Deputy Rector of Ste Bernadette.

Each participant received the same set of questions prior to the interview after agreement to participate was reached. Interviews were conducted by appointment, in the participant's office and were audio-taped to be transcribed later. The interviews lasted for about forty-five minutes and were conducted in English. The questions that I asked the rectors and the Deputy are annexed in Appendix 20. They attempt to uncover their perceptions as they constructed meaning from their daily experiences of the 'mixed ability' program.

Table 4.3 set out the interview questions for the rectors and deputy rectors.

Table 4.3

Interview Questions for Rectors and Deputy Rectors

Question	Research Question	Underpinning Key Concept
1. What would a successful 'mixed ability' class look like?	Sub-research Question 2a	Catholic Identity Differentiation Middle Schooling Learning Pedagogies Assessment Teacher Professional Learning School operations and structures
2. What have been some of the impacts on your school of the implementation of the mixed-ability concept at the middle level of schooling, particularly in Form I?	Sub-Research Questions 2b, 2c	Catholic Identity Differentiation Middle Schooling Learning Pedagogies Assessment Leadership Teacher Professional Learning School operations and structures
3. How have you responded to the change process implied with the new philosophy of Catholic secondary schools?	Sub-Research Questions 2b, 2c	Catholic Identity Differentiation Middle Schooling Leadership Learning Pedagogies Assessment Teacher Professional Learning School Operations and Structures
4. Are regular meetings with other principals or the BEC part of the implementation of the mixed-ability concept in Catholic secondary schools? Can you give a feed-back?	Sub-Research Questions 2b, 2c	Catholic Identity Differentiation Middle Schooling Learning Pedagogies Assessment Leadership Teacher Professional Learning School Operations and Structures

Question	Research Question	Underpinning Key Concept
5. What do you consider to be the impediments in your school that prevent successful implementation of the mixed-ability concept?	Sub-Research Questions 2b, 2c	Differentiation Middle Schooling Learning Pedagogies Assessment Leadership Teacher Professional Learning School Operations and Structures
6. Within your school, what Professional Development program do you think is necessary?	Sub-Research Question 2c	Teacher Professional Learning
7. In an ideal world, what do you think are some features of an effective model for mixed-ability teaching in Form I?	Sub-Research Question 2	Differentiation Middle Schooling Learning Pedagogies Assessment Leadership Teacher Professional Learning School operations and structures

Interviews of Catholic Leaders

The Catholic leaders interviewed individually in this study are those that had conceptualised and promoted the ‘mixed ability program’. The interviews attempted to explore their vision for the future of Catholic secondary schools through the ‘mixed ability’ philosophy coupled with the mission of a human-centred education, and the means they would employ to implement it in their schools.

Each Catholic leader was forwarded the same set of questions of the interview after their willingness to participate was received. The questions that I asked the Catholic leaders are annexed in Appendix 19. An appointment was made for each interview to be carried at their respective offices. The interviews lasted between 30 and 45 minutes.

Some of the leaders preferred to respond in French so their responses have been translated into English. Table 4.4 set out the interview questions for the Catholic leaders.

Table 4.4

Interview Questions for Catholic Leaders

Question	Research Question	Underpinning Key Concept
1. Why did the BEC and the Loreto Institute decided to implement the 'mixed ability' program in Catholic secondary schools?	Research Question 2	Catholic Identity Differentiation Middle Schooling Learning Pedagogies Assessment
2. What is your understanding of the term 'mixed ability'?	Sub-Research Question 2a	Catholic Identity Differentiation Middle Schooling Learning Pedagogies Assessment Teacher Professional Learning School Operations and Structures
3. How does mixed ability relate to human-centred education?	Sub-Research Question 2a	Catholic Identity Differentiation Middle Schooling Learning Pedagogies Assessment Teacher Professional Learning School Operations and Structures
4. Do you think that rectors and teachers in Catholic secondary schools have a shared vision of both philosophies, the 'mixed-ability' program and a human-centred education?	Sub-Research Question 2a	Catholic Identity Differentiation Middle Schooling Learning Pedagogies Assessment Leadership Teacher Professional Learning School Operations and Structures

Question	Research Question	Underpinning Key Concept
5. How is the BEC assessing the impact of the Professional Development Programs provided by BEC/ACU in 2004 on teaching styles, particularly teaching through the Multiple Intelligences in Form I?	Sub-Research Question 2b	Teacher Professional Learning
6. What do you think are the impediments in Catholic secondary schools that prevent the successful implementation of the mixed-ability concept?	Sub-Research Questions 2b, 2c	Catholic Identity Differentiation Middle Schooling Learning Pedagogies Assessment Leadership Teacher Professional Learning School Operations and Structures
7. Rethinking Mauritius, the conference organised in 2005 under the aegis of BEC has highlighted the need of an independent research body for research to support teaching and learning. How do you respond to this call?	Sub-Research Question 2b	Teacher Professional Learning
8. What is your vision of an effective successful 'mixed ability' classroom?	Sub-Research Question 2a	Differentiation Middle Schooling Learning Pedagogies Leadership Teacher Professional Learning School operations and structures
9. What are your future plans for the success of the 'mixed ability' implementation in Catholic secondary schools in Mauritius?	Sub-Research Questions 2b, 2c	Leadership Teacher Professional Learning School operations and structures

4. *Focus groups*

Focus groups are the fourth and last method I used for data collection. As pointed out by Morgan (1988), the focus group, while having some characteristics of individual interviews and participant observation, is a distinct method because it allows for listening to people and learning from what they are saying at the same time. It may happen that during individual interviews, the interviewee is not at ease to answer questions. With focus groups, “participants communicate among themselves, share ideas, beliefs and attitudes” (Madriz, 2000, p. 835) and the interactive processes “include spontaneous responses from the members of the group that ease their involvement and participation in the discussion” (Madriz, 2000, p. 836). Since “it is from the interaction of the group that the data emerge” (Cohen et al., 2000, p. 288), I set up a focus group in each Catholic secondary school participating in the research project involving the heads of department (English, Mathematics, French and Science). Madriz (2000) has suggested avoiding larger groups as it is difficult to handle the discussion and keep the conversation on the topic.

Focus group meetings provide the opportunity to discuss a range of themes in depth and participants identify, explore and clarify ideas during the sessions. Participants can be more critically reflexive through discussion and sharing of knowledge and at the same time they will have the chance to share common experiences and views and gain immediate feedback.

Focus group interviews were conducted with the following:

- 3 heads of department from Ste Therese (English, Mathematics and Science).

- 4 heads of department from Ste Claire (English, Mathematics, French and Science).
- 3 heads of department from Ste Bernadette (English, Mathematics and French).

All participants received the same set of questions before the focus group interview. The questions that I asked the heads of department are annexed in Appendix 21. We met at the respective school for the interview which lasted about forty-five minutes and the interview was audio-taped for transcription afterwards.

Table 4.5 sets out the set of questions for heads of department that participated in the focus group interviews.

Table 4.5

Focus Group Questions for Heads of Department

Question	Research Question	Underpinning Key Concept
1. What would a successful 'mixed ability' class look like for you?	Sub-Research Question 2a	Catholic Identity Differentiation Middle Schooling Learning Pedagogies Assessment Teacher Professional Learning School Structures and Operations
2. In what way do you see yourself as an initiator of school change for the implementation of the 'mixed ability' concept?	Sub-Research Questions 2a, 2b, 2c	Differentiation Learning Pedagogies Assessment Leadership Teacher Professional Learning School Operations and Structures
3. In your opinion, what is the greatest impediment for the success of mixed-ability classrooms?	Sub-Research Questions 2b, 2c	Catholic Identity Differentiation Middle Schooling Learning Pedagogies Assessment Leadership Teacher Professional Learning School Operations and Structures
4. In what ways should school structures and operations change to enable the success of the 'mixed ability' program? Why?	Sub-Research Question 2c	School Operations and Structures
5. In an ideal world, what do you think are some features of an effective model for mixed-ability teaching in Form I?	Sub-Research Question 2a	Differentiation Middle Schooling Learning Pedagogies Assessment Leadership Teacher Professional Learning School operations and structures

Question	Research Question	Underpinning Key Concept
6. How far do you think the Professional Development (PD) Program provided by BEC/ACU in 2004- 2005 has been successful and how far do you think that <u>on-going</u> PD programs on emerging pedagogies of the 21st century can keep teachers up-to-date with modern trends in education?	Sub-Research Question 2c	Teacher Professional Learning

Summary of Data Collection Methods

Table 4.6 shows a summary of the data collection methods used with numbers of participants and Table 4.7 is a summary of the research framework.

Table 4.6

Summary of Data Collection Methods

Data Collection Methods	Participants
Questionnaire	97 teachers
PMI	97 teachers
Interview	2 rectors and 1 deputy rector; 6 Catholic leaders
Focus Group Interview	11 heads of department

Table 4.7

Summary of Research Framework

Epistemology	Constructionism
Theoretical Perspective	Interpretivism <ul style="list-style-type: none"> • Hermeneutical Phenomenology • Critical Hermeneutics and Critical Enlightenment • Symbolic Interactionism
Methodology	Case Study <ul style="list-style-type: none"> • Instrumental • Multi-site
Methods for Data Collection	Questionnaire PMI (de Bono, 1992) Interviews: Structured Face-to-Face Verbal Interviews: Focus Group

Data Analysis and Interpretation

Qualitative methods of data collection result in a large amount of data for analysis. Marshall and Rossman (1989) highlights the processes of “reduction” and “interpretation” of the volume of data available for analysis by the researcher. According to Tesch (1990), there are the processes of “de-contextualisation” and “re-contextualisation” and the researcher reduces the voluminous amount of information to certain patterns or themes and then interprets this information through schemas. Sarakantos (2005) distinguishes three types of qualitative analysis: iterative, fixed and subjectivist. My research adopts the fixed qualitative analysis as “data analysis is conducted after data collection, and chiefly entails a method of content analysis or text analysis” (Sarakantos, 2005, p. 346). As Sarakantos (2005) explains, “the fixed method of

qualitative analysis deals primarily with written records, that is with documents. It deals with transcripts which the researcher must read and analyse” (p. 347).

The questionnaires and PMIs constitute written records and the individual interviews and focus group interviews were transcribed. Some participants interviewed chose to reply in French and these transcripts were translated into English. The Statistical Package for the Social Sciences (SPSS, Version 14, 2005) was used to analyse the quantitative data obtained from the teacher-participants questionnaire.

In a sense, all the data have been reduced to documents and texts. Sarakantos (2005) identifies three types of documentary methods:

- Document study. Here the focus of analysis is on description, identification of trends, frequencies and interrelationships, and, sometimes, statistical analysis;
- Content Analysis. The research focuses on the manifest or latent content of documents, in a very detailed and analytical way, or on meanings;
- Text analysis. This approach sees text as a ‘virtual reality’ and the ‘world as text’, and, using methods such as semiotics, discourse analysis and hermeneutics, reaches the ultimate point of analysis, going far above the level other methods can reach (p. 293).

Text analysis is used in my study considering its qualitative paradigm. Two forms of text analysis are pertinent for this study: hermeneutics and discourse analysis. Hermeneutics has already been discussed in this chapter as an appropriate theoretical perspective. I will now discuss discourse analysis.

Discourse analysis

Sarakantos (2005) believes that discourses are “socially constructed frameworks of meanings” (p. 309). Discourse analysis

Deals with communication, text, language, talk and conversation, but also with the ways of seeing, categorising and reacting to the social world in

everyday practices. Language is studied as it appears as a social product, in written or social form. Put simply, discourse analysis deals with group discussions, interview transcripts, and policy documents (p. 309).

Data generation methods used in the study that is the interviews, focus group and documents are discourses which are analysed in a written form.

Theme Analysis

Van Manen (1990) describes theme analysis as “the process of recovering the theme or themes that are embodied and dramatised in the evolving meanings and imagery of the work” (p. 78). He goes on to explain the notion of theme and how it relates to the phenomenon the researcher is interested in as:

1. Theme is the experience of focus, of meaning, of point.
2. Theme formulation is at best a simplification.
3. Themes are not objects one encounters at certain points or moments in a text.
4. Theme is the form of capturing the phenomenon one tries to understand. (p. 87)

The phenomenological attributes of themes are highlighted in exploring the real world of participants as:

1. Theme is the needfulness or desire to make sense.
2. Theme is the sense we are able to make of something.
3. Theme is the openness to something.
4. Theme is the process of insightful invention, discovery, disclosure. (van Manen, 1990, p. 87).

I stated earlier in this chapter that the main themes that I identified from my literature search were used to frame the questions to the participants. The responses from data generated by the questionnaires, the PMIs, the interviews, the focus groups were also grouped under these same themes (see page 156).

Validity and Trustworthiness

Validity is an “important key to effective research” (Cohen et al., 2000, p.105) and “a requirement for both quantitative and qualitative/naturalistic research” (Cohen et al., 2000, p.105). Since this investigation uses qualitative approach, it is necessary that the “qualitative data validity be addressed through the honesty, depth, richness and scope of the data achieved, the participants approached...the objectivity of the researcher” (Cohen et al., 2000, p.105). The approach for the validity of this study is through triangulation which is described as “the use of a variety of data sources in a study” (Denzin & Lincoln, 2000, p. 393) and a process “to clarify meaning, verifying the repeatability of an observation or interpretation” (Stake, 2000, p. 444). The use of different sources of data, that is questionnaires, PMI, interviews and focus groups with a variety of participants in this study is to aim for a level of consistency that will confirm or disconfirm the realities that exist in the participants’ experiences.

Ethical issues

Ethical issues are also the responsibility of the researcher. For Kumar (1996), “ethical issues can be looked at as they relate to participants, researchers, and sponsoring organisations” (p.196). As human participants are involved in the investigation, their privacy must be protected. According to Wiersma (2005), ethical and legal considerations such as voluntary participation, confidentiality, dignity and welfare of the participants must be ensured by the researcher. This study has been approved by the Australian Catholic University Ethics Committee. Permission for collection of data was sought from the three Catholic secondary schools involved in the investigation, the Loreto Institute

and the BEC. Each participant was informed of the nature and purpose of the project and reassured about privacy and confidentiality. The participant's willingness to participate or not has been respected and participants were informed that they could withdraw at any time. They were also advised that they would be informed of the results of the study. See Appendix 1 for a copy of the ethics approval for this study.

Limitations of the Study

Drawing the limits of my study will show clearly what is and what is not included in the research. The criteria for admission in Catholic secondary schools have been described in chapter 2 but my investigation for this study only refers to academic criteria, ie the CPE aggregates. The other criteria for admission in Catholic secondary schools are not included in my research project. The following are the other aspects which my study does not directly investigate:

- The quota of intake of students decided by the BEC and Catholic schools in regard to the number of units.
- The relevance of religion (Catholic faith) as a criterion for admission in Catholic schools.
- The rapport and relationship between the BEC and the government.
- Religious education as compulsory in Catholic school communities.
- The issues of Creole, the mother tongue of most Mauritians, as medium of instruction.

Moreover this is limited only to Catholic secondary schools not to State schools or other confessional schools which also have the right to 50% reserved places for admission in their schools.

Conclusion

In this chapter, I have explained the four theoretical elements of my research that inform each other: the epistemology, theoretical perspectives, methodology and methods. I have tried to show how far they are coherent with my double intention of exploring an effective integral model for a diverse classroom and investigating the beliefs and understandings of teachers, heads of department, rectors and leaders who are responsible of implementing the integral model. A theoretical framework of the research process is presented in Figure 4.1 below, and represents the process through which I answer the research questions and sub-questions.

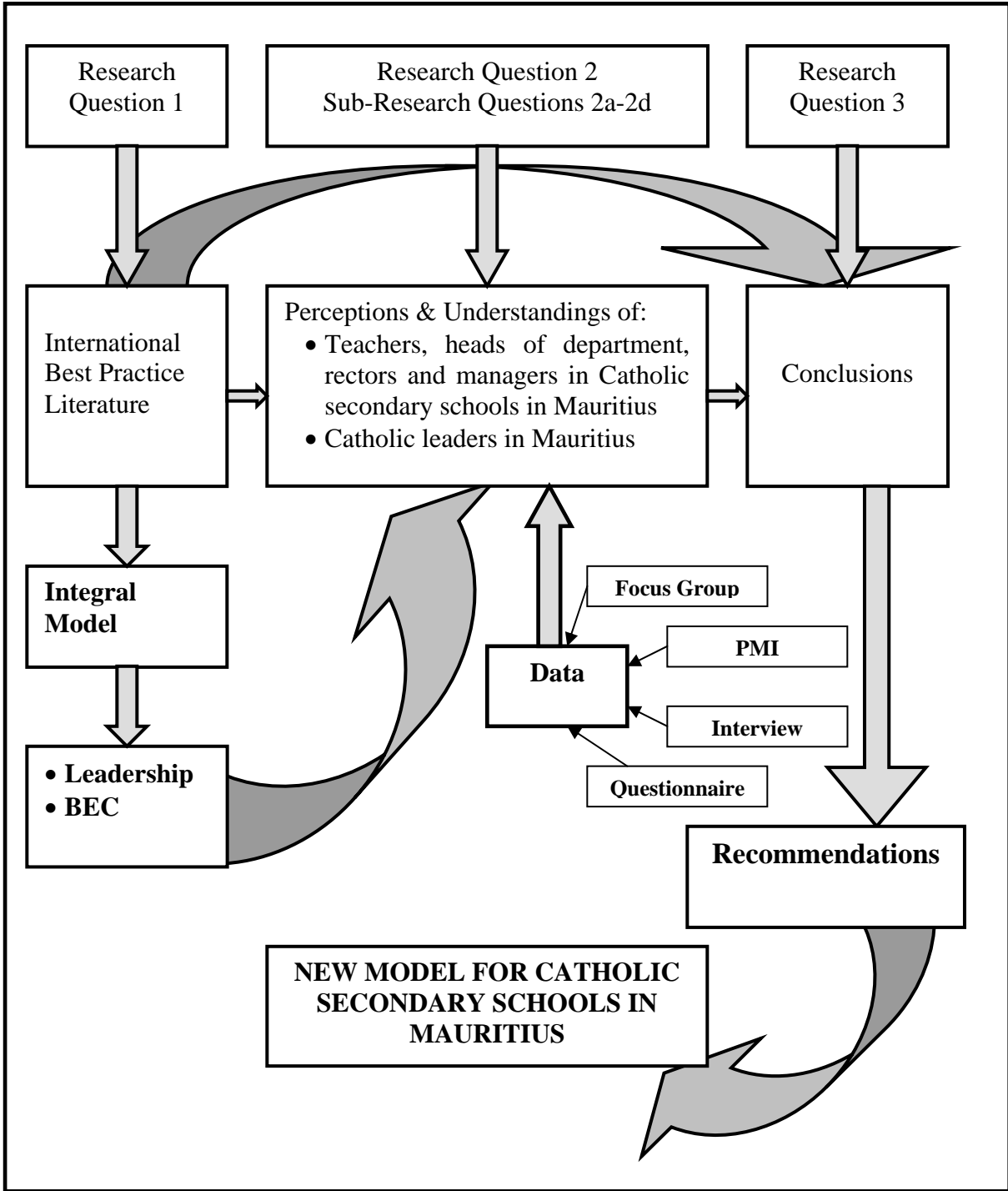


Figure 4.1 *The Research Process*

Chapter 5 continues the journey with text analysis, discourse analysis (Sarakantos, 2005) and theme analysis (Van Manen, 1990) of the data generated. I analyse the data in the light of the main areas identified in the literature review and begin to answer the second research question and sub-questions.

CHAPTER 5

PRESENTATION AND DISCUSSION OF RESULTS

*“It’s a deep change of approach, a human approach”
[Brother Mark]*

Introduction

In chapter 2, I described the context of my study, the challenge of Catholic education in Mauritius to foster its Catholic values and identity through the ‘mixed ability’ philosophy in an educational system which is highly competitive, fosters educational inequality and does not encourage the holistic development of the student.

In chapter 3, I used a literature search as a method to develop a model relevant to mixed ability teaching and learning in the lower secondary forms in Mauritius. The exploration identified four main areas:

1. Middle Schooling and Differentiation
2. Key Concepts of Learning, Pedagogies and Assessment
3. School Organisation for Learning
4. Leadership

These areas were used to answer my first research question:

1. What are the characteristics of an integral model of education that will address diverse learners in the classroom?

In chapter 4, I presented the analysis of data generated within the epistemological, theoretical and methodological framework of the study. The processes of “reduction” and “interpretation” (Marshall & Rossman, 1989) and “de-contextualisation” and “re-contextualisation” (Tesch, 1990) were the mechanisms used to

analyse the large volume of data produced by the collation of the teacher questionnaires and PMIs, the transcription of the focus group interviews of heads of department and the individual interviews with rectors and Catholic leaders. Text analysis (Van Manen, 1990) and discourse analysis (Sarakantos, 2005) enabled the arrangement and discussion of data under the main themes identified from the literature review and the authentic values of Catholic education highlighted in chapters 1 and 2. The major themes which have emerged from my data are:

Theme 1. Catholic Identity: The concepts of The Personhood and Social Justice

Theme 2. Differentiation

Theme 3. Key Concepts of Learning, Pedagogies and Assessment

Theme 4. School Organisation for Learning

The above themes will enable me to answer my second research question:

2. What are the perceptions of teachers, heads of department, rectors, school managers and the BEC of an integral model of education for 'mixed ability' teaching at the middle level of schooling in Catholic secondary schools in Mauritius?

and the sub- research questions:

- 2a. What is the understanding of the key actors, teachers, heads of department, rectors, school managers and Catholic leaders of the integral model of education, as discussed in the first question?
- 2b. What do the key actors understand by the 'mixed ability' philosophy? What factors are assisting or impeding the effective

articulation of the ‘mixed ability’ program philosophy in Mauritian Catholic secondary schools?

2c. To what extent are teachers empowered through effective professional learning programs to meet the exigencies of mixed-ability teaching?

2d. To what extent are school structures flexible to meet the requirements of mixed ability teaching?

Informed by the literature review and with reference to the responses of the participants, I use the above themes to report the views of the leaders, rectors, heads of department and teachers of the integral model underpinning ‘mixed ability’ education at the middle level in Catholic secondary schools in Mauritius. I discuss the participants’ understandings of the Catholic identity of Catholic secondary schools in Mauritius and their understandings of the translation of the ‘mixed ability’ philosophy in the reality of school life. I go on to discuss the participants’ views of learning differentiated through content, process and product (Tomlinson, 1999; UNESCO, 2004) with regard to the school organisation for learning.

The presentation and discussion of participants’ responses in this chapter are consequently organised under each of the four themes stated above. These are:

1. The voices of the Catholic education decision-makers;
2. The voices of those charged with transformational, pedagogical and parallel leaders – the rectors and heads of department;
3. The voices of the practitioners/teachers.

I have opted for these three sections because of the different positions of the participants. In section 1, I present and discuss only the Catholic leaders' responses as key decision-makers. In section 2, I present the voices of rectors and heads of department from the perspective of those who would be charged with transformational, pedagogical and the parallel leadership in transition to the integral model as discussed in chapter 3. In section 3, I present and discuss the teacher-participants' responses as the practitioners in the classroom. The presentation and discussion of data is summarised in Figure 5.1

below:

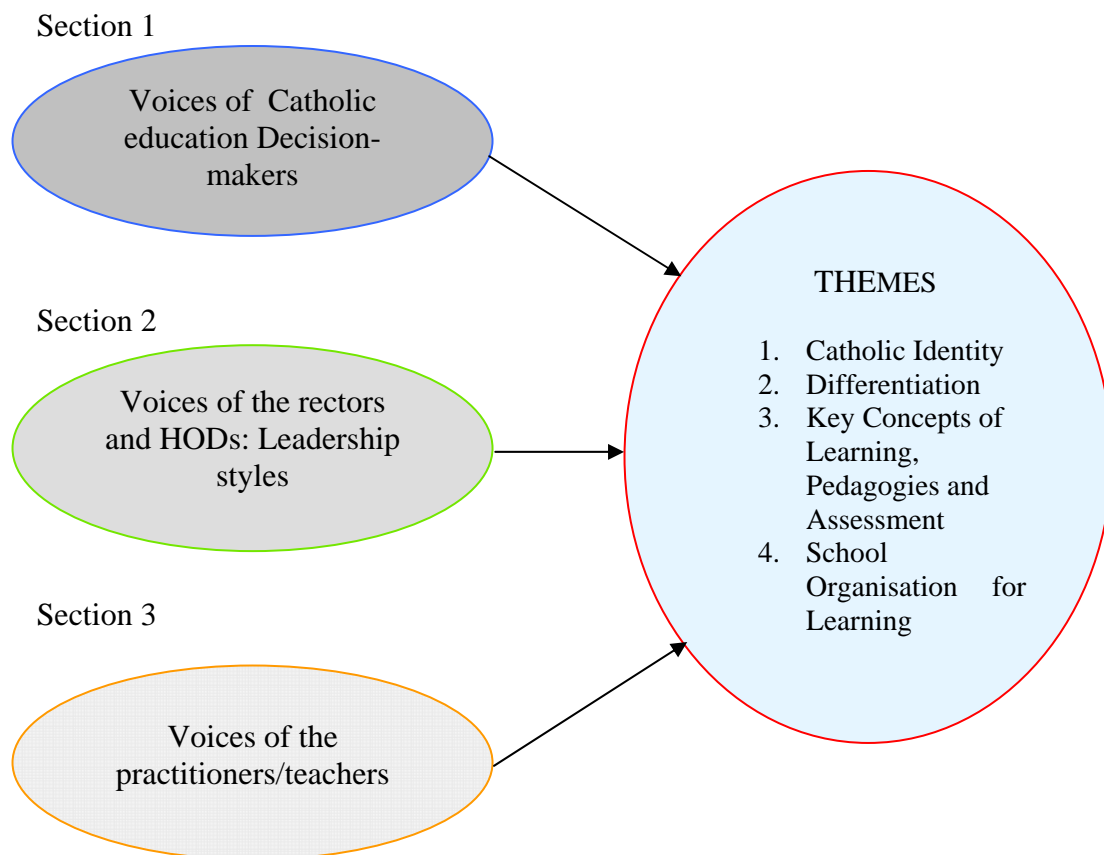


Figure 5.1 *Summary of Presentation of Data*

I begin with the voices of the decision-makers and I discuss the four themes in turn.

Section 1. The Voices of Catholic Education Decision-Makers

Theme 1. Catholic Identity: The Concepts of Personhood and Social Justice

« *La mission de l'éducation catholique est d'humaniser l'éducation* »
 “ *The mission of Catholic education is to humanise education* ”
Bishop Piat (2006)

In this section, I will present and discuss Catholic leaders' views which emerged from their individual interviews, in their capacity of decision-makers, based on the themes that emerged from the data as discussed in chapter 4. The leaders' views fall into four main areas:

1. The pressures exercised on their leadership for the new orientation of Catholic secondary schools in Mauritius;
2. Their rationale for the 'mixed ability' philosophy in these schools;
3. Their understandings of the 'mixed ability' philosophy;
4. The change process in Mauritian Catholic secondary schools as a result of this new philosophy.

I begin with the pressures which compelled Catholic leaders in Mauritius to seek a new orientation for Mauritian Catholic secondary schools.

Pressures Leading to the "Mixed Ability" Philosophy

In chapter 2, I have already referred to what Mauritians commonly term the “rat race” - the intense competition which prevails at the primary level of schooling for enrolment in secondary schools. The Catholic leaders interviewed spoke about the impact

of this on education in Catholic schools since 1980 when the CPE was introduced. While ranking was believed to exert a heavy pressure on primary schooling, the leaders also both admitted and confessed that this selective system of education benefited Catholic secondary schools, since students with the best CPE rank or grade were enrolled. As a result, SC and HSC results were good and rectors, teachers and parents were generally happy. The Catholic secondary schools' academic performance under this system made of them what are termed "star" schools. As David put it:

We remain in that system, we are also in connivance with that system, this must be said and this fits everybody, everybody is rewarded ... with success [David].

Since Catholic secondary schools were among the best secondary schools in Mauritius, there is a high demand for a limited number of places in these schools. The leaders talked about the issues regarding the number of Catholic students in Catholic secondary schools, and their concerns that academically weaker and poor Catholic students were being excluded. In some Catholic secondary schools, there were more than 70% non-Catholic students, and therefore some in the wider Catholic community saw this as unfair. They questioned why others of non-Catholic faith were admitted; they could not secure a place for their own child. Students enrolled in Catholic secondary schools came mostly from the middle and lower middle classes. Many Catholics were frustrated and felt rejected, and as a result severely criticised the Catholic Diocese of Port Louis (Mauritius). At the same time there was pressure from Catholic priests working in poor suburbs who also questioned why a poor Creole child from, for example, Roche Bois (a poor suburb in the outskirts of the capital) could not obtain a place at a Catholic

secondary school. These issues of exclusion of poor Catholic students in Catholic secondary schools are clearly encapsulated in the following response from Brother John:

You know it's not because you are poor it means that you are dumb ... this must be clearly spelt out, the majority of Creoles who were telling themselves sometimes, rightly or wrongly, that they could not get in our schools because non Catholics were getting in and then the rich supposedly who were getting in [Brother John].

These criticisms from within the Catholic community itself which were uncovered in the Synod (1997-2000), referred to in chapter 2, were made clear by these leaders. The Synod (1997-2000) was described by one leader as a popular consultation at all levels. Christians in the Catholic Diocese of Port Louis (Mauritius) confirmed the feelings of the Catholic community in Mauritius about admission to Catholic secondary schools. David's response described the findings of the Synod (1997- 2000):

The Education Commission uncovers the huge frustration of the Catholics who at the end of the day have no more access to Catholic schools, in a great majority, the Catholic schools are no more accessible to them and this shakes up widely the Diocese because the Diocese, the Diocese leadership is contested by saying that we have sold our schools to the Government and we are taking only the best and we know who are the best in this country, the Asians etc. therefore Catholics and not Catholics who are most in need of our type of education [David].

As well as the internal pressure coming from the Catholic community itself, the Catholic Leadership in Mauritius has also had to face external pressures ever since the criteria for admission to Catholic secondary schools, used by the BEC since 1995 following the arrangement with the government as discussed in chapter 2, became illegal. This is because the Mauritian Constitution does not allow religion to be used as a criterion for admission. The ruling which questioned the capacity of Catholic schools to enroll students on the criterion of religion was taken very seriously by the Catholic leadership in Mauritius, as noted by Brother Mark:

We had lost our case in front of the Privy Council, we no longer, we were no longer allowed to recruit Catholic children in our schools just because they were Catholic; we were no more allowed to do so even in a small quota [Brother Mark].

The Mauritian competitive system of education, the conclusions and recommendations of the Synod (1997- 2000) and the 2001 and 2003 rulings of the Privy Council, all resulted in pressure on Catholic education to rethink its *raison d'être* and way forward. Brother John was particularly vocal on this point:

We were at a turning point as far as the future of Catholic schools was concerned. There was the question of what we are going to do of our schools...Therefore with all this we told ourselves if we cannot have Catholic schools, if we cannot serve, what's the purpose of having schools, therefore we told ourselves we have anyway a long experience, our colleges are of good standard, we have teachers anyway who are more or less competent and

talented, therefore we have since years, we have been among the first colleges, the founders of education in Mauritius , therefore we had a long tradition and we had the competency and we told ourselves we could close down our colleges, we have decided that our colleges and our personnel must continue to serve the nation [Brother John].

Consequently, a new admission policy in Catholic secondary schools had to be found and a task force was set up to consider this. David talked about the consultation process as this issue was discussed:

The XXX set up a task force comprised of rectors of colleges, all the rectors ... parents' representatives, teachers' union representatives and the partners of Catholic education to think about how to respond to the Christians' claims, the Synod's requests and therefore it's then that we realised that we were admitting only the best ranked pupils in our schools and therefore with all this we had to somehow find a way out of this ranking system at least as far as the criteria of admission were concerned [David].

Discussions with all parties concerned guided the leadership to what became known as the 'mixed ability' philosophy, but which the literature refers to as 'differentiation'. The leader-participants in the study talked about the rationale for the 'mixed ability' philosophy discussed next.

Leaders' Rationale For The 'Mixed Ability' Philosophy in Catholic Secondary Schools

The values which focus on both the concepts of personhood and social justice are at the core of Catholic values, and that these values are expected to be reflected in the schools was clearly signaled by the leaders. The leaders' justifications of the 'mixed ability' philosophy showed that they were clearly concerned about the student as a human being, a fundamental principle which has been largely undermined by the unhealthy competitive spirit in Mauritian schools. All the Catholic leaders interviewed had similar perspectives, that is, that all students are human beings with different values and different competences which are significant qualities that have to be developed. As Brother Mark declared,

We want to give the best possibility for children to develop their human talents, how do you say, yes, to develop their human capacities [Brother Mark].

Leader-participants clearly spelt out that they did not want Mauritian Catholic secondary schools to be perceived as "star" schools, enrolling only the best performers. This was commented on by Margaret:

The Director of BEC was saying we cannot go on being perceived as schools for the elite, as 5- star schools [Margaret].

On the contrary, the leaders felt that Catholic secondary schools in Mauritius had a responsibility to be open to all students. Leaders' responses indicated that they wanted Catholic secondary schools in Mauritius to be open to students coming from poor families and who were academically weak. As Margaret and Brother John said:

It was thought that if we took lower grades in this way we would have given a better chance to a few poorer students [Margaret].

Behind the mixed, behind various abilities there are also different social classes and also children with higher or lower opportunity [Brother John].

Gabrielle pointed out that,

The correlation between poverty and academic performance led to the decision to change our admission criteria by including hardship cases and pupils with lower aggregates [Gabrielle].

These responses show the willingness and the determination of Catholic leadership to remain true to their founders' vision. David reaffirmed that all Catholic secondary schools in Mauritius have an educational program rooted in the mission of the founding religious institutions. For example, Ste Therese and Ste Claire are schools inspired by Mary Ward, who was in turn inspired by Christ and the Gospel. Ste Bernadette, St Leonard and St Peter's College are inspired by St John the Baptist de La Salle. As David elucidated further, the 'mixed ability' project is:

A project which confirms, you know the 1997 Vatican Millenium Document, OK, this document confirms all the founding intuitions, reasserts all the founding intuitions of our institutions [David] .

Hence the data relating to the circumstances which led to a new direction for Catholic secondary schools in Mauritius showed consistency in the responses of all the

Catholic leaders interviewed. Their responses which outlined the reasons which led to the 'mixed ability' philosophy in Catholic secondary schools are summarised below:

1. To be faithful to the Catholic values and the founders' vision;
2. To counter the harmful competitive spirit in Mauritian primary schools;
3. To welcome academically weak students;
4. To address social justice issues by offering the opportunity of a quality education to poor students.

Because of these reasons, the Catholic leadership opted for the 'mixed ability' philosophy for their secondary schools, despite the difficulties this move clearly presented. Next I discuss the leaders' perceptions of the possible impact of this philosophy on the schools themselves.

Theme 2. Leaders' views of Differentiation ('Mixed ability')

The leaders' responses clearly affirm that the differentiation ('mixed ability') philosophy is the direction that must be taken to enable a human-centred and holistic education in Mauritian Catholic secondary schools, as indicated by the following responses:

It takes into consideration the abilities, skills and potential of each pupil in the class; versus the dehumanisation of the 'one method for all' approach and the resulting proportion of pupils who are academic failures or drop-outs [Gabrielle].

These children even if they have very different types of results at the exams they can perform as human beings [Brother Mark].

Today we speak also a lot of the holistic approach, I think the respect of, you know, what makes the human being [Sister Laura].

The decisive measure for Mauritian Catholic secondary schools to be schools ‘of human persons for human persons’, a concept posited by the Vatican document (1997) (see discussion in chapter 2) would be through the enrolment of students with lower CPE aggregates. Mauritian Catholic secondary schools would become open to all, irrespective of intellectual abilities and capacities and socio-economic profile, as indicated by the following responses from the leaders:

A school open to all with special attention for the poorest, the weakest, for the weakest economically, for the weakest morally [David].

The ‘embracing all’ expression was clearly defined and is inclusive of young people of different talents, different intellectual capacities etc. [Sister Laura].

The leaders clearly understood what this would mean for the classroom. As the consequences of the ‘mixed ability’ philosophy become translated into the reality of school life, it would become obvious that the classroom would comprise students of different abilities and backgrounds compared with before. As Margaret put it:

This is to have in the same class students with varying intelligences with varying backgrounds but not necessarily what we call weak students [Margaret].

For Gabrielle, ideally, a differentiated classroom would be,

A classroom with all types of pupils, from the academically brilliant to the mentally disabled child, from the good athlete to the musician, from the computer wizard to the poet. Each pupil would have his or her individual learning program and he or she would learn at his or her own pace. Each child would have his or her achievement chart, without any feeling of inferiority [Gabrielle].

However the leaders voiced concerns about how this major change would be accepted by their staff. They were not confident that Senge's (1990) shared vision would eventuate, and were not certain of their own ability to make explicit the 'mixed ability' philosophy to the other key actors, that is, to the managers, rectors, heads of department and teachers. Responses indicated that all the Catholic leaders interviewed realised that such a huge shift in vision from traditional to differentiated teaching and learning was slow to be accepted in Mauritian Catholic secondary schools. The following responses indicated the difficulty of articulating that vision in the leaders' school communities:

Some school communities may have a shared vision but it is still in its theoretical phase for some, therefore the attitude yes, it's true, it's all nice, but we cannot do this because ... [Gabrielle].

But when you eat the pudding it becomes another thing [Margaret].

Change for differentiated teaching and learning was recognised as inevitably slow and is currently going through a reflection phase, since the 'mixed ability'

philosophy represents a totally different perspective for teachers, heads of departments, rectors and managers in Mauritian Catholic secondary schools. This is shown by

Gabrielle's response:

Since year 2000, there has been a change in attitude and a sensitisation to the issue. There has been a reflection period during which progress has been made [Gabrielle]

The difficulty lies in the shift from traditional to differentiated teaching and learning as described by Brother Mark:

Because traditionally it was pupils who performed well who were accepted in Catholic schools. So because of this tradition our teachers and rectors are used to welcoming these good performers and it's not easy for them to have this shift not only in vision but in practice, to welcome in their schools, in their classes people of various levels, of various academic levels [Brother Mark]

While some leaders believed that some teachers were responding to change well, particularly young teachers, for many, it was still very difficult to experience the change process positively. Up to the present, it would seem that in the view of the leaders, many teachers have not yet understood the 'mixed ability' philosophy.

According to these Catholic leaders, some rectors and teachers regret change and prefer the older system because it was easier to manage, and were familiar with it. Responses also indicated that a few Catholic secondary schools had implemented a program based on differentiation in classrooms in Form I, but had reverted to some sort

of streaming in Forms II and III for fear of poorer results. When Gabrielle was asked to comment on this particular issue, she said ‘I would not say that not all Catholic secondary schools are back to streaming.’ This implies that a few schools were indeed applying some sort of “streaming.” Margaret was very blunt in her response:

Some rectors were defending their way of doing things that unfortunately we are still having ‘mixed ability’, that is we have one section which is the good ones and then two other sections where we mix, therefore they still argue that they are having ‘mixed ability’ but they still have this good section. Why? Why? Because of their reputation of their school, they are relying on that good section to produce the high good results [Margaret].

From the above responses, it is clear that the Catholic leaders in this study have encountered some difficulties in making the ‘mixed ability’ philosophy explicit in their schools, as the considerable shift from traditional to differentiated teaching and learning requires a change of mindset by the key actors involved. However this is not surprising and is consistent with the literature on teacher change as reviewed in chapter 3.

Theme 3. Key Concepts of Learning, Pedagogies and Assessment

The responses of the Catholic leaders discussed above indicated that they see the issue stemming from the primary system of education that focuses far too much on academic education. Sister Laura believed that the Catholic leaders’ decision was very positive since it would foster in Mauritius another type of education. This has

implications for learning, pedagogy and assessment in particular, as discussed at length in chapter 3. This new and different type of education was described by Gabrielle as,

The application of an inclusive pedagogy which brings together pupils of different abilities in the same class using the concept of multiple intelligences, thus optimising the learning skills of all pupils [Gabrielle].

Brother Mark also recognised that the move to differentiation would require a focus on pedagogy so that in the classroom, students would collaborate instead of competing with each other. In the following quote, Brother Mark explained how he believes Gardner's (1993, 1999) multiple intelligences theory would foster a collaborative culture among the students in the classroom:

We have to promote a culture which is more a culture of solidarity, a culture where those who are brighter help those who are less bright and also a culture of solidarity where the multiple intelligences are recognised, are promoted and this is a tall order as you know because as I say, we have to start somewhere and I think it is important to have mixed ability as a wedge into the system, try to promote what I call this counter culture of solidarity [Brother Mark].

However, according to all the Catholic leaders interviewed, the greatest difficulty for differentiating teaching and learning resides in the processes that would need to change, as they recognise that teachers have always worked with students who are academically strong and have always taught through a standard, one size fits-all approach. Brother Mark declared that it was not easy for teachers to change their teaching

style immediately “because it’s a deep change, it’s not only a technical change.” And as David elaborated, teachers:

Had to be prepared for a change of mindset, to change the whole pedagogical approach ... for those who were used to, who were stuck, who knew only this system somehow elitist ... this has claimed a radical change in mindset, therefore some difficulty and reluctance which still exists in our system [David].

Margaret, on the other hand, questioned the role of rectors and heads of department as pedagogical leaders. She declared that many rectors and heads of department have not carefully read their schedule of duties and were not performing as required. She expressed clearly that,

All rectors are responsible for pedagogy in their school and you can count on the fingers of your hand, ‘*qui?*’ (trans: who?) Rectors who go and visit the class of their teachers not to criticise but to help that teacher, to assess the teacher, to discuss afterwards, I have been in your class, you don’t see yourself, you don’t hear yourself and I am here not to criticise but to help. Heads of department whose duties also are spelt out to be responsible for pedagogy, tell me who are the heads of department who go and stay in the class of a new teacher for example? [Margaret].

Gabrielle was not totally confident that all teachers would be able to teach using Gardner's (1993, 1999) multiple intelligences when she said:

Yes. Perhaps for some tentatively, others more vigorously but it is not general [Gabrielle].

The leaders also pointed out the difficulty in differentiating the product (Tomlinson, 1999; UNESCO, 2004) as assessments and pathways are barriers which will have to be overcome. This was highlighted by both David and Gabrielle in their responses:

The challenge of what type of assessment, of exams for our students... Is it compulsory for everyone to continue with SC, HSC, what other type of assessment or other examining body we can access ... City and Guilds for students who would not be taking the pathway [David].

We have accumulated delay in the program. Now that 1st cohort is at Form III level, start planning career path and choice of subjects, think-tank should have done some brain-storming and synthesis before this deadline [Gabrielle].

The above responses indicate that the Catholic leaders were already considering how to depart from traditional schooling at the middle level, using the focus on the concept of multiple intelligences (Gardner, 1993; 1999) as a way forward, but they also identified the difficulties of differentiating processes and product (Tomlinson, 1999; UNESCO, 2004).

As noted in the literature review, a key enabling mechanism for differentiated teaching is the organisation of schooling. The next theme, theme 4, examines the leaders' views on school organisation for learning.

Theme 4. School Organisation for Learning

Teacher Professional Learning

David was very vocal and explicit about the enabling initiatives taken by the decision-makers and described his experience. First he talked about one of the earliest assisting initiatives he had experienced - the intensive and large- scale professional development program which targeted Form I teachers, discussed in chapter 2.

David recalled that:

There has been the help of (an) Australian University which sent four lecturers for three days of Professional Development founded on the pedagogy of multiple intelligences, invitational education that is attention to welcome, induction and all that and after these three days, there are 400, more than 450 teachers, heads of department reached by this formation ... therefore on a large scale [David].

During this professional development course, teachers and heads of department were provided with resources that included books and other information to assist them to gain a better understanding of differentiated teaching and learning. David reported that "some teachers have told me that these have enlightened them when working some elements in class." He added that the follow-up of this professional development for

Form I teachers was for each Catholic secondary school to develop its own Action Plan and discuss it with the rector.

David also talked about the other professional learning opportunities such as the Certificate courses that started in 2006. The Certificate in Counseling was meant to help teachers in Catholic secondary schools develop counseling skills, while the Certificate in Christian Leadership was both for secondary and primary school teachers. The Masters in Educational Leadership which would soon start for a third cohort was to take the local context into account by offering a unit on enculturation. The following is David's response about the professional learning initiatives for teachers:

We have started for 2006, for psychology, Certificate in Counseling for the teachers, the formation centre has started a Certificate in Counseling ... a Certificate in Christian Leadership ... the Masters in Educational Leadership ... enculturation as a unit in the Masters in Educational Leadership [David].

Another professional learning initiative that has been set up to assist differentiation is networking. In chapter 2, I noted the comments of one of the external facilitators about the difficulties of the 'mixed ability' program in Catholic secondary schools in Mauritius, and the suggestion of a network to be set up to assist the program. David talked about the networking culture, which had been mentioned by one of the lecturers from the Australian University. As he put it: "you have your own resources and you need to develop the networking culture" [David].

Brother John declared that networks were valuable to promote discussions among teachers, heads of department and rectors and to encourage them to work together in teams:

The big advantage of mixed ability also is teachers are forced to work together, which they were no more doing because they were specialists in their specific area, they were teaching, they were giving tuitions, they were coming, they were leaving whereas there is the obligation of team work and if team work has started to work out, we'll find it's more profitable and we'll work in teams and therefore, this will be the working culture [Brother John].

David explained that subject clusters were set up within the networks, and rectors, heads of department and teachers met on a regional basis. According to Brother John, these clusters were helpful as difficulties and experiences were able to be shared.

David declared that:

It's a kind of professional development for me and maybe some teachers don't realise that, the clusters working, subject-wise is essentially for me also a professional development because there is sharing of success, there is sharing ... of difficulties and to find solutions [David].

David also added that another formation group was the Action Research group which was set up and involved secondary school teachers.

An important outcome of the discussions among teachers, heads of department and rectors in the clusters was syllabus reviews. As David explained:

After it had started in 2005, rectors have been reflecting, from the feedback in their school, how this was working, therefore there have been evidently lists of positive points and negative points and it was found that it was important to revise the syllabus, the syllabus which was being applied in our schools was no more appropriate in mixed ability situations ... therefore 3 programs, FI syllabus, looking at the elements that must be put in place, what are the essential learning competencies as they are called, we need to make sure that they are acquired by all pupils and how to build up on it after [David].

However, David noted that,

There is still the big challenge of the school as a learning community ... we are still far from the networking [David].

David added that the culture of collaboration and team teaching and teacher networking is difficult to implement, in fact he believes that it is not part of Mauritian education culture:

It was the first time in the history of the Catholic school except maybe a little bit for the Loreto Schools who had, who worked a bit in network but I'm not too sure up to what extent, probably not subject-wise, but well you have a type of, but the other schools have never worked in network ... not even in their own

school, some, but definitely not in school network where each school could bring its knowledge, its experiences, this sharing ... [David].

David also added that lack of research was an impeding factor as there was no systematic follow-up like the Action Research and that someone experienced in the field would be needed. He said:

You can't ask a first-comer ... the XXX asked to document our thing ... I'm asking myself how is he going to start this poor teacher, well a small group had started ... well it's still to be done again, to find out how to set up documentation techniques ... we are very weak in that field, we don't have this culture [David].

Margaret's experience as manager of one of the Catholic secondary schools participating in the research was significant in this context. Her response indicated that she viewed her responsibilities in the manner of a transformational leader. The following shows Margaret's views of the organisation supporting measures needed for effective learning:

First year that I introduced really drama classes and we had a wonderful performance because up to now it was an elitist school, no singing, no dancing, nothing. This year we have reduced to 33 in a class as a concession to teachers instead of the 40, so I said OK we are going to have 33. I shall encourage my rector and my staff to adjust, to work as a team, to do team teaching to implement appropriate pedagogy. I shall provide of course facilities which I

have already done you know that I am adding, I am providing more classrooms, I am building another audio-visual room here and I am providing funds since this year because I heard ... but we don't, we can't make students pay for the handouts and we want to do other things but there is this question of costs so I said OK I'll provide funds for your handouts. This is one way of managing you see and of course if I can, if we are invited with people are providing, BEC is providing further training for teachers, of course I'll encourage my teachers and I'll pay if there is the necessity for the training of teachers [Margaret].

Other impediments to implementation

Both Brother John and Gabrielle talked about the financial constraints to employ a professional in this field. Other factors which Catholic leaders talked about impeding the school organisation for learning were the overcrowded classes, financial means, space and furniture. This is spelt out in the following quotes.

I would say the greatest difficulty, there's no way out, is the number of students ...with 40 students [Sister Laura].

Lack of training, lack of financial resources for investment in new pedagogical tools, lack of space and classrooms, lack of appropriate adapted furniture for group-work [Gabrielle].

Discussion

The above presentation and discussion of the first theme, Catholic identity and the related concepts of personhood and social justice, has focused on the voices of the

decision-makers, that is the Mauritian Catholic leaders who have been interviewed for the purpose of this study. Their views convey the pressures on Catholic leaders in Mauritius which challenges their leadership to rethink the vision and mission of secondary schools. Their understanding of the reasons for the ‘mixed ability’ philosophy has been explained as well as their understandings of that philosophy itself. This section has also uncovered their understandings of the subsequent themes of differentiation, in Mauritian Catholic secondary schools as the outcome of their decision, their perceptions of learning and the differentiation of the processes, the content and their knowledge of the school as an organisation for learning. The overall view of these decision-makers appears to be that the ‘mixed ability’ philosophy:

1. Is consistent with the Catholic values and the founder’s vision;
2. Fosters a human- centered and holistic education;
3. Entails a deep shift in pedagogical practice and well as the school as a learning organisation;
4. Has received some enabling initiatives for implementing the program;
5. Is meeting with some difficulties in its effective articulation in Mauritian Catholic secondary schools because of some teachers’ and others’ (understandable) lack of willingness to change.
6. Has physical and financial implications which are still an issue.

The next section discusses how the ‘mixed ability’ philosophy is articulated and translated into the reality of the Mauritian Catholic secondary schools through the voices of the rectors and heads of department in terms of the concepts of transformational, pedagogical and parallel leaders, as discussed in chapter 3. These are the leadership styles

that this group would need to be aware of and begin to work towards if ‘mixed ability’ is to succeed.

Section 2. Voices of the Rectors and Heads of Department

In this section I present and discuss the data generated by the individual interviews of rectors and the focus group interviews of heads of department, within the same themes as section 1, that is Catholic identity, differentiation, key concepts of learning, pedagogies and assessment, and school organisation for learning

Here I will demonstrate their perceptions of themselves as transformational, pedagogical and parallel leaders, of the articulation of the ‘mixed ability’ philosophy in the physical activities of Mauritian Catholic secondary schools in relation to each theme stated at the beginning of this chapter.

I begin with an examination of the participants’ understandings of a translation of the ‘mixed ability’ philosophy in the reality of the schools in relation to the Catholic identity.

Theme 1. Catholic Identity: The concepts of The Personhood and Social Justice

Rectors

The rectors of the schools in this study were aware that Catholic education in Mauritius had taken a new orientation with the ‘mixed ability’ philosophy as indicated in Chantelle’s response:

Yes, we cannot do otherwise, that’s my point of view ... Therefore we have to look at that ‘*un nouveau regard*’ (trans: a new way to look at), ‘*il y a un*

changement de regard, il y a un nouveau regard' (trans: there is a change in the way we look, a new look) [Chantelle].

Chantelle added that there was an awareness of the 'mixed ability' orientation in Catholic secondary schools in Mauritius as indicated in the following response:

There has been what we say in French '*une prise de conscience*' (trans: awareness), OK that we are and we'll be more and more towards 'mixed ability' and there has been '*une prise de conscience*' (trans: awareness) ... [Chantelle].

It would appear that Chantelle has explicitly engaged with and understood the 'mixed ability' philosophy. I will now proceed to examine at what heads of department said about the Catholic identity.

Heads of department (HODs)

For some HODs the concept of the personhood is explicitly shared between the decision-makers and the parallel leaders who are at the middle management level in the schools. This is demonstrated in Sarah's response as a parallel leader in the quote below:

The learner also is a human being [Sarah]

For Roy, it was an opportunity for the students to grow together and learn from each other. Catholic identity was strongly perceived in both Sarah's and Lily's response:

There is no labeling and pupils are motivated, there is the upraising of the self esteem of students, self confidence, trust, respect, that is what we have seen is that the 'mixed ability' class has social aims, OK, so we have, we encourage

sharing, praise and this will in fact relieve our students from fear, from inhibitions [Sarah].

In a 'mixed ability' class you would allow holistic development at least you make them become a good human being, good citizen for the country, in fact you become a lifelong learner with life skills [Lily].

These responses of the above heads of department show that they share the vision of the Catholic leaders as far as the Catholic values are concerned and they believe in fostering the human qualities which will make the students better human beings.

I will now continue with the second theme, differentiation.

Theme 2. Differentiation

In chapter 3, I noted that for the 'mixed ability' program to succeed, the role of rectors and heads of department in Catholic secondary schools in Mauritius would need to be one of transformational, pedagogical and parallel leader. This section is about the significance of these roles in relation to differentiating teaching and learning in the physical activities of the school. I will now discuss the rectors' views.

Rectors

The translation of the 'mixed ability' philosophy in Mauritian Catholic secondary schools has been identified by rectors as challenging and ongoing, as these quotes show:

‘Mixed ability’ is a package. For BEC, for Catholic schools to give access to their schools to 15 aggregate and be happy is not enough, that’s just the beginning of the race [Chantelle].

For me it’s a challenge, we need to live up to the new situation [Matthew].

The rectors, as transformational leaders, encouraged a change of attitude for the ‘mixed ability’ philosophy to be obvious in their schools. This was made possible by meetings of the rectors with the staff, to reflect about effective changes as a result of the shift from traditional teaching to ‘mixed ability’ teaching as the following quote shows:

I can say and therefore we did give much time to reflection, we did meet, we did meet during the holidays, we met at the beginning of last year for our first staff meeting, therefore we really did a good, a lot of reflection at meetings... [Chantelle].

However, as “streaming” is embedded and inherent in the Mauritian system of education, the rectors noted that a few schools were going back to streamed classes. The BEC and the Loreto Provincial asked rectors to explain themselves here, as Chantelle explains:

When we have reports from the BEC that not all Loreto Schools are working with ‘mixed ability’, that in Form II, some of us are going back to streaming, therefore there is a report from BEC to Mother Provincial who asked for a meeting and listened to us [Chantelle].

Some rectors found it difficult to establish differentiated classrooms in their schools because at present there is no transition program between primary and secondary schools in Mauritius which would help establish students' groupings in Form I. As Chantelle noted:

These pupils come to us with their biography and we have no contact with primary, no '*dossier*' (trans: personal file) from primary [Chantelle].

Views about rectors' meetings for discussion of strategic planning revealed that they believed the BEC is losing time and that the key actors in Catholic secondary schools in Mauritius are still only in the learning phase of how to differentiate the classrooms. This is evidenced by Mathew's response:

The BEC, which in my mind is very slow. So we have to come together to, for a compromise on what we are doing and why we are doing it, what is behind and I believe till now, nothing much has been done concretely, we are still in the process of learning how to implement this project [Matthew]

The rectors recognised, however, that their role was to translate the vision of the 'mixed ability' program into physical activities in their school in line with the mission of Catholic schools to attain its objective. Here they appear to recognise their role as a transformational one.

The rectors' responses were useful to identify assisting and impeding factors for differentiated teaching and learning. The next section continues the discussion about what heads of department have to say about the concept of differentiation.

Heads of department (HODs)

Responses of HODs about their understandings of the ‘mixed ability’ philosophy in schools stressed the idea of word ‘different’ and the diverse nature of each student, as indicated in the following quotes:

Students of different abilities, of different age group, of different social backgrounds, of different community, of different religion [Roy].

When our students come in FI, they come to us with their own background, therefore their family, their social background, cultural background, economic [Mira].

Roy had also referred to the term ‘ability’ and highlighted the diverse feature of the classroom which has always existed even before the development of the concept of differentiation. Roy explicitly referred to the diverse nature of the classroom in the following response:

We’ll have to start by asking ourselves the question what is ‘ability’? ... The question ‘ability’ itself gives us several definitions and to start I’d like to say that when we talk of ‘ability’ everybody is born with an ‘ability’ so basically ‘mixed ability’ we are already in the context of a ‘mixed ability’ and ‘ability’ is something which is not static, it’s dynamic, it changes, it evolves, it adapts according to circumstances and situations, all sorts of situations and all sorts of circumstances and if we start by saying are we or is ‘mixed ability’ class successful, I have been teaching for 30 years and I can already say that for 30

years, perhaps the word has not been used as it is being used actually, we have been teaching 'mixed ability' [Roy].

HODs have expressed their concerns about translating the 'mixed ability' philosophy into reality because they believe that there has been no proper follow-up with a distinct program or proper guidelines and communication for differentiated teaching and learning. As a result nobody knew exactly what these key actors in Mauritian Catholic secondary schools were supposed to be doing. As Roy put it:

Having an idea or going on a project, everybody has the vision, once you get that vision, I have to ask myself, do I have the means to realise that vision, the policy as far as I'm concerned is putting the ox behind the cart, this is in fact suddenly OK 'mixed ability,' what does it imply? what will it involve? how are we going to implement? what is required? has there been a proper study, a proper evaluation of all those things? [Roy].

Clearly Roy had much a lot to say about the issue. He also noted that not all Catholic secondary schools are moving in the same direction as far as differentiation is concerned. Other responses from heads of department echoed those of the Catholic leaders, stressing the fact that a change in mindset for differentiated classrooms is difficult because teachers have been used to streaming in the Mauritian education system. Charles believed it would not be easy to change the teachers' attitude and that it would take years:

Attitude, changing attitude is not something easy and over days, it takes years, I don't know how long it will take but this is the greatest difficulty [Charles]

The data show that as pedagogical leaders, HODs were able to recognise that students have different abilities and backgrounds. However they expressed their concerns about an effective differentiated program since not all schools were working in the same direction and since the change of mindset from a streamed approach of education to differentiated education would not be easy and would take time.

It has been possible to establish from the above presentation of rectors' and HODs' comments similar responses of these participants about the concept of differentiation in the classroom, that is the diversity of learners and also both rectors and HODs stressed about the difficulties of differentiated teaching. However, it has not been possible to assess how far rectors and HODs would assume their role of transformational, pedagogical and parallel leaders as there was no mention of a differentiated planning tool for guiding growth toward effective differentiation with the goal of individual professional learning of the teacher and moving each student as far and fast as possible.

Next I will discuss the views of rectors and heads of department as they considered the key concepts of learning, pedagogies and assessment.

Theme 3. Key Concepts of Learning, Pedagogies and Assessment

Rectors

Responses of rectors to the interview questions indicated that they saw their role

as transformational and pedagogical leaders as the translation of the vision of the ‘mixed ability’ program into physical activities in their school so that the mission of Catholic secondary schools in Mauritius could be realised. The rectors interviewed had similar responses about the decisions they had to take at the early stages of the program, that is when the Catholic leaders’ decision to introduce the ‘mixed ability’ philosophy came into effect. These responses indicated that the rectors understood the need for deep pedagogical change. Both Matthew and Chantelle talked about rethinking their program of study and adapting it to the level of students. This is shown in the following excerpts from the interviews:

It would seem to me that when the mixed classes come in we will have to look into the curriculum, both the program, the pedagogy and the evaluation ...

‘Mixed ability’ classes cannot be totally academic, it has to go into activities, it has to go into multiple intelligences [Matthew].

I was thinking of curriculum, of content and methods, methodology. I could not see them separately [Chantelle].

Rectors were able to sustain their level of pedagogical leadership when they met in the clusters to develop the program for each subject and the associated pedagogies. Chantelle talked about the request from the BEC to set up different committees under the leadership of a rector to look at the syllabus of some of the subjects.

We did prepare a questionnaire for teachers, all teachers, on what is your program in Form I, for your subject matter, what is your program and program means program that you submitted to the PSSA, because you normally do what

you submit what you say you do, therefore what's your program? 2nd column, observation and 3rd column, propositions and then we had all these papers from different Confessional schools and we decided the four of us that we are going to work in clusters, this is how I found myself in English, French and Social Studies and we did call after teachers to meet on the committee of English, French and Social Studies and then to try to have a look at all that have been sent and try to sort of synthesis and eventually a proposed curriculum [Chantelle].

Chantelle went on to talk about her own experience of leading the French cluster:

And then the colleagues said ... content is huge, let's stick to content but what we have to do now I think is to see the methodology, strategies OK you don't propose to say OK we are going to reduce let's say passive voice, we are not going to have passive voice in Form I, we're going to have this and that, that's good OK but how are we going to introduce, what are the new strategies ... therefore we have to move on to methodology and if we finish with content and methodology Form I and then we do the same thing for Form II and propose our it should be experimented as well [Chantelle]

In the above excerpt, Chantelle talked about the content and the strategies which teachers in her cluster were discussing during their meetings. Assessment was also spelt

out in the context of differentiated teaching and learning. This was indicated by

Chantelle:

We said it was time to change therefore now it's less summative with a certain let's say percentage 1st Term, 2nd Term and 3rd Term and more continuous assessment [Chantelle].

Chantelle also expressed her views about the CPE, and was concerned that it is only one examination common for all pupils, the bright, average and weaker, which labels them all with an aggregate. She believed that so far, not everything has been done as far as assessment is concerned. While Chantelle said that Loreto rectorors have been discussing assessment, but BEC rectorors less so, she was concerned since there was no proper assessment guidelines for Forms II and III. She was also concerned as a rector about the decisions she would have to take about assessment in Form IV. Chantelle's response depicted a very realistic view of the assessment issue:

Therefore I don't see much coming as far as exams are concerned, I'm speaking of, should we have other examining bodies? No, not ... should we not have the same examining bodies, Cambridge but have other subjects, additional ones? Should we not keep the same body more or less the same subjects because if we had subjects too many what about the time table, 40 minutes, so many periods a week, 8.30 a.m. to 2.30 p.m? ... We can't have 'mixed ability' and then work with different methods, group work and so on and so forth and then after 5 years the same paper, That's a problem and which has not been discussed, did not

give much time, much energy, you know to this. What are exams at the end of 3 years, at the end of 5 years? [Chantelle].

These rectors' views showed that they were aware that changes about what to teach, how to teach and what to assess and how to assess were required in order to translate the 'mixed ability' philosophy in the reality of the schools. Some rectors have already taken some action in their capacity of transformational and pedagogical leaders but there was still more to be done.

Next I will discuss what heads of department have to say about these processes of differentiation.

Heads of department (HODs)

From the perspective of heads' of department responsibility to encourage change and innovation, as well as review and renewal of teaching practices, the focus group responses indicated that this group was aware of the challenges faced in the context of the 'mixed ability' situation in schools. To become effective parallel and pedagogical leaders, the heads of department had accordingly to change and review the workload and the scheme of work. As Tony put it,

We have been given one of the task is to implement 'mixed ability' grouping last year, we had to initiate and take measures and steps to implement the philosophy or the idea [Tony].

The key role of the subject head of department was clarified when the heads of department talked their respective departmental initiatives to assist the differentiation

processes. Lily, Agnes and Sarah participated in the same focus group interview and the following reflects their individual initiatives to differentiate the content, the process and the product (Tomlinson, 1999; UNESCO, 2004).

Lily talked about her work as head of Mathematics department:

I spent time looking at the whole primary syllabus to have an idea about the methods because mathematics is scaffolding. If it worked in Maths, it was also because I worked with a colleague who was teaching the two other classes, she has worked for a few years in FI, therefore she knew the content and together we prepared our plan of work, our assessments, common assessments and we could share ideas, strategies and she was most willing to try and then we shared [Lily].

Agnes, as head of department of French, said:

In French, we started since last year in 2005 a review of the Form I syllabus, therefore we worked with the teachers to review completely the syllabus and we agreed on one objective which was to reduce content, that is less in quantity but more in quality and look at the content, what skills students need to have in form I, we looked at that, we even asked an external facilitator, a lecturer from the Teacher's College, to look at our work, therefore we had advice and this has been the first change, we also changed the exam paper, we don't ask the student to write a whole essay but only one or two paragraphs which are combined with the literature paper and even in the exam paper we try to give them marks which they can easily obtain, 30% marks maximum which they can easily obtain [Agnes].

Sarah, as head of English, demonstrated aspects of the pedagogical and parallel leader. The following is her response:

We are actually working on it in the English department, right now we are trying to review the curriculum in FI, we are trying to make it lighter so that it really caters for needs of our FI students so we are trying to change, modify the contents according to their needs, we are also working on the methodology, how to teach it, trying to look at new innovative teaching strategies and we are also thinking of remedial, remedial work to help those who have not attained the level because there is a gap between the students coming from primary schools when they reach FI ... we are trying also to look at how to change methods of evaluation we are also trying at assessment and this is what we are working at and we are also trying in our classrooms and so in brief what we are trying to do is adapt our teaching to their learning styles [Sarah].

Other heads of department consistently talked about cutting back the syllabus content by about 20 per cent. Justine went further, saying “in fact it’s not about the content that we are interested, we are interested in the concepts.” However Roy and Tony were not planning at this stage for the integration of thinking skills for teachers to move to the six levels of Bloom’s taxonomy. The following is an excerpt from their focus group interview:

Researcher: ... applying, designing, creating ... have you been planning for that so that teachers can move to the 6 levels of Bloom’s taxonomy?

Roy: no

Researcher: no?

Tony: no

Margaux, on the other hand, was concerned about the program being too easy for the bright students, as indicated in this response:

We need to cater also for the most brilliant one, now that is not to make the syllabus too easy or too difficult and try to use, to devise strategies how to make the weaker pupils work together with the more clever ones [Margaux].

The heads of department also indicated their awareness of student-centered strategies to cater for students' learning needs, such as the use of cooperative learning, peer teaching, pair work, more activities and group work. However, Justine, in the following quote, talked about the difficulties of implementing these strategies. She believed that the more able and successful students would be disinclined to work in cooperative groups:

The brighter ones, they're always exam-centered, they are very egoistical, they won't share what they know, and so when we ask them to work in group and to help the lower ability pupils, they just think that's not their job [Justine].

All the heads of department talked about the profile of the learner as a significant impediment for introducing differentiation processes. These impediments include that students have been used to rote learning in primary schools, have developed

an exam-oriented attitude, but more important, as many have Creole as their home language, have significant problems with language. However rather than acknowledge these as genuine impediments to learning, the HODs interpret this as lack of critical thinking ability and creativity:

They have no creativity ... I have to translate it to English, I have to keep relating, I think that they just don't understand what I'm teaching if I don't speak in Creole [Justine].

It is in some ways of learning ... they don't have a critical mind, they have not learnt to have a critical mind on everything [Margaux].

That's why we are trying to unlearn [Sarah].

Relearn [Mira, Lily].

As far as assessment was concerned, heads of department recognised that they had to consider a range of types of assessment tasks for internal examinations and a different system of marking and term examinations, but they were also concerned about their accountability to the rectors in terms of results. The HODs clearly saw themselves wedged between what they saw as accountability and the move to be more student centred in their assessment. This issue was conveyed by Roy:

So there are implementations which are being made, the result nobody knows but we will know the results when the rector will call us and say we have 70% failure in SC, can you account for that, then we'll have to sit down and review the whole thing and discuss the whole thing but at the end of the day there will five generations of students who would have gone through that [Roy].

Some heads of department who participated in the focus group interviews were also engaged in the clusters. Heads of department in clusters were beginning to act as pedagogical leaders and initiators of change as they encouraged teacher collaboration through fostering a network. Lily gave this feedback on her experience:

With this curriculum change, for example I am in Maths group, we meet all the heads of department to see what can be done ... to bring change, I think that we are in the good direction because when I'm there and I talk to the teacher who is doing the same thing in FI, what are the difficulties, this is our reality and we can share [Lily].

The above responses of the HODs indicated their understanding of change by reviewing the syllabus, looking at new teaching strategies and other forms of assessment. Data also showed their concerns with accountability and how to implement 'mixed ability'. For some though, there seems to be an underlying view that the students themselves were deficient rather than being products of the system itself. Here there have been positive and optimistic responses as well as realistic and pessimistic ones which depicted the difficulties and impeding factors they all faced.

Next I discuss the rectors' and heads of departments' views of school organisation for learning.

Theme 4. School Organisation for Learning

Rectors

James talked about the BEC/Australian University Professional Development Program but thought that the Australians may not have fully understood the local context or what he called ‘Mauritian realities’:

It’s good to have people from abroad but we have also to think about the realities of the Mauritian situation, it’s very important, people from Australia, they have ..., Mauritian realities [James].

As well as the BEC initiatives regarding professional learning of teachers, rectors also have the responsibility of giving professional development opportunities to their staff to develop their skills and knowledge. Matthew talked about a 20-session staff development program including classroom management and teaching-learning processes conducted by a resource person from the local Teachers’ College. Teachers were to be given time for discussion and the outcome would be to develop at least five strategies to be implemented in their school.

Other responses from the rectors participating in the study referred to other initiatives in the school organisation for learning, such as curriculum. Matthew mentioned new initiatives in his school:

We are implementing few things, we started with remedial classes ... we are introducing 2 activity periods during the week ... music and life skills

[Matthew]

Heads of department also had their views on the professional learning of teachers.

Heads of department

In their focus group, the heads of department were asked to consider the effectiveness of the Professional Development (PD) program provided by BEC/Australian University in 2004-2005. Tony talked about the informative nature of the BEC/Australian University Professional Development program but questioned its effectiveness for heads of department and teachers in assisting them to cope with the new situation. According to Mary and Justine, the BEC/Australian University initiative was more of a teacher seminar than a PD program, as it was not ongoing and teachers had not been able to grasp the technical know-how. Charles and Justine also spelt out that teachers did not have the proper pedagogical training to teach through multiple intelligences to which they had been exposed:

Over and above we don't have the proper pedagogical training [Charles].

We really would like to develop multiple intelligences but we are not trained for that [Justine].

However, for Lily, it was very helpful and it motivated her as she knew she was going to teach a Form I. She believed that the teacher's attitude was very important for the BEC/Australian University Professional Development Program to be effective and any follow-up resided in the teachers' willingness to change and put into practice the new ideas they had gathered.

For Roy, professional learning of teachers was not enough and the BEC should have a long-term plan in terms of teacher education. He stated:

The Bureau de L'Education Catholique (BEC) is an authority, why don't they decide at a certain time to say, OK our requirements for next 5 years will be let us say 50 teachers, why not start a program where those teachers are going to be put in a situation where they come out with a professional qualification even if the Catholic church is investing in a specialised school, start with the teachers so that when they come to school there is no problem of monitoring, they can stand on their own legs and take the responsibility because they have got that professional qualification [Roy].

Clearly while the HODs felt in general the BEC/Australian University Professional Development program was generally beneficial, there was little opportunity for follow-up and practice of the information the teachers had received.

A number of HODs mentioned mentoring as an important assisting factor in the schools organisation for learning. As Mary put it,

I think my role is you know, listen, advise, guide, create a pool of resources and see what can be done [Mary].

However, Roy and Charles clearly signified that for them, mentoring was not clearly defined and structured in schools. Rather it tends to be carried out on an informal basis during lunch time. Charles added that as a HOD, he would like to be a mentor:

We would like to see a situation where we can observe and recommend our staff, we can observe the classes of our staff and then make proper recommendation as far as the pedagogical means are concerned [Charles]

Next I present the rectors' and HODs' voice about the structural impediments.

Rectors

Chantelle spoke of the importance of infrastructure, that is, not only classrooms and study rooms but also activity rooms and resources such as photocopies, kitchen paper and more visual aids. She also spelt out the problems of flexibility and accountability to external governing bodies. As such she does not have full independence to make decisions about the workload of the heads of department and teachers. She would want more floating teachers for language, mathematics and remedial classes but she has a staff entitlement issue. The rector's autonomy is also hindered as far as the teacher/ pupil ratio is concerned. Chantelle talked about the rectors' understandings of the teacher/ pupil ratio in the classroom but they have to think about the capita per head grants. The money is needed to run the school and therefore more pupils mean more money. The following response exemplifies the rectors' issues as far as flexibility, autonomy and governing bodies are concerned:

Flexibility in terms of time-table if I want to give 20 periods instead of 28 periods to my HOD or to any teacher I can't do it; the teacher/ pupil ratio. We are prepared but we have to think about the capita per head grants. We need the money as well to run the school therefore more pupils means more money; staff entitlement, can I have more teachers and have floating ones as well and

floating ones who will be the language and maths teachers, good at both you know, to help the teachers with remedial work, that's Ministry, PSSA, therefore more flexibility which we don't have but which we have to fight for. I think for the model we could go on and on for a successful mixed ability but I just wanted to stress these 3 points, infrastructure, teachers and ... [Chantelle].

Heads of department (HODs)

Other responses of heads of department related to impediments which they believed were structural. All heads of department consistently talked about the size of the classrooms, the overcrowded classes and the furniture, as is clear from the following quotes regarding the classroom situation:

Same furniture, same table, same desks and same blackboard and even in worse condition [Charles].

I would mention first class size, I mean the number of students in the classroom, for the time being it's about, it amounts to 40 [Tony].

And also you could add perhaps 40 students divided into groups of 5 ... you have 8 groups ... of 5 students ... how do you manage, for one teacher, how do you manage? ... We are still in that relationship of each student with his chair and table, the teacher in front, chalk blackboard, we're still in that context [Roy].

Not only that you have 40 students but the size of the classroom is such that you hardly you can move between the desks ... between the eight groups [Charles].

For Agnes, another factor was not enough time for effective teaching:

The other difficulty would be the time factor, that is you have classes of 40 minutes with these types of students, it's not enough, honestly, it's my big frustration, my goodness, 40 minutes, it's so quick [Agnes].

Charles felt that time is lacking for HODs to perform as mentors:

It is not something organised, officially recognised by the administration that we have on our timetable or the board in such periods in such days we have to go there, it's not something like that, organised, it's time constraint. We need a very flexible timetable and our workload is so heavy that we hardly have time to give others, do monitoring is very good but how, when to monitor, how to monitor [Charles].

And for Roy, the problem was lack of resources such as books and photocopies.

He made it clear that he often has to purchase some resources himself. As he declared:

Do we have a resource center? Where do we pick up our resources? We could come with resources, do we have the back up? the administrative back up? I need photocopies, I have to wait one week and I have to explain why I need these photocopies, I need material, very often you go and buy your material, it's your subject, you teach the subject, you buy it, you know the salary of a Mauritian teacher, so you understand what I mean [Roy].

In general, the responses of the heads of department indicated a tension between the learner's profile (pace, interest, content) and meeting the set standards. They also showed their understanding of the need for ongoing professional development through teacher learning programs which they believed would be more effective than one-off sessions. They also believed that barriers to effective mixed ability teaching were issues of time for mentoring, the physical learning environment, short class times and resources.

The next section examines the perceptions of the practitioners charged with introducing the mixed ability program – the teachers themselves.

Section 3. The Voices of the Practitioners

This section focuses on the voices of the practitioners, that is the teachers who are charged with implementing the 'mixed ability' program in their classrooms. As described in chapter 4, 97 teachers mainly from three Catholic secondary schools and a smaller number from other schools participated in the study. They completed the questionnaires and PMIs (de Bono, 1992). A blank copy of the questionnaire is annexed in Appendix 22 and a blank copy of the PMI as well as a filled one of each are annexed in Appendices 23 and 29.

For analysis purposes, questionnaires were collapsed into three categories: Agree, Not Sure and Disagree. All responses from the questionnaires are displayed in percentages in bar graphs. These responses are then linked to the responses to the PMIs which gave a more nuanced insight into the reasons for their responses in the questionnaires. Exemplars of the most frequent categories of PMI responses are presented

here in tables. Both questionnaire and PMI raw data are annexed in Appendices 24 and 25.

I begin the examination of the practitioners' views under the first theme.

Theme 1. Catholic Identity: The concepts of The Personhood and Social Justice

Teachers' views of human-centred education

The first two statements in the questionnaire were intended to gather responses of the teachers participating in the study about their perceptions of the concept of a human-centred education. As noted earlier, this is believed to be a translation of the 'mixed ability' philosophy into the reality of Mauritian Catholic secondary schools. The two statements (**S1** and **S2**) are:

- S 1.** A human-centred education includes all students irrespective of ability, capacity, creed, religious and economic backgrounds.
- S 2.** A human-centred education does not label students according to their CPE aggregates.

Responses of teacher-participants as shown below in the bar graph indicate a full 99% positive response as far as the holistic and inclusive features of the human-centered education are concerned (S1). 94% of teachers also agreed that labeling students by their CPE is incompatible with a human-centred education.

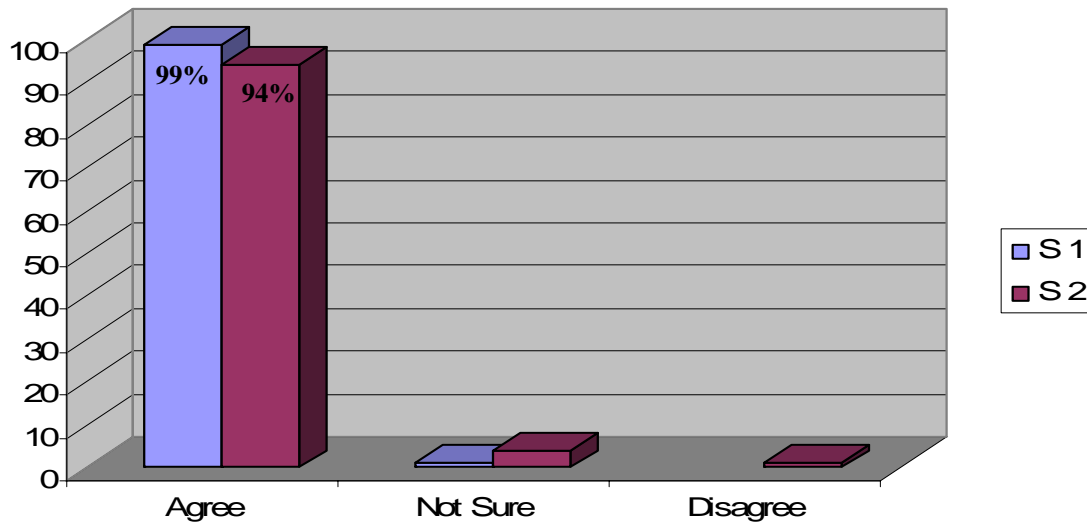


Figure 5.2 *Teachers' Views of Human-Centred Education*

The PMIs added insight to the respondents' questionnaire data and were more revealing of the teachers' understandings of the vision of the 'mixed ability' philosophy. There were in all 51 positive responses from the teacher-participants. Their comments focused on the inclusive and shared character of the 'mixed ability' philosophy as a move towards greater social justice and to foster a new type of education which considers the learner as a human being. The following are typical positive responses from the teacher-participants' comments from the PMIs:

Inclusiveness [not only 'academic', different backgrounds, family; all children have a right to Catholic schools; teach one and all]

Equal chances (low performers, poor)

Sharing/ collaboration/ positive interaction between students regardless of aggregates/ backgrounds

Individual attention to student's needs/ recognition of individual talents/ interesting environment for the pupils of different abilities/ focus on learners

Peer support for self confidence (shy students)

Sense of belonging/ dignity/ second chance/ high self esteem/ praise and encourage weak students/ avoid 'labeling' and stigma

Promote good learning atmosphere/ reform our educational system

(See Appendix 25 for raw data)

However, there were also 15 negative comments about the impact of introducing 'mixed ability' in schools, such as that a common vision was not being expressed or explicit, and fears that Mauritian Catholic secondary schools will revert back to the old system of streaming in lower forms despite the change in philosophy:

Teachers refuse to change teaching style; make as if still working with top students; not persuaded about the change and think the BEC will revert back/ teachers voice out frustration: have chosen to work in 5-star schools

Lack of clear vision from leaders; no final goal

Not all teachers understand the concept of mixed ability/ teachers do not know where the mixed ability program will lead

Streaming still applied; elitist system

Social/ Psychological Impact

Kids are sacrificed for a moral feel good purpose without their needs identified

Lack of support

(See Appendix 25 for raw data)

Next I continue with an examination of the teachers' responses to the second theme, differentiation.

Theme 2. Differentiation

Teachers' views of a 'mixed ability' classroom

Statements 3, 4 and 6 in the questionnaire were intended to generate responses from the teacher-participants about their understandings of a 'mixed ability' classroom and how it relates to the concept of differentiation.

- S 3.** A mixed ability class is a class with students whose CPE aggregates range from 15 to 20 units.
- S 4.** A mixed ability class is a class with diverse learners.
- S 6.** In a classroom there are as many differences in learning styles as there are students.

The responses as indicated below show that 98% of teacher-participants recognised the diverse nature of the classroom, while 89% of them recognised that students have differences in learning styles. However, for 35% of teacher-participants, that is the 16% Not Sure and the 19% who disagreed, the classroom is seen as diverse because of the different CPE aggregates of the students, not because of their human differences.

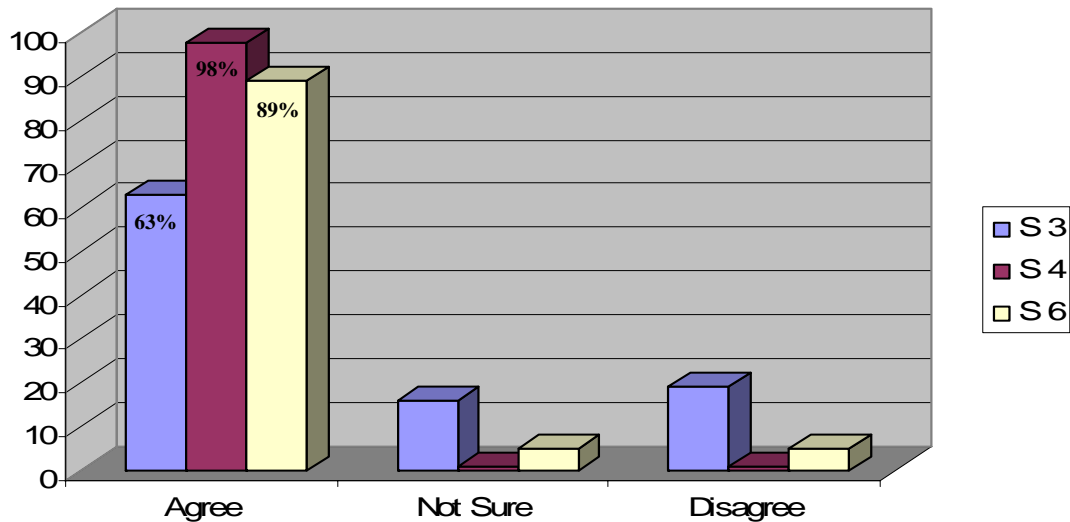


Figure 5.3 *Teacher's Response to Differentiation*

Teachers' views of "streaming"

Statements 7 and 8 were designed to generate data about the teacher-participants' perceptions of streamed classes as the best way to teach top CPE performers:

S 7. Streamed classes are the best way to teach students (FI- III) i.e. top performers of the CPE in one class and same for the low performers.

S 8. Top performers of the CPE are not performing to their full capacity and ability in 'mixed ability' classes.

35% of teachers still believe that streaming is still perceived as the best way to teach Form I to Form III for the 'top' performers. This was confirmed by the 62% of teachers who still believed that the top CPE performers would not perform to their full capacity in a differentiated classroom.

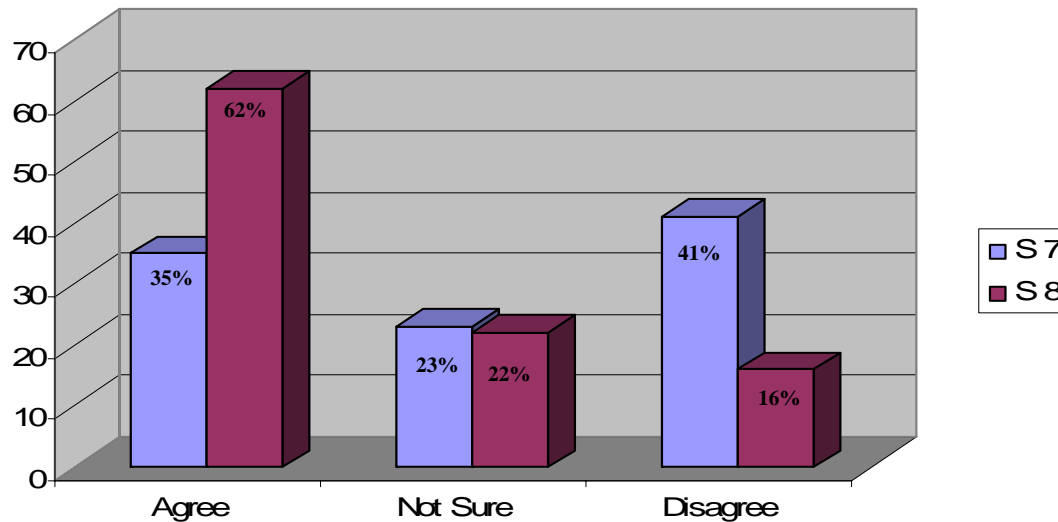


Figure 5.4 *Teachers' Response to Streaming*

This interpretation was reinforced by 12 negative responses and 15 recommendations from the PMIs which revealed that streaming was still seen as a useful way of teaching:

All eggs in same basket/ Large gap between top and low performers/ Not working at times when it is too mixed/ Diverse abilities not well catered for

'Mixed ability' teaching in BEC schools has failed

Back to streamed classes [learners with same level together/ for the first 30 students/semi-streamed classes in Form II (mixed grades: A+B, B+C, C+D/ a narrower range:15-16; 17- 20]

'Mixed ability' school instead of 'mixed ability' class

(See Appendix 25 for raw data).

Moreover, 27 PMI responses indicated teachers were concerned that the more able students would be disadvantaged in a 'mixed ability' classroom, as shown in the comments below:

Bright students feel left out, at a loss, bored as more time is devoted to low performers; needs of bright students ignored

More emphasis on weak students; discrimination

(See Appendix 25 for raw data).

The practitioners' views on differentiation, presented and discussed so far, showed that teachers have considerable reservations about the inclusion of all CPE performers in the same class, irrespective of their aggregate, even though all teacher-participants acknowledged that a differentiated classroom means diverse learners.

In spite of these reservations, 22 teacher-participants indicated that they were aware of the benefits of moves towards differentiated teaching as an outcome of the articulation of the 'mixed ability' philosophy. Some of these are listed below:

Innovative and different teaching strategies

Teaching less boring/ challenging/ rewarding

Team building (teachers)/ teacher collaboration/ sharing new strategies/ facilitators

Learn to work with mixed ability

Weekly teacher self assessment

(See Appendix 25 for raw data).

However, it was also clear that teachers were concerned about the difficulties of teaching a differentiated classroom. 40 teachers in all expressed concerns:

Difficult for teachers

Not all students understand what the teachers explain

What type of work to give to students of different abilities

Have to explain the same topic several times

More attention needed for the weak ones

Match teaching style with individual learning styles

Class management

What level to teach, bright or weak?

Less attention to weaker students because of time In most cases have to force students to work

Cooperative Learning can be time/ energy consuming

Teachers are attached to their syllabus which must be completed

Preparation affects work load

(See Appendix 25 for raw data).

The teachers' main concerns here are pedagogical – how to match their teaching to students' learnings, as well as workload related. This and the other PMI data indicate that although the teachers are in theory sympathetic to a differentiated approach, they do not feel equipped to translate this into classroom practice.

Teacher-participants also made comments about the students themselves. 88 PMI responses revealed negative attitudes to students. Some of these responses are listed below:

Low performers not always interested in improving or working/ discouraged/ lazy/ shy or wary [family problems, laziness, no intrinsic motivation, unjustified absences, disturb class, violence, restless, inferiority complex, low self esteem]

Students refuse to work in groups, have always worked alone/ bright students do not want to help weak ones/ negative attitude towards cooperative learning/ weak ones do the strict minimum; clans

Lack of basic competencies of some students for the syllabus proposed/ Some students have not even mastered the basic concepts

Form I students completely disorganised in their behaviour, academic levels, degree of understanding instructions; a lot of time spent in giving instructions

(See Appendix 25 for raw data).

It would appear that these teachers are indicating that differentiation would not work in their classroom because of the negative attributes of the students, that is they hold a deficit view of students. Similar comments had been expressed by HODs in their focus group interview.

Teachers' views of leadership

Items 29 and 30 were designed to provide the practitioners' views about their leaders:

S 29. Your rector is a pedagogical leader and supports change.

S 30. Your head of department is a pedagogical leader, gives advice for innovation.

Responses from the teacher-participants from the bar graph below indicated that 81% of them agreed that the rector is a pedagogical leader and 65% that the head of department fulfills a pedagogical leadership role.

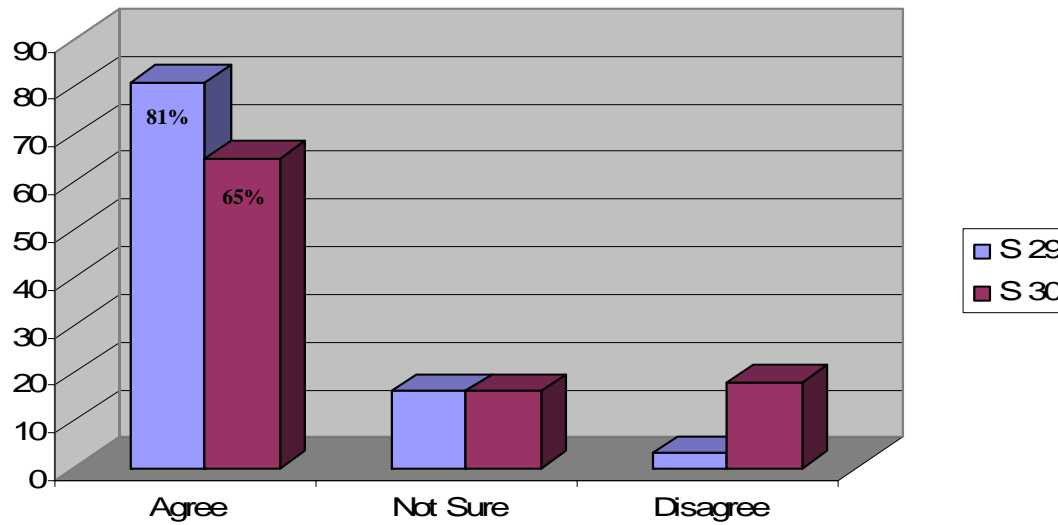


Figure 5.5 *Teachers' Response to Leadership*

There were seven negative responses from the PMIs in which teacher-participants expressed concerns about appropriate leadership for differentiation. These teachers felt that a common vision for differentiation was not being shared, or that school structures were not enabling of the change. These responses are listed below:

School management: syllabus-centred

No common guidelines for all schools; schools not using same syllabus/ Schools do not share a common curriculum

Management's attitude to change/ Management refusal for new structures: different seating arrangement, number of periods/ classes per week

(See Appendix 25 for raw data)

Discussion

The questionnaires and PMI results on the views of teachers about differentiation in the classroom are very illuminating. The teachers, those who are charged with the task of implementing ‘mixed ability’, would appear to be quite ambivalent about it. They are clearly sympathetic to the philosophical underpinnings of ‘mixed ability’ as revealed in the previous section on their views on Catholic identity. They also recognise that a shift in their teaching approaches is required, but do not believe they are well equipped to do this. They also believe that their students are not able to work well in a differentiated classroom, and are particularly concerned about how it would affect the more able students. This reflects the previous “star” status of the schools concerned.

Other data also revealed rather complex contradictions about the teachers’ views of leaders providing the necessary leadership. While the results from the questionnaires appeared to show that teachers were quite positive about change yet the PMIs uncovered teachers’ views of management to support change. The PMI comments confirm what leaders Margaret and Brother Mark had noted about the attitude of the leadership towards differentiation.

Given that much of the data reveal quite contradictory and paradoxical views, the next section attempts to throw further light on these data by examining teachers’ responses to issues of learning, pedagogies and assessment.

Theme 3. Key Concepts of Learning, Pedagogies and Assessment

Items 5 and 9 of the survey were designed to explore teachers' views of Gardner's (1999) multiple intelligence (MI) theory as supporting the teaching-learning process - the main subject of their intensive professional development.

S 5. Learners in the classroom have 2 or 3 intelligences usually stronger than others.

S 9. Teaching through the Multiple Intelligences is an effective way to address low and top scorers of the CPE in the same way.

The responses indicate that the MI theory is understood by a large majority of teacher-participants, 78% for statement 5 and 84% for statement 9, as a learning theory consistent with differentiated learning.

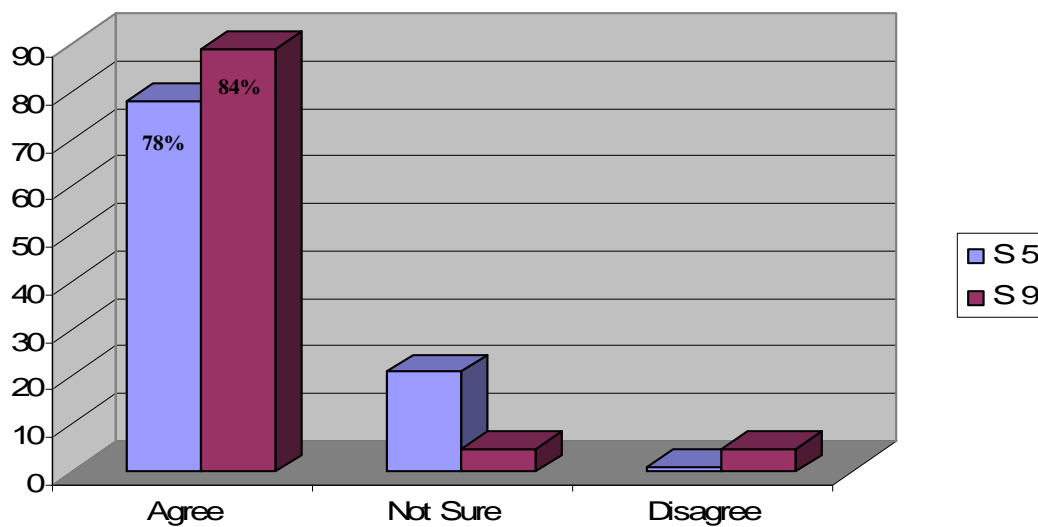


Figure 5.6 *Teachers' Response to MI Theory*

The PMIs generated 120 responses about the teacher-participants' views of useful strategies for an effective differentiated classroom with 37 responses referring to a

variety of strategies used, 35 positive responses relating to cooperative learning and 26 positive responses to peer teaching. Examples of learning activities mentioned by the teachers are:

body language/ visuals/ project work/ research/ display/ learning by playing/ reflective practice/ personal diary/ creative writing/ child-centered/ friendly approach/ quiz tests/ brainstorm/ outside classroom activities/ reading skills/ reading with others/ partner retell/ constructive learning through video/ literature/ playwriting/ mindmapping/ discussion/ role play/ singing/ story telling/ kinesthetic/ audio-visual/ flash cards/ poetry

(See Appendix 25 for raw data).

This mention of an extraordinary range of different strategies clearly reveals that the teacher-participants were able to name a range of teaching approaches, and that teachers thought these strategies would contribute to the effectiveness of the differentiated classroom. However there is no indication how far these strategies were being used in the classroom, and given the earlier evidence that teachers do not feel equipped to conduct a 'mixed ability' class effectively, one is left wondering whether mention of these goes any further than recall from the recent intensive professional learning.

Similarly, teachers were able to recognise descriptions of best practice (statements 10, 11 and 12).

- S 10.** Teachers need to diversify what they teach, how they teach it and how they assess learning to cater for diverse learners.
- S 11.** It is necessary to reduce content and infuse thinking in the curriculum for learners to move from surface to deep learning and higher order levels of complexity in Bloom's taxonomy, that is analyse, evaluate and create.
- S 12.** Constructivist teaching strategies are important for student-learning.

The bar graphs below show that a full 100% teacher- participants were positive about a change in teaching practices (statement 10). 96% of them agreed that a thinking curriculum was necessary for learners to access the higher levels of Bloom's taxonomy. This was highly indicative of teacher-participants' views of a necessary change of paradigm from the "chalk and talk" traditional teaching towards a constructivist one. 87% of teacher- participants expressed similar opinions about constructivist strategies in a student-centered classroom and agreed that constructivist approaches were important for learning. However given contradictions identified above, it is difficult to ascertain whether this is an artifact of the way the question was worded rather than a genuine belief about teaching and learning (teachers are hardly likely to disagree with these statements).

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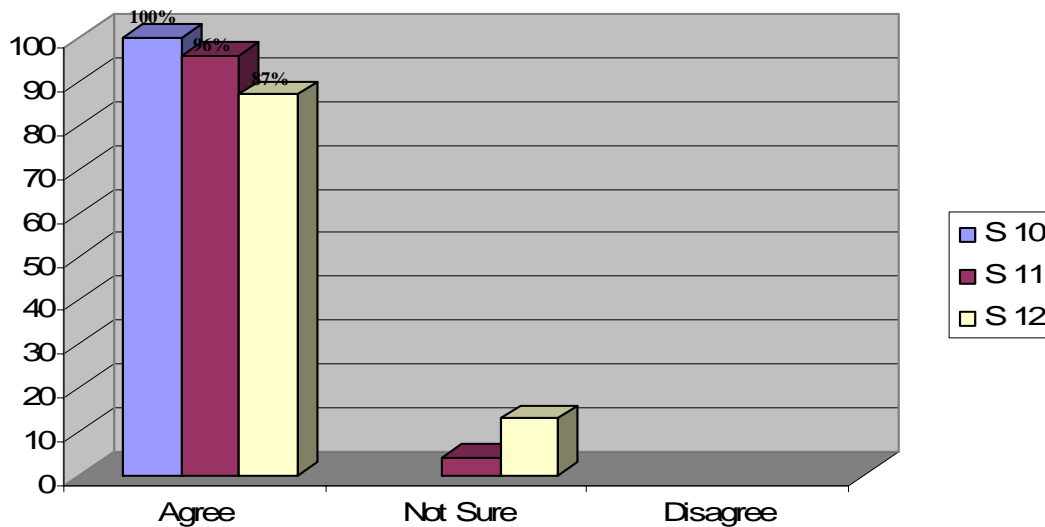


Figure 5.7 *Teachers' Response to Best Practice (Differentiation, Thinking Skills, Constructivist Theory of Learning)*

Statements 13 and 14 were about the teacher-participants' views on literacy and ICT:

S 13. Literacy must be taught through all key learning areas.

S 14. The use of ICT in teaching and learning is important.

Responses to the above statements are indicated on the bar graph below. Once again, there is consensus about the teaching of literacy across the curriculum in all key learning areas and the use of ICT as a useful pedagogical tool in teaching and learning with around 90% of teacher-participants being positive about these two points. But again, this is not surprising given the emphasis placed on these in education in general, and it is not possible to say to what extent teachers actually practice their beliefs in the classroom.

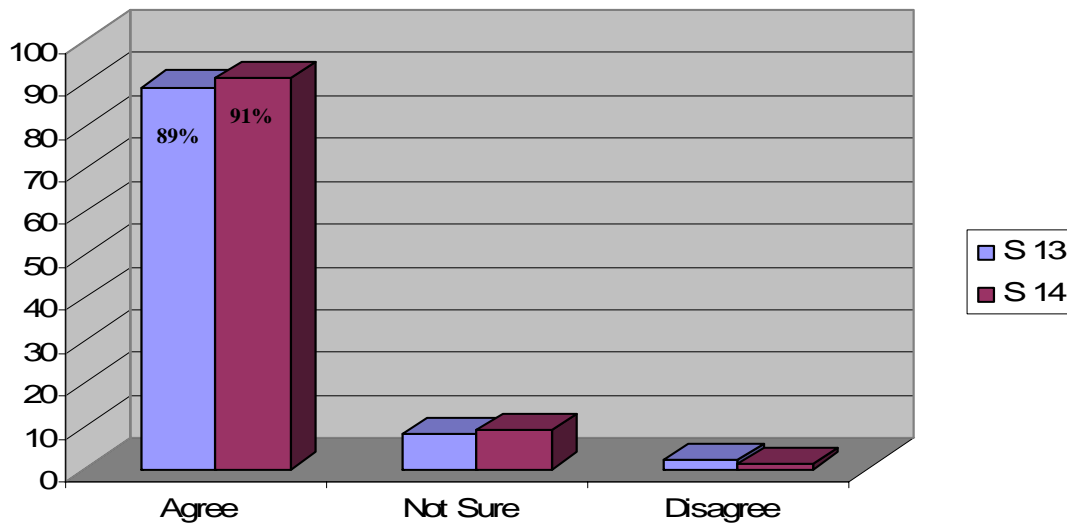


Figure 5.8 *Teachers' Response to Literacy and ICT as Pedagogical Tools*

The above statements (5, 9-14) in the questionnaire were expected to generate teacher-participants' views about elements of the integral model identified in chapter 3 and which constitutes a paradigm shift in the way educators approach their work and see their students in the 'mixed ability' setting. The move from teacher directed education to human-centred is agreed on in theory, and as noted above, it is likely that teachers agreed that the learning theories and effective pedagogies should be implemented because they would almost certainly have heard about them. They know that these technical terms are associated with education and they would not have wanted to appear lacking in knowledge. However, the main issue remains in the realm of praxis, what actually happens in classroom and teachers' attitudes to their students. Indeed the attitude to the students as shown by the data is perhaps the most revealing of what teachers think (student deficits) and contradicts what they say about their pedagogical knowledge.

The data uncovered other beliefs about the praxis approach. 27 responses indicated that teachers believed that teaching was being too syllabus-driven, the syllabus being content heavy and largely academic. There were also concerns about the workload for students both in the short and long term. Below is a list of comments from the PMIs about the curriculum and the syllabus which they see as barriers for effective differentiated teaching and learning:

Bulky syllabus/ largely academic

Syllabus coverage over the year: choice between explicit understanding of some topics and coverage of syllabus with partial understanding

Reduce content of syllabus, good for weak students but loss of time for bright students when doing same thing over and over again, not working to their full capacity

Too many subjects at middle level for weak students

Curriculum: a barrier/ no in-depth change for quality/ no change in middle school level program/ not enough extra-curricular activities for students to develop their skills/ no prepared and similar program for all schools

Because content has been reduced, more topics have to be covered in higher classes

Even after reducing workload, percentage of failure is still the same

(See Appendix 25 for raw data).

Here teachers are expressing concerns about the more able students and “not getting through” the syllabus if differentiated approaches are used. This suggests that teachers are only at the beginning of their learning that differentiated approaches may benefit all students, as the literature suggests.

The issue of language was also noted by some of the teachers. There were 11 comments from the PMIs about recognition that English as the medium of instruction was a barrier for effective learning:

Language barrier: English, a foreign language, not a second language/ as a medium of instruction

Literacy (technical terms, theory)

Medium of instruction never defined

No politics for use of Creole

(See Appendix 25 for raw data).

On one hand, these responses from the teacher-participants stress what they believe are the impediments for effective differentiation in the classroom. On the other hand, these responses highlight again the paradox of teachers' knowledge of learning theories and pedagogies and their practice since if their professed knowledge was authentic, it would assist them in overcoming the hurdles in their daily teaching.

Teachers' views on assessment

I will now present and discuss data from the practitioners' perspective about assessment.

Statements 15 and 16 in the questionnaire were about assessment:

S 15. Assessment practices in our classrooms are arbitrary.

S 16. Assessment practices should include formative and authentic assessments and students must learn to be critical assessors.

From the bar graph, there is an indication that 59% of the teachers participating in the study understood the practice of assessment in Mauritian classrooms as not fully

evaluating the learning that has actually taken place and 88% of teacher-participants advocated for other types of assessment such as formative and authentic assessments.

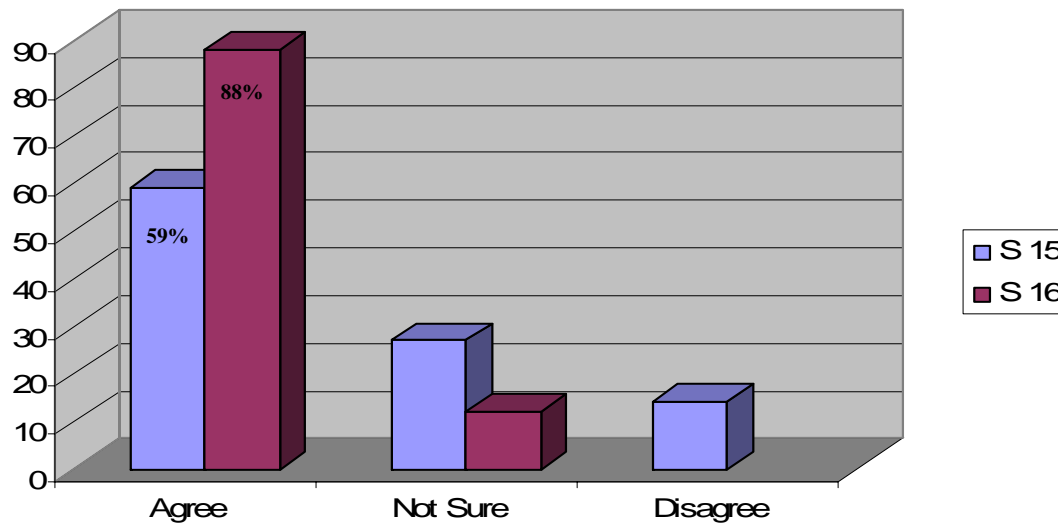


Figure 5.9 *Teachers' Response to Assessment*

The PMIs threw further light on these results with eight comments which illustrate teachers' views about current assessment practices in the Mauritian educational system:

Exam oriented/ assessment has not changed/ result-oriented perceptions instead of process-oriented

Continuous assessment not well planned

Same exams for slow and fast learners

Primary education: too exam oriented

Weak students won't reach SC level

(See Appendix 25 for raw data).

These comments indicate again the teacher-participants attitude towards the students as they believe that slow learners should have different examinations and would not be able to reach the SC level. There is no indication that teachers viewed effective assessment as integrated into learning.

The final theme in this section on the practitioners' voice is their views of school organisation for learning.

Theme 4. School Organisation for Learning

In this section, data are discussed and presented under two headings:

1. Teacher Professional Learning
2. Physical Learning Environment

1. Teacher Professional Learning

The following statements in the questionnaire were designed to obtain a sense of teachers' views of teacher professional learning and its effectiveness for the school to be a learning community:

S 24. Teachers must go through on-going professional Development Programs for new pedagogical models and practices.

S 26. The Professional Development (PD) program provided by BEC/AustralianUniversity in 2004, 2005 was highly effective and addressed directly teachers' needs.

S 28. The whole school must become a learning community.

Responses indicated below on the bar graph showed that 99% of teacher-participants agreed that they required ongoing professional learning. However only 33%

were confident that the BEC/Australian University teacher professional learning program in 2004 and 2005 was the most effective way of doing this. Almost all (98%) of teacher-participants agreed that the school should develop as a learning community.

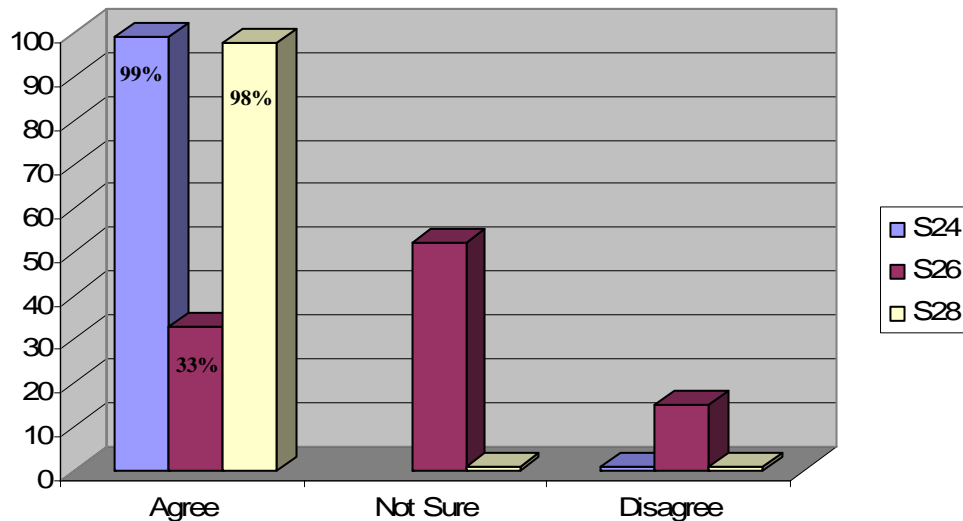


Figure 5.10 *Teachers' Response to Teacher Professional Learning*

Statement 27 was designed to generate data about the nature of follow-up on teaching practices after the intensive and large-scale Professional programs in 2004 and 2005:

S 27. Since the Professional Development (PD) Program provided by BEC/Australian University in 2004, 2005, you have changed your teaching practices and you now teach through the Multiple Intelligences.

From the bar graph below, while 46% of teacher-participants agreed that they have changed their teaching practices, 33% were not sure and 21% disagreed.

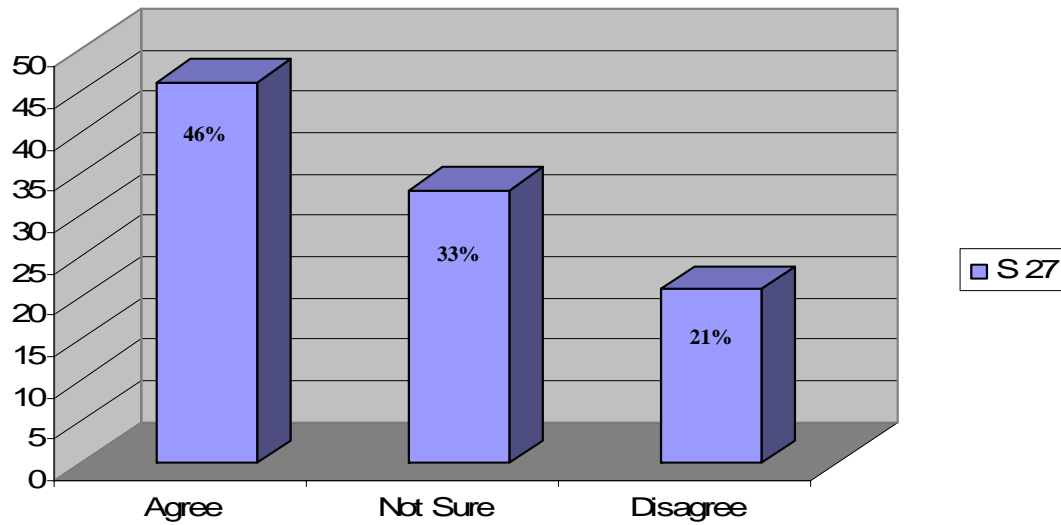


Figure 5.11 *Teachers' Response to Change in Teaching Practices*

Statements 25 and 31 probed the culture of professional development for teachers in Mauritius:

- S 25.** There is no culture of professional development for teachers in Mauritius.
- S 31.** An independent research body to support teaching and learning is important.

The data indicate that 69% of teacher-participants agreed that there was a lack of a culture of professional development in the Mauritian teaching profession and 95% believed that there should be support for teacher professional learning through an independent research body.

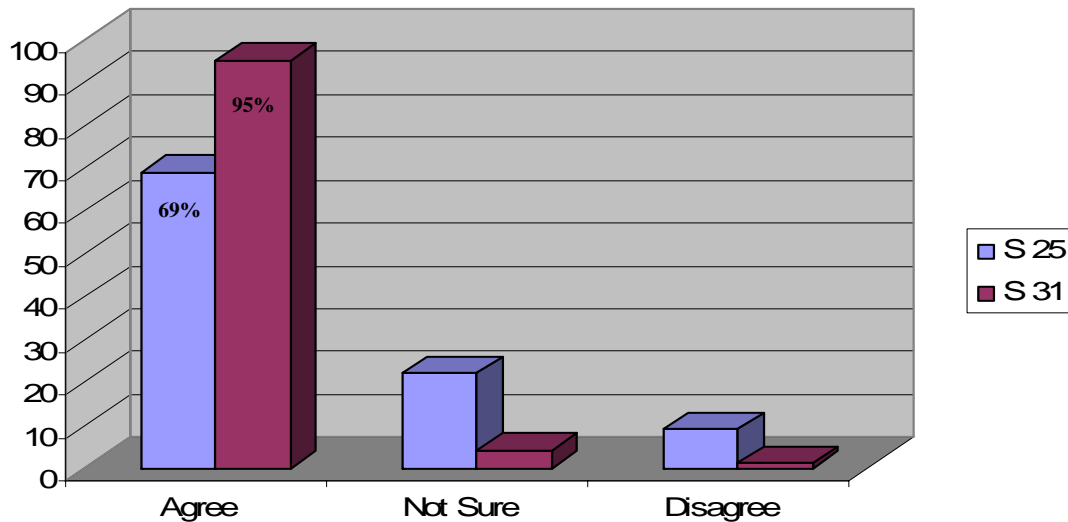


Figure 5.12 *Teachers' Response to Culture of Professional Development for Teachers*

These results strongly reflect teachers' views that although they believe that professional learning is important, one-off professional development is not sufficient, but rather it needs to be ongoing. While teachers are now familiar with at least the names of different approaches for implementation of teaching for differentiation in their classrooms, they believe that there is little support for this through an ongoing program of professional development, and little culture of a learning community. This is consistent with Mary's and Justine's comments about the BEC/Australian University initiative which was not ongoing and not supportive enough for teachers to fully master the technical "know-how".

Statements 21 and 23 in the questionnaire explored teacher education and their knowledge of emerging pedagogies of the 21st century, as noted in the literature review (chapter 3):

S 21. Your teacher education had focused on teaching through Multiple Intelligences.

From the bar chart below, responses indicated that 67% of teacher-participants were familiar with Gardner's (1994) Multiple Intelligences theory.

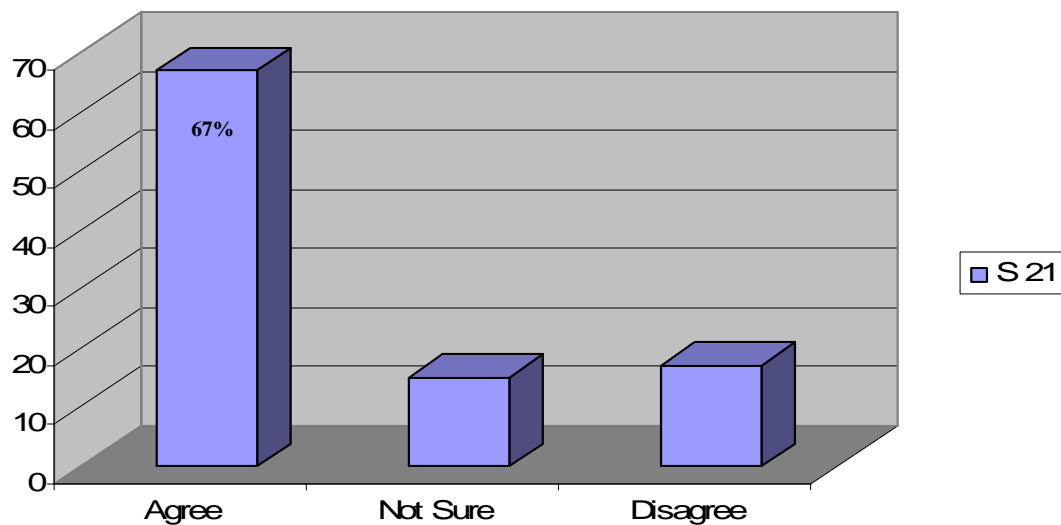


Figure 5.13 *Teachers' Response to Teacher Education*

Statement 23 in the questionnaire explored the teachers' knowledge of the emerging pedagogies of the 21st century:

S 23. You are familiar with the emerging pedagogies of the 21st century i.e.

- Collaborative learning
- MI/Bloom Planning Matrix
- Thinking Hats
- KWHL (What do I know? Want to Know? How? What have I learnt?)
- Interdisciplinarity
- Thinkers' Keys

As far as the pedagogies of the 21st century are concerned, teachers were aware of and viewed positively, collaborative planning, MI/Bloom Planning Matrix and KWHL (What do I know? Want to know? What have I learnt?), followed by Thinking Hats, Habits of Mind, Interdisciplinarity and Thinkers' Keys which had a more varied and less positive response. Again, at first glance, it would appear that the teacher-participants have encountered all this technical know-how in their teacher education. However, results from other data about teacher-participants' views, for example on streaming show a contradiction in these responses and again suggest a schism between teaching terminology awareness and actual practice towards the differentiated classroom.

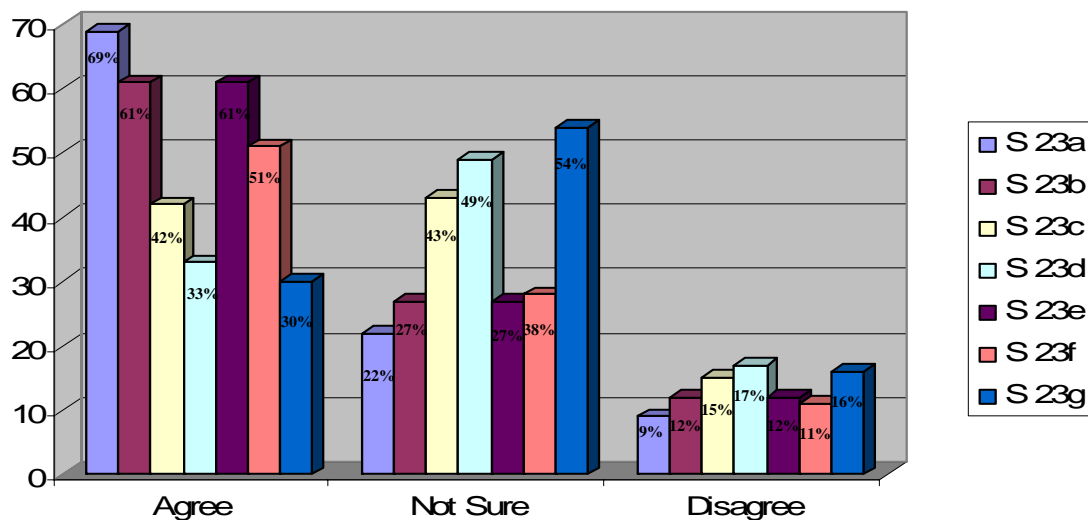


Figure 5.14 *Teachers' Response to the Pedagogies of the 21st Century*

Statements 17 and 22 were designed to provide the teacher-participants' views about teacher collaboration through Professional Learning Teams and exchange of teaching strategies and statement 18 was supposed to generate the teacher-participants views about team teaching as an assisting measure to overcome the overcrowded classes:

S 17. Teachers must build effective Professional Learning Teams.

S 18. Team teaching can facilitate teaching overcrowded classes.

S 22. Teachers must share a repertoire of teaching strategies.

The responses indicated on the bar graph below showed that in both cases 95% of the teacher participants agreed that teachers working in teams and sharing teaching strategies is part of an effective teacher professional learning for an effective teaching of a differentiated classroom. A full 81% of teacher-participants agreed that working in teams can assist in the case of overcrowded classrooms.

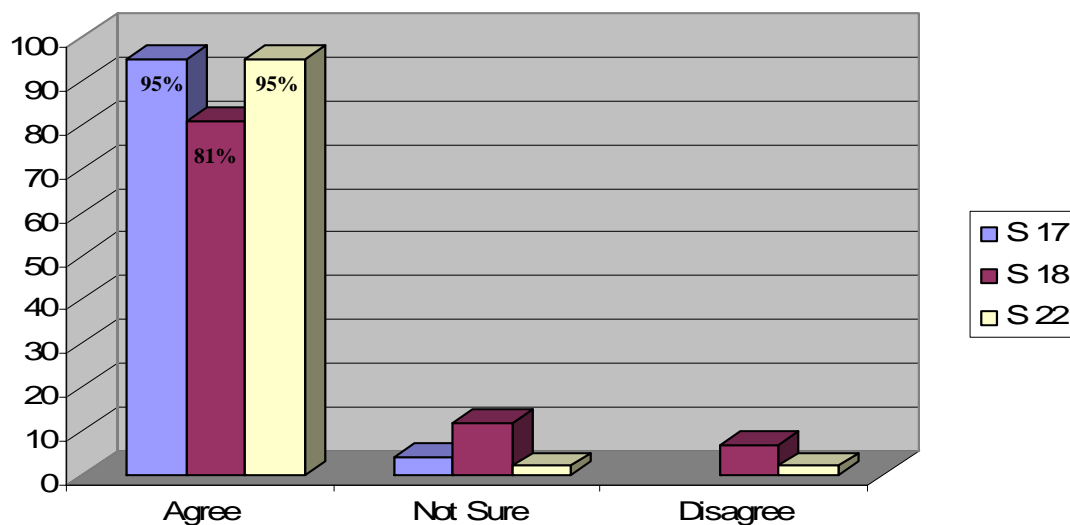


Figure 5.15 *Teachers' Response To Professional Learning Teams and Teacher Collaboration*

However there were also 17 negative comments from participants who expressed their views about the ineffectiveness of professional learning for ‘mixed ability’ teaching. Again they were concerned that it is not ongoing and teachers felt that they have not been sufficiently trained. Representative comments from the PMIs are:

Teachers have not been prepared to work in ‘mixed ability’ classes, not trained before implementation

Not all Form I teachers participated, attended the PDs

Not on-going

Don’t know about the many teaching strategies/ new trends in the field of education/ teach and research at the same time

Teacher collaboration [lack of time]

No follow-up after BEC PDs

Not all teachers have implemented changes in classroom practices

How far and how true are teachers really prepared and motivated?

No mentoring

Mixed ability program not fully worked out before implementation

(See Appendix 25 for raw data).

These comments about the needs of the professional learning are very illuminating in the sense that they highlight the fact that teacher-participants have been responding positively about their knowledge because while they have clearly heard these educational terms, they do not feel they are well equipped to effect change towards differentiating their classrooms. There is still much room for further professional learning

for teachers to learn more about how to effectively differentiate teaching and change their praxis approach accordingly.

After discussing teachers' views about their professional learning, I next discuss their beliefs about the physical learning environment.

2. *Physical Learning Environment*

From the PMIs there were 18 responses that indicated a lack of appropriate resources, considered to impede effective differentiated teaching. These are:

Lack of resources: books, CDs, videos, photocopies, computers, overhead projector, slide show

Old, traditional books/ do not cater for all needs of students

(See Appendix 25 for raw data)

96 responses from the teacher-participants' PMIs indicated that teachers were facing problems of infrastructure, overcrowded classes and time issues, as illustrated below:

Teacher- Student ratio; overcrowded classes

Time table/ time constraint/ consuming [e.g. for group work]/ Not enough time for individual teaching/ waste of time [to move in for students to get started] / no time to work together with colleagues

Infrastructure/ resources do not respond to creative teaching/ lack of infrastructure/ space/ additional classrooms for pooling and remedial work/ classrooms not always appropriate for group work activities

Short periods/ periods not enough when teaching language

Noise management as classrooms are not soundproof

System inherited from the past/ practical logistics

Funds for particular pedagogical practice

(See Appendix 25 for raw data)

These responses confirm the same issues which other participants, that is Catholic leaders, rectors and HODs have mentioned and highlight the infrastructure problems which teachers are facing.

Statements 19 and 20 in the questionnaire probed teachers' views of time for differentiated learning:

S 19. School operations are flexible for interdisciplinary team organisation, team teaching and longer blocks of time.

S 20. A school day must be organised around 2 blocks of 90 minutes in the morning and 3 periods of 45 minutes in the afternoon.

The bar graph below shows that 40% of the teacher-participants were not sure whether the school's hours were flexible enough while 22% of them believed they were

not. The suggested reorganisation of learning around block schedules (statement 20) did not receive a strong positive feedback, with 48% not sure and 26% disagreeing.

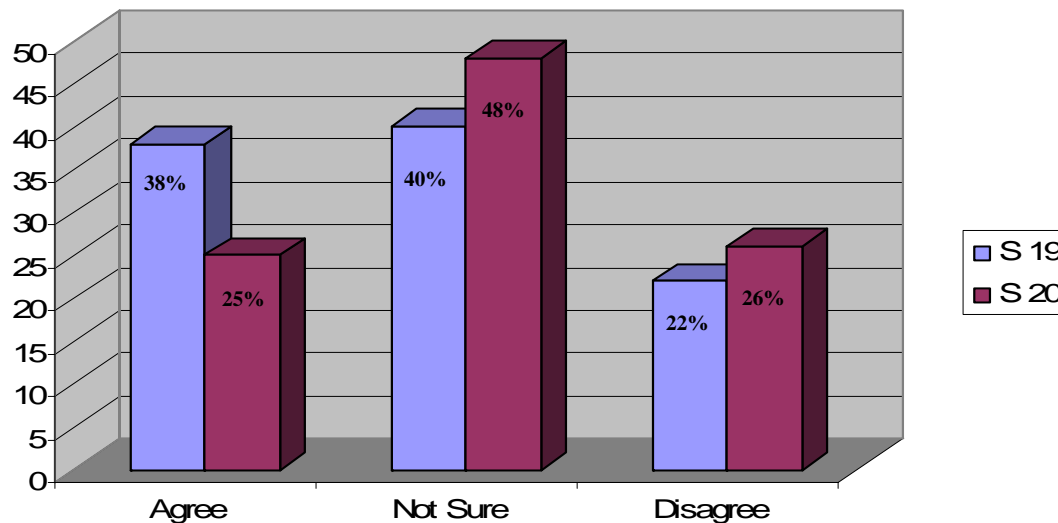


Figure 5.16 *Teachers' Response to Time as an Assisting Factor for Differentiated learning*

S 32. You are confident to implement change in your classroom.

Here, 87% of teacher-participants are indicating that they are able to respond positively to change. Given these at times conflicting results where the paradoxes, concerns and frustrations of teachers that seem to sit alongside their apparent knowledge of pedagogy and their willingness to respond to change, another reading of this data is that of hope. This is that given sufficient support, teachers would like to see the Catholic values to which they subscribe be translated into good practice in schools.

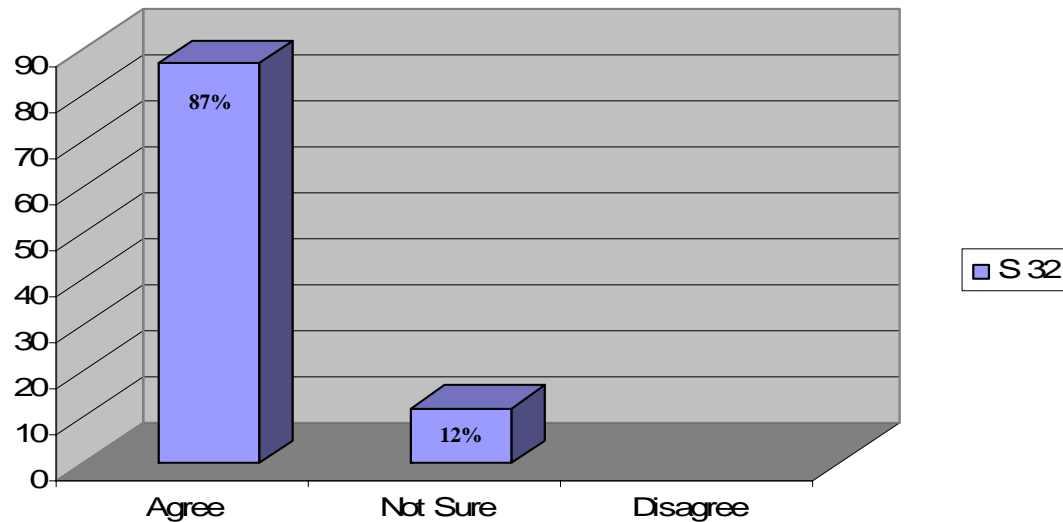


Figure 5.17 *Teachers' Response to Change*

Summary

The journey has unfolded with the participants' responses about the 'mixed ability' philosophy of Mauritian Catholic secondary schools which is consistent with Catholic values. The results of the study indicate the articulation of this philosophy in the reality of the school context via three groups of voices: the decision-makers, the transformational, pedagogical and parallel leaders and the practitioners. The responses were organised under four main themes: Catholic Identity; Differentiation; Key Concepts of Learning, Pedagogies and Assessment and School Organisation for Learning. The following is a brief summary of the findings under each of these themes.

Catholic Identity

There has been ample evidence from the participants' responses that the 'mixed ability' philosophy in Catholic secondary schools in Mauritius is seen as a continuation of the founders' vision for an education which is human-centered, holistic and inclusive of the poor and the less able. All Catholic leaders' responses were consistent about this

vision. Chantelle as a rector showed her explicit engagement, Sarah, a HOD talked about fostering the student's 'self esteem, self confidence, trust, respect' and disregarding the CPE label. There was a full positive response from teachers to human-centered education.

Differentiation

Differentiation or 'mixed ability' as the practical manifestation of Catholic values is essentially viewed positively by most respondents. Examples are Catholic leader Gabrielle's comment about the respect of the student's 'abilities, skills and potential' in the classroom against the dehumanised "one-size-fits-all" approach and Catholic leader Brother Mark's response about students performing as human beings in the classroom. Likewise Catholic leaders Margaret and Gabrielle talked about varying intelligences in the classroom and the HODs recognised the different abilities of the students in the classroom. Teacher-participants, in the PMI, wrote about an education which would give "equal chances" to students and foster "sharing, collaboration, positive interaction, individual attention, recognition of individual talents, self confidence, dignity, self esteem, praise" and avoid "labeling and stigma." However, there have also been concerns related to streaming, change, leadership and whether a shared vision is possible. Some negative comments of teachers are probably indicative of their particular values (inconsistent with the 'mixed ability' philosophy) fostered by the Mauritian educational system itself.

Key Concepts of Learning, Pedagogies and Assessment

There is an understanding, from the participants' responses, of an holistic and inclusive approach. For example, Gabrielle, a Catholic leader, talked about an inclusive pedagogy while Chantelle, a rector, talked about a "package" which would include

“curriculum,” “content,” “methods” and “methodology.” Similarly, another rector, Matthew, mentioned “curriculum,” “program,” “pedagogy” and “evaluation.” From the same perspective, Tony, a head of department, was aware of his role which is to take appropriate measures to translate the ‘mixed ability’ philosophy in his school. However, there are paradoxes noted in the teacher-participants’ responses about their actual knowledge of the learning approaches, pedagogies and assessment which tended to contrast with their views on students and “streaming.”

School Organisation for Learning

There were shared views on the effectiveness of professional learning programs for schools as necessary in order to develop as learning communities. Catholic leader David was very vocal about the professional learning of teachers and the current opportunities for their education. While Lily, a head of department found that the BEC/Australian University Professional Program had been helpful, for Tony, another head of department, it was mainly informative and only 33% of teacher-participants were confident about its efficacy. PMI responses included comments such as “not ongoing,” “no follow-up,” “not all teachers have implemented changes in classroom practices.” The data suggest that that there is a strong need to develop a culture of learning for teachers and teachers are looking for ongoing professional learning programs, with 99% of responses identifying this as a need. Deputy rector James pointed out that professional learning activities should include the “Mauritian realities” meaning taking the Mauritian context in full account and 95% of teacher-participants thought that their professional learning should be supported by a professional body. Finally 95% of teacher-participants

revealed that they were keen to be involved in Professional Learning Teams in order to ensure their learning is effective.

Finally, school structures were understood as not being flexible enough - there were unanimous responses about the physical environment of the schools not being conducive for differentiated teaching and learning, with issues of space, overcrowded classes, furniture and time for teaching. .

Conclusion

Perceptions of Catholic leaders, rectors, heads of department and teachers which were revealed through the presentation and discussion of data in this chapter have allowed me to answer my second research question:

2. What are the perceptions of teachers, heads of department, rectors, school managers and the BEC of an integral model of education for ‘mixed ability’ teaching at the middle level of schooling in Catholic secondary schools in Mauritius?

and the further research questions:

- 2a. What is the understanding of the key actors, teachers, heads of department, rectors, school managers and Catholic leaders of the integral model of education, as discussed in the first question?
- 2b. What do the key actors understand by the ‘mixed ability’ philosophy? What factors are assisting or impeding the effective

articulation of the ‘mixed ability’ philosophy in Mauritian Catholic secondary schools?

- 2c. To what extent are teachers empowered through effective professional learning programs to meet the exigencies of mixed-ability teaching?
- 2d. To what extent are school structures flexible to meet the requirements of mixed ability teaching?

The journey continues to its final stage in the next and final chapter where I provide answers to the research questions and recommend possible actions to enable the ‘mixed ability’ program to succeed.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

*“All grown-ups were once children – although few of them remember it.”
(St Exupery, 1946).*

The Journey Ends

This thesis is about the new journey that has begun for Catholic secondary education in Mauritius with the articulation of the ‘mixed ability’ philosophy, a human-centred education and differentiated learning that honours the learner’s uniqueness and individuality. This is a bold and risky venture, given the entrenched colonial legacy which continues to dictate the education system in Mauritius and which will be difficult to change, serving as it does a range of powerful vested interests. As well, while outside the scope of this study, the parallel consideration of the Creole language issue needs to be resolved so that more children can have access to education in their own tongue.

At the beginning of this thesis, in chapter 1, I stated the dual purpose of my research, which is to explore:

- An integral model for an effective and relevant education that focuses on diversity in the classroom and each learner’s individual needs in the middle years of schooling, particularly in Form I (year 7) in Catholic secondary schools in Mauritius.
- The beliefs and understandings of educators (teachers, heads of department, rectors, managers and leaders) who would be responsible for implementing this model.

To achieve the first purpose, in chapter 3, I presented a search of the current International body of research in the fields of middle schooling, differentiation, constructivist perspectives on learning, pedagogies, assessment, school organisation for learning and leadership in times of change for best practice. Here I was using a literature review as part of my research methodology. I identified and developed an integral model to justify and to sustain the move from the current traditional teaching approach commonly practiced in Mauritian Catholic secondary schools to differentiated teaching and learning at the middle level of schooling. The literature review enabled me to answer the first research question which is:

1. What are the characteristics of an integral model of education that will address diverse learners in the classroom?

The first research question is answered in chapter 3 where I presented the elements of the integral model appropriate for Mauritius which focuses on the uniqueness of the learner as a human being and represents the story of differentiation (Fogarty 1999, 2005; Howard & Fogarty, 2004; Tomlinson, 1999, 2000, 2001; UNESCO, 2004) Set in the middle schooling background (Pendergast, 2005; Repetto et al., 2006) the integral model includes the following elements: learning, pedagogies, assessment, teacher professional learning, school operations and structures and leadership. These elements are highly interrelated in order for effective differentiated learning education to take place.

To achieve the second purpose, I framed the second research question which is:

2. What are the perceptions of teachers, heads of department, rectors, school managers and the BEC of this integral model for 'mixed ability' teaching

at the middle level of schooling in Catholic secondary schools in Mauritius?

This question was divided into the following sub-research questions:

- 2a. What is the understanding of the key actors, teachers, heads of department, rectors, school managers and Catholic leaders of the integral model of education, as discussed in the first question?
- 2b. What do the key actors understand by the ‘mixed ability’ philosophy? What factors are assisting or impeding the effective articulation of the ‘mixed ability’ program philosophy in Mauritian Catholic secondary schools?
- 2c. To what extent are teachers empowered through effective professional learning programs to meet the exigencies of mixed-ability teaching?
- 2d. To what extent are school structures flexible to meet the requirements of mixed ability teaching?

Both to develop the integral model and to explore educators’ perceptions of it, I developed tools to generate data under the following headings:

- Catholic Identity
- Differentiation
- Middle Schooling
- Learning
- Pedagogies
- Assessment

- School Operations and Structures
- Teacher Professional Learning
- Leadership

The data were subsequently presented and discussed within the following themes that emerged from the data:

- Catholic Identity: The concepts of the personhood and social justice.
- Differentiation.
- Key concepts of learning, pedagogies and assessment.
- School organisation for learning.

Within these themes, I presented and discussed the participants' voices as follows:

1. Decision- makers.
2. Rectors and heads of department: transformational, pedagogical and parallel leaders.
3. Practitioners (the teachers).

Overall, the literature review and participant data generated allowed me to identify the shaping forces behind the pressure for the 'mixed ability' philosophy, its rationale and its understanding by the participants. The shared vision as well as the enabling and impeding initiatives in differentiating the content, process and product (Tomlinson, 1999; UNESCO, 2004) were revealed and discussed.

Lastly, I use the answers to the first two research questions to answer the third question which is:

3. What recommendations can the study provide to enable transitions towards best practice within this integral model of education?

In this chapter, the final stage of the journey for this study, I answer the second research question by presenting conclusions from the research. I answer the third research question by recommending a range of possible actions to be taken based on the findings. Finally I reflect again on my personal journey which I contemplated at the beginning of chapter 1.

Generalisability of Findings

The results have been obtained from a sampling of actors mainly from three Mauritian Catholic secondary schools. As such, the results are not necessarily representative of the current situation in other Catholic secondary schools in Mauritius. Even so, given that there were 24 teacher-participants from other Mauritian Catholic secondary schools in the study and the short length of time and the context already referred to in the first paragraph (p. 265) above, it would seem most probable that these results would be representative of the whole Catholic education sector in Mauritius.

Answering the Research Questions

Answering Research Question 2

I now present the answer to my second research question, based on the analysis of the data discussed in chapter 5:

- 2a. What is the understanding of the key actors, teachers, heads of department, rectors, school managers and Catholic leaders of the integral model of teaching, as discussed in the first question?

Participants are essentially positive about an holistic and an inclusive approach to education in Catholic secondary schools in Mauritius, based on theories of differentiation (Tomlinson, 1999, 2000; UNESCO, 2004) that caters for the different needs of students irrespective of their CPE grades and background. The holistic and inclusive approach, which I have called the integral model, represents a paradigm shift for Mauritian education, departing as it does from the competitive nature of the current system of education to foster a human education through collaboration and solidarity. The educators involved are positive about the need to change, recognising the need to be more consistent with Catholic values and the subsequent need to re-examine key educational issues that is, learning, pedagogies, assessment, teacher professional learning, school operations and structures and leadership.

- 2c. To what extent are teachers empowered through effective professional learning programs to meet the exigencies of mixed-ability teaching?

While the participants in the study recognised the need for change, the data discussed in chapter 5 on the extent to which they are empowered to make effective change through appropriate professional learning programs to meet the exigencies of mixed-ability teaching, suggest that this particular issue has not been fully explored to ensure that teachers are proactive. It appears that most teachers are sensitive to lack of a

coherent and ongoing nature of professional learning, without which they are reluctant to make significant change.

2d. To what extent are school structures flexible to meet the requirements of mixed ability teaching?

Participants believed that school structures were not flexible enough to support 'mixed ability' teaching and this were not yet part of the integral model. There was unanimous agreement from teachers that the physical environment of schools was not conducive for differentiated teaching and learning. The main barriers identified were lack of space, class size, poor furniture and insufficient length of lessons.

2b. What do the key actors understand by the 'mixed ability' philosophy? What factors are assisting or impeding the effective articulation of the 'mixed ability' program philosophy in Mauritian Catholic secondary schools?

Participant data generated allowed related understandings of the 'mixed ability' philosophy grounded in Catholic values and the founders' vision of an holistic, inclusive and human-centered education which respect the student's individuality and uniqueness as a learner and which fosters a culture of solidarity in schools.

The factors which have assisted the articulation of the 'mixed ability' philosophy in Mauritian Catholic secondary schools have been:

- Some early professional learning initiatives for teachers;

- Availability of resources such as books and other texts that provide background on differentiated teaching and learning during the professional learning sessions;
- The setting-up of regional subject clusters;
- Team teaching;
- The differentiation of the content with a review of the syllabus, particularly in FI;
- The application of the Multiple Intelligences theory of learning and cooperative learning as a strategy by some teachers in some schools.

However, the articulation of the ‘mixed ability’ philosophy in schools, as evidenced by the data, is clearly impeded by factors such as:

- Teachers generally still resist change and prefer working in streamed classes;
- Teachers have particular attitudes towards less able students, whom they believe have learning deficits;
- Teachers have real concerns about the impact and consequence of the change to ‘mixed ability’ classes.
- The lack of follow-up, guidelines and communication regarding the program as expressed by heads of department;
- The fact that some schools are still applying some sort of “streaming” as inferred by leaders, a rector and a teacher;
- The absence of ongoing professional learning programs, as noted by heads of department and teachers;

- The physical environment of the schools which are inappropriate for differentiated teaching and learning, such as overcrowded classrooms, lack of space for interaction and group work;
- The lack of resources for teachers;
- The financial constraints for resources such as photocopies;
- The short teaching periods which are not conducive for learning.

Comments and conclusions

After answering the research questions based on the data from the participants, I make the following comments and conclusions:

1. Overall I do not find these results surprising. In this study I have assessed the articulation of the 'mixed ability' philosophy in Catholic secondary schools study at a very early stage in the process. Since its beginning in January 2005, and hence in view of the short timeframe and the entrenched traditional and competitive context of the Mauritian educational context, rapid changes in Mauritian Catholic secondary schools toward the integral model would not be expected and any change will be slow.
2. Even though the results have demonstrated that there has not been any significant change in Mauritian Catholic secondary schools through the attempts to introduce the program, I believe there is hope that real changes are able to occur. The data suggest that there is potential for the educational paradigm beginning to emerge, for example most teacher-participants declare that they are confident they could implement change in their classrooms.

3. As a teacher myself in Mauritius in both primary and secondary levels for more than 20 years, I fully understand and appreciate the practitioners' concerns and difficulties. I have experienced the standardised, competitive system at first hand and certainly grasp the difficulties that a move to differentiated teaching would present in this context.
4. This study is useful in that it paints a picture of the situation very early into the implementation of the mixed ability program. As such, it provides significant insights and a valuable contribution to any long-term study of the translation of the 'mixed ability' philosophy in Catholic secondary schools in Mauritius.

Answering Research Question 3

In this final stage of the journey, I now draw on the findings of the study to make recommendations to the key decision-makers in the Mauritian Catholic Education system, the BEC, schools and the wider education community, through answering the last research question:

3. What recommendations can the study provide to enable transitions towards best practice within this integral model of education?

Recommendations

The recommendations that follow are a list of possible actions that are suggested to key decision-makers (BEC, schools and the wider education community) that may

enable the mixed ability program to succeed over time. These recommendations are noted under a number of headings:

1. Recommendations to the BEC

Mission and values

The ‘mixed ability’ philosophy as articulated in the integral model, should become a reality rather than rhetoric for the whole Catholic system of education in Mauritius, that is both at primary and secondary levels, if Catholic values are to be perceived as consistent in all Mauritian Catholic schools.

Leadership roles

The BEC should consider appointing staff or restructuring the roles of existing staff with appropriate experience to fulfill the following leadership roles:

- a. *‘Mixed ability’/ pedagogy adviser* to assist schools to implement the program and to advise the BEC on pathways for the adoption of the ‘integral model’.
- b. *Curriculum adviser* to advise the BEC on related curriculum, assessment and reporting issues.
- c. *Policy and priorities adviser* to support BEC’s priorities and policies for differentiation in Mauritian Catholic schools, in both the primary and secondary sectors.
- d. *Professional learning advisers* whose role would be to
 - organise workshops and conferences for teachers, heads of department and rectors;

- assist the BEC in teacher education, liaise with the Tertiary institutions both in Mauritius and International to develop and teach accredited courses such as Master of Education, Graduate Diploma in Middle Schooling, other Graduate Diplomas and modular programs for in-service teachers, heads of department, deputy rectors and rectors;
- design, develop and conduct professional learning of teachers both in primary and secondary in the following areas:
differentiated teaching, interdisciplinary teaching, classroom management strategies, thinking skills, different approaches to assessment, constructivist strategies and the emerging pedagogies of the 21st century;
- communicate, liaise and work collaboratively with school leaders, ‘mixed ability’ coordinators in schools, heads of department and teachers for the implementation of the ‘integral model;’
- assist in the setting up a teachers’ resource centre that includes on-line resources.

Research and Development Unit

The setting up of a Research and Development Unit is essential to monitor and evaluate the implementation process of the recommendations of this study to identify new and ongoing needs of the proposed reform program (for example the integral model) and also to ensure the desired learning outcomes. The main

objective of this unit would be to ensure that policy changes become a reality in the classroom applications.

2. Recommendations to schools

The recommendations offered here for schools based on the findings of this research are necessarily broad and deep, given the dimensions of the new paradigm. In many cases it must be acknowledged that these will not be easy to readily implement. However they provide a broad framework of actions that can be taken so that schools can individually develop a strategic action plan for implementation over time.

Mission and values

Like the BEC, schools have a duty to live the mission and values of Catholic education and their founders' vision (D'Orsa & D'Orsa, 1997; McLaughlin, 2000; Sacred Congregation for Catholic Education, 1997). This should form the core and provide the rationale for change which will promote a human-centred education through a differentiated approach based on the students' uniqueness as human beings.

Strategic plan

Rectors, with their leadership team, need to develop and present a strategic plan at the beginning of the school year that is consistent with the vision, and provide the means to achieve the strategic plan for successful outcomes of differentiated schooling. The 'mixed ability' philosophy should be fully articulated from Form I to Form VI with the human-centered and holistic education presented in three stages:

Form I- Form III

FIV and FV

FVI Lower and Form VI Upper

It would also be important to set up a transition team in secondary schools who would collaborate with primary schools in their region to enable a smooth transition of students into secondary schools.

Implementation

Experience of initiating significant change in educational direction in other settings suggests that ownership of any new program by the key actors is the key for successful implementation. Projects such as PEEL (Baird & Northfield, 1992; Mitchell, 2005) have shown that teachers and school leaders are able to develop their own authentic approaches to effective differentiated learning if they are given the time, resources and professional responsibility to do so. Teachers also need to be able to work in a non-judgmental teaching environment order to take risks and learn from mistakes. These conditions are not commonly present in Mauritian secondary schools as discussed in chapter 2, and would need to be introduced slowly and sensitively.

Time to meet, collaborate and share success and failure

The provision of time in schools for regular meetings of teachers, heads of department, the leadership teams and support staff is critical to success. This enables the setting up of professional learning teams under the leadership of a head of department where groups of teachers meet to design a series of lessons, teach accordingly and use observation checklists to assess the differentiation of content, product and process with their students. The PEEL project stresses the importance of teachers needing to meet regularly to debrief, reflect on what worked or did not work (Baird & Northfield, 1992; Mitchell, 2005).

Heads of department also need to be allowed time for induction and mentoring of new teachers and to visit classes to support teachers.

Formal teacher professional learning

Teachers in collaboration with the BEC would need ongoing professional support. In particular, their professional learning would need to acknowledge and allow them to articulate their beliefs and understandings as a critical component of pedagogical education in aspects of the integral model such as middle years education, constructivist strategies, Multiple Intelligences, inquiry-based learning and formative and authentic assessment. This can be achieved through the development of a professional learning schedule that will respond to the needs of teachers, heads of department, the leadership team and the support staff in each school year, established by the rector. Time for professional reading and professional discussion with colleagues will also enable professional learning to take place (Department of Education & Training, 2003).

Creation of an Individual Teacher Professional Learning Plan.

Teachers should develop an Individual Teacher Professional Learning Plan (Department of Education & Training, 2003) which would be ongoing and would focus on best practice informed by research for ultimately improved student outcomes. After a guided self-assessment, an Individual Teacher Professional Learning Plan proforma would be given in personal consultation by the rector or head of department to each teacher at the beginning of the school year, to assist him or her to develop an individual response to his or her needs. There would also be a mid-term review where teachers would be required to discuss their Individual Professional Learning Plan with their head of department who will write comments. At the end of the school year, there would be a

conference with the individual teacher, the head of department and the rector. Teachers would also be provided with a Teacher's Professional Diary, a weekly strategy planner which includes different thinking, learning and teaching strategies.

Teacher appraisal

Related to the learning plan approach would be the introduction of a teacher appraisal plan (Department of Education & Training, 2003) consisting of:

1. A record of off-site learning (attendance at minimum of two workshops or conferences.
2. A record of on-site learning by being part of a Professional Learning Team.
3. Teachers would also have a choice to engage in (say) any two of the following:
 - Peer observation: visiting another teacher's classroom and seeking an area where improvement would be needed.
 - Inviting a critical friend to his/her classroom to observe and give feedback.
 - Shadowing another teacher at his/her own school a day to seek best practice.
 - Shadowing a student for a day, observing high and low engagement times, recording observations and sharing with the student and later with colleagues.
 - Designing a lesson plan and apply it in the classroom and recording observations for discussion with colleagues.

- Choose from the following to support the teaching and learning plan: action research, examination of student work, study group, mentoring, focus group.

Review of the classroom environment

Schools should consider the introduction of one-hour periods for deeper learning and engagement (Fogarty, 1997). Also they should consider the creation of learning environments which support differentiation, for example, visual displays of student work, resources, one or two computers (if funds allow) and different learning stations in the classroom.

Team teaching and support teachers in the classroom should be encouraged to overcome the problem of overcrowded classrooms.

Curriculum

It is imperative to have an appropriate inclusive curriculum for the 'mixed ability' programming with long term goals about the academic, social and life skills which the Catholic school would want its students to acquire as well as the short term goals such as the acquisition of the sub skills in the classroom. At this stage, it is very important to distinguish between the syllabus reviews mentioned by participants and the inclusive curriculum which will respond to the new paradigm and move from a teacher-centred to a learner-centred approach as discussed in chapter 3. Part of the move towards 'mixed ability' is the consideration of the provision of a broader curriculum with singing, drama, dance and music to cater for Multiple Intelligences, thinking and creativity and interaction and collaboration.

Focus on student learning

The departure from traditional teaching and the articulation of the ‘mixed ability’ philosophy should be made very obvious at the start of the school year for Form I students, with a special program which would be half of the teaching time, last a whole year, and would include the introduction of a Student Individual Learning Plan (Degenhardt, 2006). This would focus on the recognition and enhancement of Multiple Intelligences in a collaborative culture and would provide a detailed synopsis for each student including learning needs, the teaching strategies that would assist that student and the individual educational plan. The Student Individual Learning Plan would be negotiated in a three-way conference between the student, the parent and the learning counselor (a teacher assigned to this duty).

One way to implement the Plan which would be useful in the Mauritian context is for students (approximately 15-20) to be divided in different school houses with two teachers in charge. These teachers would be the learning counselors of these students and establish specific goals with each of them after negotiation between the student, the parent and the learning counselors. The focus would be on a personal learning plan for each student to ensure each student can extend and improve his/her learning curve. The starting point is an assessment of the students’ learning style and content understanding through an appropriately designed assessment.

Based on the successful program “La Mer” at Loreto College, Mahebourg described in chapter 2, learning would involve an interdisciplinary approach with students working on the discovery of self and identity. They would achieve this by:

- Students working in groups

- Learning of cooperative skills
- Introduction of literacy and numeracy skills
- A peer approach
- Big brother/ big sister program
- A personal learning log for a record of what has been learnt and feedback for teachers. The personal learning log can be used to differentiate the product.
- Parent surveys for feedback.
- Co-curricular activities.
- Portfolio assessment.
- An exhibition of learning products at the end of the school year.

For subsequent years, this program could be maintained, but perhaps with more time allocated for classroom teaching.

The above recommendations represent possible actions that might be taken to enable to introduction of some or all elements of the integral model for a new educational direction for Catholic secondary schools in Mauritius which will more consistent with a human-centered education. They also provide the basis for a model, with suitable adaptations, for Catholic primary schools. However as I already stated, the articulation of the ‘mixed ability’ philosophy in Mauritian Catholic secondary schools is at its early stages and other possible actions might be useful and helpful as differentiation is an ongoing journey. Nonetheless, I believe the above recommendations provide a useful and firm foundation for the future.

My personal journey

This is the end of the journey for this study which began with the main perspectives of the research in chapter 1 and continued through an illustration of the current Catholic education system in Mauritius. The journey continued with a review of the relevant literature in chapter 3 that allowed me to answer the first research question. An explanation of the adoption of the research framework followed in chapter 4. The journey unfolded with the presentation and discussion of the data where I gained insights to assist in answering my next research questions. In this final chapter, I answered the research questions, presented conclusions from the research and recommended possible actions to be taken.

This may be the end of the journey for this thesis but not for my personal journey. I have been engaged in this exploration for almost three years. There have been times of joy, motivation, success, discovery and determination but there have also been times of sorrow, struggle and discouragement. But I remain positive and tell myself that without pain there would be no gain. I enjoyed the readings, the exploration, the thinking, the discussions and the writing of the thesis. My learning journey has been rich with discovery and a constant challenge. I have learned about new concepts in education, I have encountered comparative education and I gained knowledge of qualitative research. I learnt that I was capable of risk-taking and living up to the challenge of writing these 65,000 words in English when French is my first language, and I have been teaching French for twenty years. Important to me as a teacher, I was able to discern that if I want to bring each student to his or her own learning pathway and not someone else's, standardised teaching is not the right way. I learned that it is possible to teach in a

personalised way and I learnt to change my perspectives of a ‘one-size-fits-all’ approach of teaching, well drilled into me from my Mauritian experience.

These past three years have provided a tremendous opportunity for me to cling to my dream of being an innovative educator by always asking myself “why not” when I came across something new. Through my study I have been able to partly fulfill my dream of working towards a new model for middle schooling in Mauritian secondary schools. I now hope to fulfill the other part of my dream by having the chance to assist in the implementation of the integral model in the real world of the Mauritian Catholic secondary school. I would like to become a co-learner, learn and relearn, search and research in a life-long and life-broad learning journey, as Hedrick (2005) puts it,

Developing expertise in differentiation is a continuum, a journey with no final destination other than continually and gradually refining knowledge, understanding, and skills where both attitudes and habits of mind support ongoing growth (p. 33)

The ‘mixed ability’ philosophy and the mission of a human-centered education in Mauritian Catholic secondary schools are a message of hope for ‘rich’ learning which, as Senge (1990) so beautifully puts it,

Gets to the heart of what it means to be human. Through learning we become able to do something that we were never able to do. Through learning we re-perceive the world and our relationship to it. Through learning we extend our capacity to create, to be part of the generative process of life (p. 14).

I am a life-long and life-broad learner engaged in a pilgrimage. I keep the fire burning. I am fully human. I am confident that with perseverance, passion and imagination which are above all, fully human attributes, human-centred education will find its way in Mauritian Catholic secondary schools and will eventually lead the way for ‘real’ and “rich” learning for every Mauritian child.

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Appendix 1
Ethics Approval Document

Australian Catholic University
Brisbane Sydney Canberra Ballarat Melbourne



Human Research Ethics Committee

Committee Approval Form

Principal Investigator/Supervisor: Dr Caroline Smith Melbourne Campus
Co-Investigators: Dr Ken Smith Melbourne Campus
Student Researcher: Kathleen Dauguet Melbourne Campus

Ethics approval has been granted for the following project:
Understanding the 'mixed ability' program in Catholic secondary schools in Mauritius: Perceptions of educators for best practice in the middle years of schooling.
for the period: 10/10/2006 to 31/12/2006
Human Research Ethics Committee (HREC) Register Number: V200607 16

The following standard conditions as stipulated in the *National Statement on Ethical Conduct in Research Involving Humans* (1999) apply:

- (i) that Principal Investigators / Supervisors provide, on the form supplied by the Human Research Ethics Committee, annual reports on matters such as:
 - security of records
 - compliance with approved consent procedures and documentation
 - compliance with special conditions, and
- (ii) that researchers report to the HREC immediately any matter that might affect the ethical acceptability of the protocol, such as:
 - proposed changes to the protocol
 - unforeseen circumstances or events
 - adverse effects on participants

The HREC will conduct an audit each year of all projects deemed to be of more than minimum risk. There will also be random audits of a sample of projects considered to be of minimum risk on all campuses each year.

Within one month of the conclusion of the project, researchers are required to complete a *Final Report Form* and submit it to the local Research Services Officer.

If the project continues for more than one year, researchers are required to complete an *Annual Progress Report Form* and submit it to the local Research Services Officer within one month of the anniversary date of the ethics approval.

Signed:  Date: 10/10/06
(Research Services Officer, Melbourne Campus)

Appendix 2

**Letter to the Director of Bureau of Catholic Education,
Mauritius**



Australian Catholic University Limited
ABN 15 050 192 660
Melbourne Campus (St Patrick's)
115 Victoria Parade Fitzroy Vic 3065
Locked Bag 4115 Fitzroy MCD VIC 3065
Telephone 03 9953 3000
Facsimile 03 9953 3005

INFORMATION LETTER TO BUREAU OF CATHOLIC EDUCATION, MAURITIUS

TITLE OF PROJECT: Understanding the 'mixed ability' program in Catholic secondary schools in Mauritius: Perceptions of educators for best practice in the middle years of schooling.

STAFF SUPERVISOR: Dr. Caroline Smith

STUDENT RESEARCHER: Mrs. Kathleen Dauguet

DEGREE: Doctor of Education

This is a formal request to the Bureau of Catholic Education (BEC) in Mauritius, to seek permission for the student researcher, Kathleen Dauguet, to access the Director, the Coordinator for Catholic secondary colleges at the BEC, the Director of Centre de Formation, BEC secondary colleges in the Diocese of Port Louis, Mauritius and documents relevant to the 'mixed ability' program for a research project.

The study is a requirement for the award of Doctor of Education, a study currently undertaken by the student researcher. The first purpose of the research is an exploration of an integral model of education that acknowledges diversity in the classroom and each learner's individual needs in the middle years of schooling, particularly in Form I in Catholic secondary schools in Mauritius. The second purpose is to investigate beliefs and understandings of educators (teachers, heads of department, rectors and leaders) in this particular community of the integral model.

The conduct of the research will be predominantly qualitative. Teachers of Form I-III will be invited for a reflective response by filling in a PMI (Positives, Negatives, Interesting) sheet and a questionnaire after a brief presentation of the project. At Ste Bernadette College, there will be a focus group session for heads of English, Mathematics, French and Science department and the rector will be interviewed. The Director of BEC and the Coordinator for Catholic secondary colleges at the BEC will be interviewed. The duration of each session with teachers and heads of departments will be approximately one hour and interviews will be half an hour. All sessions with teachers and heads of department will be held during school hours, following prior arrangements made with the rector and on the school's premises or at the BEC. Interviews will be on appointment with the participant.

All focus groups discussions and interviews will be audio-recorded and participants will have a code name. Teachers will not be required to declare their personal details such as their name and address. While the identity of participants will be known to the researcher, privacy and confidentiality will be maintained according to the ACU Ethics Committee Guidelines. There are no anticipated risks for participants. The study will be published as a thesis for assessment. Results from the study may be summarised and appear in publications or may be provided to other researchers in a form that no participant or school will be identified.

Response of participants is very important for the success of this research and participants will receive feedback of the results of the research. Participants are free to refuse consent altogether without having to justify that decision, or to withdraw consent and discontinue participation in the research at any time without giving a reason. Any withdrawal from the research will not prejudice in any way the participants' future care and involvement with the researcher.

This study has been approved by the Human Research Ethics Committee at Australian Catholic University.

Any questions regarding the study should be directed to:

Research supervisor: Dr. Caroline Smith
School of Education
ACU National, St. Patrick's Campus
(03) 9953 3289
C.Smith@patrick.acu.edu.au

Any complaint or concern relating to the study, the way that participants have been treated while participating in the study, or a query not satisfactorily responded to by the supervisor or researcher, could be addressed in writing to:

Chair, HREC
C/O Research Services,
Australian Catholic University,
Melbourne Campus, Locked Bag 4115
Fitzroy VIC 3065
Tel. (03) 9953 3157 - Fax. (03) 9953 3315

Any complaint will be treated in confidence and be fully investigated. The participant will be informed of the outcome. If you agree to participate in the study, please sign both copies of the consent form and retain a copy for your records. The other copy must be given to the researcher.

Yours faithfully,

Dr. Caroline Smith
Staff Supervisor

Kathleen Dauguet
Student Researcher



Australian Catholic University Limited
ABN 15 050 192 660
Melbourne Campus (St Patrick's)
115 Victoria Parade Fitzroy Vic 3065
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15th August 2006

The Director of Bureau of Catholic Education
Bureau of Catholic Education
Rose-Hill
Mauritius

Dear Rev. Father,

We are writing to seek your permission for one of us, Kathleen Dauguet, to undertake a research study in Catholic secondary education in the Diocese of Port-Louis in Mauritius. The research is part of Kathleen's studies for the degree of Doctor of Education for the Australian Catholic University at St.Patrick's campus, Melbourne. Please find attached a copy of the information letter outlining all relevant details regarding the study. This letter forms part of the formal ethics proposal to the ACU Research Services Ethics Committee.

As indicated in the information letter, the purposes of the study are to explore an integral model of education that acknowledges diversity in the classroom particularly in Form I in Catholic secondary schools in Mauritius and to investigate beliefs and understandings of educators (teachers, heads of department, rectors and leaders) in this particular community of the integral model.

We hope that findings from the research will provide further directions for educators in Catholic education in Mauritius in order to assist them for a more successful implementation of the 'mixed ability' program.

We look forward to receiving permission to proceed with this project.

Yours sincerely,

Dr. Caroline Smith
Staff Supervisor

Kathleen Dauguet
Student Researcher

Appendix 3

Consent Form: Director of Bureau of Catholic Education, Mauritius



Australian Catholic University Limited
ABN 15 050 192 660
Melbourne Campus (St Patrick's)
115 Victoria Parade Fitzroy Vic 3065
Locked Bag 4115 Fitzroy MCD VIC 3065
Telephone 03 9953 3000
Facsimile 03 9953 3005

CONSENT FORM
(researcher's copy)

Title of Project: Understanding the 'mixed ability' program in Catholic secondary schools in Mauritius: Perceptions of educators for best practice in the middle years of schooling

Name of Supervisors: Dr Caroline Smith, Dr Ken Smith
Name of Student Researcher: Ms Kathleen Dauguet

I (Director, Catholic Education Bureau (BEC), Mauritius) have read (or have had read to me) and understood the information provided in the Letter to Participants. Any questions I have asked have been answered to my satisfaction. I agree for BEC and BEC secondary colleges to participate in this activity, realising that interviews will be audiotaped, and be signed by both the supervisor and the student researcher. I realise that I can withdraw at any time. I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify the BEC or the BEC colleges in any way.

NAME OF PARTICIPANT:

SIGNATURE:

DATE:

NAME OF SUPERVISOR: Dr Caroline Smith

SIGNATURE:

DATE:

NAME OF STUDENT RESEARCHER: Mrs Kathleen Dauguet

SIGNATURE:

DATE:



Australian Catholic University Limited
ABN 15 050 192 660
Melbourne Campus (St Patrick's)
115 Victoria Parade Fitzroy Vic 3065
Locked Bag 4115 Fitzroy MCD VIC 3065
Telephone 03 9953 3000
Facsimile 03 9953 3005

CONSENT FORM
(participant' s copy)

Title of Project: Understanding the 'mixed ability' program in Catholic secondary schools in
Mauritius: Perceptions of educators for best practice in the middle years
of schooling

Name of Supervisors: Dr Caroline Smith, Dr Ken Smith
Name of Student Researcher: Ms Kathleen Dauguet

I (Director, Catholic Education Bureau (BEC), Mauritius)
have read (or have had read to me) and understood the information provided in the Letter to
Participants. Any questions I have asked have been answered to my satisfaction. I agree for BEC
and BEC secondary colleges to participate in this activity, realising that interviews will be
audiotaped, and be signed by both the supervisor and the student researcher. I realise that I can
withdraw at any time. I agree that research data collected for the study may be published or may
be provided to other researchers in a form that does not identify the BEC or the BEC colleges in
any way.

NAME OF PARTICIPANT:

SIGNATURE:

DATE:

NAME OF SUPERVISOR: Dr Caroline Smith

SIGNATURE:

DATE:

NAME OF STUDENT RESEARCHER: Mrs Kathleen Dauguet

SIGNATURE:

DATE:

Appendix 4

Letter to Mother Provincial, Loreto Institute, Mauritius



Australian Catholic University Limited
ABN 15 050 192 660
Melbourne Campus (St Patrick's)
115 Victoria Parade Fitzroy Vic 3065
Locked Bag 4115 Fitzroy MCD VIC 3065
Telephone 03 9953 3000
Facsimile 03 9953 3005

INFORMATION LETTER TO LORETO ADMINISTRATIVE OFFICE, MAURITIUS

TITLE OF PROJECT: Understanding the 'mixed ability' program in Catholic secondary schools in Mauritius: Perceptions of educators for best practice in the middle years of schooling.

STAFF SUPERVISOR: Dr. Caroline Smith

STUDENT RESEARCHER: Mrs. Kathleen Dauguet

DEGREE: Doctor of Education

This is a formal request to the Loreto Administrative Office in Mauritius, to seek permission for the student researcher, Kathleen Dauguet, to access the Provincial, Loreto colleges in the Diocese of Port-Louis and documents relevant to the 'mixed ability' program for a research project.

The study is a requirement for the award of Doctor of Education, a study currently undertaken by the student researcher. The first purpose of the research is an exploration of an integral model of education that acknowledges diversity in the classroom and each learner's individual needs in the middle years of schooling, particularly in Form I in Catholic secondary schools in Mauritius. The second purpose is to investigate beliefs and understandings of educators (teachers, Heads of Department, Rectors and leaders) in this particular community of the integral model.

The conduct of the research will be predominantly qualitative. Teachers of Form I- III will be invited for a reflective response by filling in a PMI (Positives, Negatives, Interesting) sheet and a questionnaire after a brief presentation of the project. There will be a focus group session for heads of English, Mathematics, French and Science department both at Ste Therese College and Ste Claire College. The Provincial, the rector of Ste Claire and the manager of Ste Therese will be interviewed. The duration of each session with teachers and heads of department will be approximately one hour and interviews will be half an hour. All sessions with teachers and heads of department will be held during school hours, following prior arrangements made with the rector and on the school's premises or at the BEC. Interviews will be on appointment with the participant.

All focus groups discussions and interviews will be audio-recorded and participants will have a code name. Teachers will not be required to declare their personal details such as their name and address. While the identity of participants will be known to the researcher, privacy and confidentiality will be maintained according to the ACU Ethics Committee Guidelines. There are no anticipated risks for participants. The study will be published as a thesis for assessment. Results from the study may be summarised and appear in publications or may be provided to other researchers in a form that no participant or school will be identified.

Response of participants is very important for the success of this research and participants will receive feedback of the results of the research. Participants are free to refuse consent altogether without having to justify that decision, or to withdraw consent and discontinue participation in the research at any time without giving a reason. Any withdrawal from the research will not prejudice in any way the participants' future care and involvement with the researcher.

This study has been approved by the Human Research Ethics Committee at Australian Catholic University.

Any questions regarding the study should be directed to:

Research supervisor: Dr. Caroline Smith
School of Education
ACU National, St. Patrick's Campus
(03) 9953 3289
C.Smith@patrick.acu.edu.au

Any complaint or concern relating to the study, the way that participants have been treated while participating in the study, or a query not satisfactorily responded to by the supervisor or researcher, could be addressed in writing to:

Chair, HREC
C/O Research Services,
Australian Catholic University,
Melbourne Campus, Locked Bag 4115
Fitzroy VIC 3065
Tel. (03) 9953 3157 - Fax. (03) 9953 3315

Any complaint will be treated in confidence and be fully investigated. The participant will be informed of the outcome. If you agree to participate in the study, please sign both copies of the consent form and retain a copy for your records. The other copy must be given to the researcher.

Yours faithfully,

Dr. Caroline Smith
Staff Supervisor

Kathleen Dauguet
Student Researcher



Australian Catholic University Limited
ABN 15 050 192 660
Melbourne Campus (St Patrick's)
115 Victoria Parade Fitzroy Vic 3065
Locked Bag 4115 Fitzroy MCD VIC 3065
Telephone 03 9953 3000
Facsimile 03 9953 3005

15th August 2006

The Loreto Provincial
Loreto Administrative Office
Rose-Hill
Mauritius

Dear Sister,

We are writing to seek your permission for one of us, Kathleen Dauguet, to undertake a research study in Loreto secondary schools in the Diocese of Port-Louis in Mauritius. The research is part of Kathleen's studies for the degree of Doctor of Education for the Australian Catholic University at St.Patrick's campus, Melbourne. Please find attached a copy of the information letter outlining all relevant details regarding the study. This letter forms part of the formal ethics proposal to the ACU Research Services Ethics Committee.

As indicated in the information letter, the purposes of the study are to explore an integral model of education that acknowledges diversity in the classroom particularly in Form I in Catholic secondary schools in Mauritius and to investigate beliefs and understandings of educators (teachers, heads of department, rectors and leaders) in this particular community of the conceptual framework.

We hope that findings from the research will provide further directions for educators in Catholic education in Mauritius in order to assist them for a more successful implementation of the 'mixed ability' program.

We look forward to receiving permission to proceed with this project.

Yours sincerely,

Dr. Caroline Smith
Staff Supervisor

Kathleen Dauguet
Student Researcher

Appendix 5

**Consent form: Mother Provincial, Loreto Institute,
Mauritius**



Australian Catholic University Limited
ABN 15 050 192 660
Melbourne Campus (St Patrick's)
115 Victoria Parade Fitzroy Vic 3065
Locked Bag 4115 Fitzroy MCD VIC 3065
Telephone 03 9953 3000
Facsimile 03 9953 3005

CONSENT FORM
(researcher's copy)

Title of Project: Understanding the 'mixed ability' program in Catholic secondary schools in Mauritius: Perceptions of educators for best practice in the middle years of schooling

Name of Supervisors: Dr Caroline Smith, Dr Ken Smith
Name of Student Researcher: Ms Kathleen Dauguet

I (Loreto Provincial, Mauritius) have read (or have had read to me) and understood the information provided in the Letter to Participants. Any questions I have asked have been answered to my satisfaction. I agree for Loreto secondary colleges to participate in this activity, realising that my interview will be audiotaped, and be signed by both the supervisor and the student researcher. I realise that I can withdraw at any time. I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify me or the Loreto Colleges in any way.

NAME OF PARTICIPANT:

SIGNATURE:

DATE:

NAME OF SUPERVISOR: Dr Caroline Smith

SIGNATURE:

DATE:

NAME OF STUDENT RESEARCHER: Mrs Kathleen Dauguet

SIGNATURE:

DATE:



Australian Catholic University Limited
ABN 15 050 192 660
Melbourne Campus (St Patrick's)
115 Victoria Parade Fitzroy Vic 3065
Locked Bag 4115 Fitzroy MCD VIC 3065
Telephone 03 9953 3000
Facsimile 03 9953 3005

CONSENT FORM
(participant's copy)

Title of Project: Understanding the 'mixed ability' program in Catholic secondary schools in Mauritius: Perceptions of educators for best practice in the middle years of schooling

Name of Supervisors: Dr Caroline Smith, Dr Ken Smith
Name of Student Researcher: Ms Kathleen Dauguet

I (Loreto Provincial, Mauritius) have read (or have had read to me) and understood the information provided in the Letter to Participants. Any questions I have asked have been answered to my satisfaction. I agree for Loreto secondary colleges to participate in this activity, realising that my interview will be audiotaped, and be signed by both the supervisor and the student researcher. I realise that I can withdraw at any time. I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify me or the Loreto Colleges in any way.

NAME OF PARTICIPANT:

SIGNATURE:

DATE:

NAME OF SUPERVISOR: Dr Caroline Smith

SIGNATURE:

DATE:

NAME OF STUDENT RESEARCHER: Mrs Kathleen Dauguet

SIGNATURE:

DATE:

Appendix 6

Letter to the Rector, Ste. Therese



Australian Catholic University Limited
ABN 15 050 192 660
Melbourne Campus (St Patrick's)
115 Victoria Parade Fitzroy Vic 3065
Locked Bag 4115 Fitzroy MCD VIC 3065
Telephone 03 9953 3000
Facsimile 03 9953 3005

INFORMATION LETTER TO THE RECTOR

TITLE OF PROJECT: Understanding the 'mixed ability' program in Catholic secondary schools in Mauritius: Perceptions of educators for best practice in the middle years of schooling.

STAFF SUPERVISOR: Dr. Caroline Smith

STUDENT RESEARCHER: Mrs. Kathleen Dauguet

DEGREE: Doctor of Education

This is a formal request to seek permission for the student researcher, Kathleen Dauguet, to access the rector, heads of English, French, Mathematics and Science department and teachers of Forms I-III for a research project.

The study is a requirement for the award of Doctor of Education, a study currently undertaken by the student researcher. The first purpose of the research is an exploration of an integral model of education that acknowledges diversity in the classroom and each learner's individual needs in the middle years of schooling, particularly in Form I in Catholic secondary schools in Mauritius. The second purpose is to investigate beliefs and understandings of educators (teachers, heads of department, rectors and leaders) in this particular community of the integral model.

The conduct of the research will be predominantly qualitative. Data at your college will be collected through a questionnaire and a PMI (Positives, Negatives, Interesting) sheet for teachers of Forms I-III after a brief presentation of the project, a focus group session for heads of English, Mathematics, French and Science department and an interview with the rector. The duration of each session with teachers and heads of department will be approximately one hour and the interview will be half an hour. All sessions will be held during school hours, following prior arrangements made with the rector and on the school's premises.

All focus groups discussions and interviews will be audio-recorded and participants will have a code name. Teachers will not be required to declare their personal details such as their name and address. While the identity of participants will be known to the researcher, privacy and confidentiality will be maintained according to the ACU Ethics Committee Guidelines. There are no anticipated risks for participants. The study will be published as a thesis for assessment. Results from the study may be summarised and appear in publications or may be provided to other researchers in a form that no participant or school will be identified.

Response of participants is very important for the success of this research and participants will receive feedback of the results of the research. Participants are free to refuse consent altogether without having to justify that decision, or to withdraw consent and discontinue participation in the research at any time without giving a reason. Any withdrawal from the research will not prejudice in any way the participants' future care and involvement with the researcher.

This study has been approved by the Human Research Ethics Committee at Australian Catholic University.

Any questions regarding the study should be directed to:

Research supervisor: Dr. Caroline Smith
School of Education
ACU National, St. Patrick's Campus
(03) 9953 3289
C.Smith@patrick.acu.edu.au

Any complaint or concern relating to the study, the way that participants have been treated while participating in the study, or a query not satisfactorily responded to by the supervisor or researcher, could be addressed in writing to:

Chair, HREC
C/O Research Services,
Australian Catholic University,
Melbourne Campus, Locked Bag 4115
Fitzroy VIC 3065
Tel. (03) 9953 3157 - Fax. (03) 9953 3315

Any complaint will be treated in confidence and be fully investigated. The participant will be informed of the outcome. If you agree to participate in the study, please sign both copies of the consent form and retain a copy for your records. The other copy must be given to the researcher.

Yours faithfully,

Dr. Caroline Smith
Staff Supervisor

Kathleen Dauguet
Student Researcher



Australian Catholic University Limited
ABN 15 050 192 660
Melbourne Campus (St Patrick's)
115 Victoria Parade Fitzroy Vic 3065
Locked Bag 4115 Fitzroy MCD VIC 3065
Telephone 03 9953 3000
Facsimile 03 9953 3005

15th August 2006

Dear Rector,
Ste Therese College
Mauritius

We are writing to seek your permission for one of us, Kathleen Dauguet, to undertake a research study in your college. The research is part of Kathleen's studies for the degree of Doctor of Education for the Australian Catholic University at St.Patrick's campus, Melbourne. Please find attached a copy of the information letter outlining all relevant details regarding the study. This letter forms part of the formal ethics proposal to the ACU Research Services Ethics Committee.

As indicated in the information letter, the purposes of the study are to explore an integral model of education that acknowledges diversity in the classroom particularly in Form I in Catholic secondary schools in Mauritius and to investigate beliefs and understandings of educators (teachers, heads of department, rectors and leaders) in this particular community of the integral model.

We hope that findings from the research will provide further directions for educators in Catholic education in Mauritius in order to assist them for a more successful implementation of the 'mixed ability' program.

We look forward to receiving permission to proceed with this project.

Yours sincerely,

Dr. Caroline Smith
Staff Supervisor

Kathleen Dauguet
Student Researcher

Appendix 7

Consent Form: Rector, Ste Therese



Australian Catholic University Limited
ABN 15 050 192 660
Melbourne Campus (St Patrick's)
115 Victoria Parade Fitzroy Vic 3065
Locked Bag 4115 Fitzroy MCD VIC 3065
Telephone 03 9953 3000
Facsimile 03 9953 3005

CONSENT FORM
(researcher's copy)

Title of Project: Understanding the 'mixed ability' program in Catholic secondary schools in Mauritius: Perceptions of educators for best practice in the middle years of schooling

Name of Supervisors: Dr Caroline Smith, Dr Ken Smith
Name of Student Researcher: Ms Kathleen Dauguet

I (Rector, Ste Therese College) have read (or have had read to me) and understood the information provided in the Letter to Participants. Any questions I have asked have been answered to my satisfaction. I agree for Ste Therese College to participate in this activity, realising that my interview will be audiotaped, and be signed by both the supervisor and the student researcher. I realise that I can withdraw at any time. I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify me or Ste Therese College in any way.

NAME OF PARTICIPANT:

SIGNATURE:

DATE:

NAME OF SUPERVISOR: Dr Caroline Smith

SIGNATURE:

DATE:

NAME OF STUDENT RESEARCHER: Mrs Kathleen Dauguet

SIGNATURE:

DATE:



Australian Catholic University Limited
ABN 15 050 192 660
Melbourne Campus (St Patrick's)
115 Victoria Parade Fitzroy Vic 3065
Locked Bag 4115 Fitzroy MCD VIC 3065
Telephone 03 9953 3000
Facsimile 03 9953 3005

CONSENT FORM
(participant's copy)

Title of Project: Understanding the 'mixed ability' program in Catholic secondary schools in Mauritius: Perceptions of educators for best practice in the middle years of schooling

Name of Supervisors: Dr Caroline Smith, Dr Ken Smith
Name of Student Researcher: Ms Kathleen Dauguet

I (Rector, Ste Therese College) have read (or have had read to me) and understood the information provided in the Letter to Participants. Any questions I have asked have been answered to my satisfaction. I agree for Ste Therese College to participate in this activity, realising that my interview will be audiotaped, and be signed by both the supervisor and the student researcher. I realise that I can withdraw at any time. I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify me or Ste Therese College in any way.

NAME OF PARTICIPANT:

SIGNATURE:

DATE:

NAME OF SUPERVISOR: Dr Caroline Smith

SIGNATURE:

DATE:

NAME OF STUDENT RESEARCHER: Mrs Kathleen Dauguet

SIGNATURE:

DATE:

Appendix 8

Letter to the Rector, Ste Claire



Australian Catholic University Limited
ABN 15 050 192 660
Melbourne Campus (St Patrick's)
115 Victoria Parade Fitzroy Vic 3065
Locked Bag 4115 Fitzroy MCD VIC 3065
Telephone 03 9953 3000
Facsimile 03 9953 3005

INFORMATION LETTER TO THE RECTOR

TITLE OF PROJECT: Understanding the 'mixed ability' program in Catholic secondary schools in Mauritius: Perceptions of educators for best practice in the middle years of schooling.

STAFF SUPERVISOR: Dr. Caroline Smith

STUDENT RESEARCHER: Mrs. Kathleen Dauguet

DEGREE: Doctor of Education

This is a formal request to seek permission for the student researcher, Kathleen Dauguet, to access the rector, heads of English, French, Mathematics and Science department and teachers of Forms I-III for a research project.

The study is a requirement for the award of Doctor of Education, a study currently undertaken by the student researcher. The first purpose of the research is an exploration of an integral model of education that acknowledges diversity in the classroom and each learner's individual needs in the middle years of schooling, particularly in Form I in Catholic secondary schools in Mauritius. The second purpose is to investigate beliefs and understandings of educators (teachers, heads of department, rectors and leaders) in this particular community of the integral model.

The conduct of the research will be predominantly qualitative. Data at your college will be collected through a questionnaire and a PMI (Positives, Negatives, Interesting) sheet for teachers of Forms I-III after a brief presentation of the project, a focus group session for heads of English, Mathematics, French and Science department and an interview with the rector. The duration of each session with teachers and heads of department will be approximately one hour and the interview will be half an hour. All sessions will be held during school hours, following prior arrangements made with the rector and on the school's premises.

All focus groups discussions and interviews will be audio-recorded and participants will have a code name. Teachers will not be required to declare their personal details such as their name and address. While the identity of participants will be known to the researcher, privacy and confidentiality will be maintained according to the ACU Ethics Committee Guidelines. There are no anticipated risks for participants. The study will be published as a thesis for assessment. Results from the study may be summarised and appear in publications or may be provided to other researchers in a form that no participant or school will be identified.

Response of participants is very important for the success of this research and participants will receive feedback of the results of the research. Participants are free to refuse consent altogether without having to justify that decision, or to withdraw consent and discontinue participation in the research at any time without giving a reason. Any withdrawal from the research will not prejudice in any way the participants' future care and involvement with the researcher.

This study has been approved by the Human Research Ethics Committee at Australian Catholic University.

Any questions regarding the study should be directed to:

Research supervisor: Dr. Caroline Smith
School of Education
ACU National, St. Patrick's Campus
(03) 9953 3289
C.Smith@patrick.acu.edu.au

Any complaint or concern relating to the study, the way that participants have been treated while participating in the study, or a query not satisfactorily responded to by the supervisor or researcher, could be addressed in writing to:

Chair, HREC
C/O Research Services,
Australian Catholic University,
Melbourne Campus, Locked Bag 4115
Fitzroy VIC 3065
Tel. (03) 9953 3157 - Fax. (03) 9953 3315

Any complaint will be treated in confidence and be fully investigated. The participant will be informed of the outcome. If you agree to participate in the study, please sign both copies of the consent form and retain a copy for your records. The other copy must be given to the researcher.

Yours faithfully,

Dr. Caroline Smith
Staff Supervisor

Kathleen Dauguet
Student Researcher



Australian Catholic University Limited
ABN 15 050 192 660
Melbourne Campus (St Patrick's)
115 Victoria Parade Fitzroy Vic 3065
Locked Bag 4115 Fitzroy MCD VIC 3065
Telephone 03 9953 3000
Facsimile 03 9953 3005

15th August 2006

Dear Rector,
Ste Claire College
Mauritius

We are writing to seek your permission for one of us, Kathleen Dauguet, to undertake a research study in your college. The research is part of Kathleen's studies for the degree of Doctor of Education for the Australian Catholic University at St. Patrick's campus, Melbourne. Please find attached a copy of the information letter outlining all relevant details regarding the study. This letter forms part of the formal ethics proposal to the ACU Research Services Ethics Committee.

As indicated in the information letter, the purposes of the study are to explore an integral model of education that acknowledges diversity in the classroom particularly in Form I in Catholic secondary schools in Mauritius and to investigate beliefs and understandings of educators (teachers, heads of department, rectors and leaders) in this particular community of the integral model.

We hope that findings from the research will provide further directions for educators in Catholic education in Mauritius in order to assist them for a more successful implementation of the 'mixed ability' program.

We look forward to receiving permission to proceed with this project.

Yours sincerely,

Dr. Caroline Smith
Staff Supervisor

Kathleen Dauguet
Student Researcher

Appendix 9

Consent Form: Rector, Ste Claire



Australian Catholic University Limited
ABN 15 050 192 660
Melbourne Campus (St Patrick's)
115 Victoria Parade Fitzroy Vic 3065
Locked Bag 4115 Fitzroy MCD VIC 3065
Telephone 03 9953 3000
Facsimile 03 9953 3005

CONSENT FORM
(researcher's copy)

Title of Project: Understanding the 'mixed ability' program in Catholic secondary schools in
Mauritius: Perceptions of educators for best practice in the middle years
of schooling

Name of Supervisors: Dr Caroline Smith, Dr Ken Smith
Name of Student Researcher: Ms Kathleen Dauguet

I (Rector, Ste Claire College) have read (or have had read to me) and understood the information provided in the Letter to Participants. Any questions I have asked have been answered to my satisfaction. I agree for Ste Claire College to participate in this activity, realising that my interview will be audiotaped, and be signed by both the supervisor and the student researcher. I realise that I can withdraw at any time. I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify me or Ste Claire College in any way.

NAME OF PARTICIPANT:

SIGNATURE:

DATE:

NAME OF SUPERVISOR: Dr Caroline Smith

SIGNATURE:

DATE:

NAME OF STUDENT RESEARCHER: Mrs Kathleen Dauguet

SIGNATURE:

DATE:



Australian Catholic University Limited
ABN 15 050 192 660
Melbourne Campus (St Patrick's)
115 Victoria Parade Fitzroy Vic 3065
Locked Bag 4115 Fitzroy MCD VIC 3065
Telephone 03 9953 3000
Facsimile 03 9953 3005

CONSENT FORM
(participant's copy)

Title of Project: Understanding the 'mixed ability' program in Catholic secondary schools in
Mauritius: Perceptions of educators for best practice in the middle years
of schooling

Name of Supervisors: Dr Caroline Smith, Dr Ken Smith
Name of Student Researcher: Ms Kathleen Dauguet

I (Rector, Ste Claire College) have read (or have had read to me) and understood the information provided in the Letter to Participants. Any questions I have asked have been answered to my satisfaction. I agree for Ste Claire College to participate in this activity, realising that my interview will be audiotaped, and be signed by both the supervisor and the student researcher. I realise that I can withdraw at any time. I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify me or Ste Claire College in any way.

NAME OF PARTICIPANT:

SIGNATURE:

DATE:

NAME OF SUPERVISOR: Dr Caroline Smith

SIGNATURE:

DATE:

NAME OF STUDENT RESEARCHER: Mrs Kathleen Dauguet

SIGNATURE:

DATE:

Appendix 10

Letter to the Rector, Ste Bernadette



Australian Catholic University Limited
ABN 15 050 192 660
Melbourne Campus (St Patrick's)
115 Victoria Parade Fitzroy Vic 3065
Locked Bag 4115 Fitzroy MCD VIC 3065
Telephone 03 9953 3000
Facsimile 03 9953 3005

INFORMATION LETTER TO BUREAU OF CATHOLIC EDUCATION, MAURITIUS

TITLE OF PROJECT: Understanding the 'mixed ability' program in Catholic secondary schools in Mauritius: Perceptions of educators for best practice in the middle years of schooling.

STAFF SUPERVISOR: Dr. Caroline Smith

STUDENT RESEARCHER: Mrs. Kathleen Dauguet

DEGREE: Doctor of Education

This is a formal request to seek permission for the student researcher, Kathleen Dauguet, to access the rector, heads of English, French, Mathematics and Science department and teachers of Forms I-III for a research project.

The study is a requirement for the award of Doctor of Education, a study currently undertaken by the student researcher. The first purpose of the research is an exploration of an integral model of education that acknowledges diversity in the classroom and each learner's individual needs in the middle years of schooling, particularly in Form I in Catholic secondary schools in Mauritius. The second purpose is to investigate beliefs and understandings of educators (teachers, heads of department, rectors and leaders) in this particular community of the integral model.

The conduct of the research will be predominantly qualitative. Data at your college will be collected through a questionnaire and a PMI (Positives, Negatives, Interesting) sheet for teachers of Forms I-III after a brief presentation of the project, a focus group session for heads of English, Mathematics, French and Science department and an interview with the rector. The duration of each session with teachers and heads of department will be approximately one hour and the interview will be half an hour. All sessions will be held during school hours, following prior arrangements made with the rector and on the school's premises.

All focus groups discussions and interviews will be audio-recorded and participants will have a code name. Teachers will not be required to declare their personal details such as their name and address. While the identity of participants will be known to the researcher, privacy and confidentiality will be maintained according to the ACU Ethics Committee Guidelines. There are no anticipated risks for participants. The study will be published as a thesis for assessment. Results from the study may be summarised and appear in publications or may be provided to other researchers in a form that no participant or school will be identified.

Response of participants is very important for the success of this research and participants will receive feedback of the results of the research. Participants are free to refuse consent altogether without having to justify that decision, or to withdraw consent and discontinue participation in the research at any time without giving a reason. Any withdrawal from the research will not prejudice in any way the participants' future care and involvement with the researcher.

This study has been approved by the Human Research Ethics Committee at Australian Catholic University.

Any questions regarding the study should be directed to:

Research supervisor: Dr. Caroline Smith
School of Education
ACU National, St. Patrick's Campus
(03) 9953 3289
C.Smith@patrick.acu.edu.au

Any complaint or concern relating to the study, the way that participants have been treated while participating in the study, or a query not satisfactorily responded to by the supervisor or researcher, could be addressed in writing to:

Chair, HREC
C/O Research Services,
Australian Catholic University,
Melbourne Campus, Locked Bag 4115
Fitzroy VIC 3065
Tel. (03) 9953 3157 - Fax. (03) 9953 3315

Any complaint will be treated in confidence and be fully investigated. The participant will be informed of the outcome. If you agree to participate in the study, please sign both copies of the consent form and retain a copy for your records. The other copy must be given to the researcher.

Yours faithfully,

Dr. Caroline Smith
Staff Supervisor

Kathleen Dauguet
Student Researcher



Australian Catholic University Limited
ABN 15 050 192 660
Melbourne Campus (St Patrick's)
115 Victoria Parade Fitzroy Vic 3065
Locked Bag 4115 Fitzroy MCD VIC 3065
Telephone 03 9953 3000
Facsimile 03 9953 3005

15th August 2006

Dear Rector,
Ste Bernadette College
Mauritius

We are writing to seek your permission for one of us, Kathleen Dauguet, to undertake a research study in your college. The research is part of Kathleen's studies for the degree of Doctor of Education for the Australian Catholic University at St.Patrick's campus, Melbourne. Please find attached a copy of the information letter outlining all relevant details regarding the study. This letter forms part of the formal ethics proposal to the ACU Research Services Ethics Committee.

As indicated in the information letter, the purposes of the study are to explore an integral model of education that acknowledges diversity in the classroom particularly in Form I in Catholic secondary schools in Mauritius and to investigate beliefs and understandings of educators (teachers, Heads of department, Rectors and leaders) in this particular community of the integral model.

We hope that findings from the research will provide further directions for educators in Catholic education in Mauritius in order to assist them for a more successful implementation of the 'mixed ability' program.

We look forward to receiving permission to proceed with this project.

Yours sincerely,

Dr. Caroline Smith
Staff Supervisor

Kathleen Dauguet
Student Researcher

Appendix 11

Consent Form: Rector, Ste Bernadette



Australian Catholic University Limited
ABN 15 050 192 660
Melbourne Campus (St Patrick's)
115 Victoria Parade Fitzroy Vic 3065
Locked Bag 4115 Fitzroy MCD VIC 3065
Telephone 03 9953 3000
Facsimile 03 9953 3005

CONSENT FORM
(researcher's copy)

Title of Project: Understanding the 'mixed ability' program in Catholic secondary schools in
Mauritius: Perceptions of educators for best practice in the middle years
of schooling

Name of Supervisors: Dr Caroline Smith, Dr Ken Smith
Name of Student Researcher: Ms Kathleen Dauguet

I (Rector, Ste Bernadette College) have read (or have had read to me) and understood the information provided in the Letter to Participants. Any questions I have asked have been answered to my satisfaction. I agree for Ste Bernadette College to participate in this activity, realising that my interview will be audiotaped, and be signed by both the supervisor and the student researcher. I realise that I can withdraw at any time. I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify me or Ste Bernadette College in any way.

NAME OF PARTICIPANT:

SIGNATURE:

DATE:

NAME OF SUPERVISOR: Dr Caroline Smith

SIGNATURE:

DATE:

NAME OF STUDENT RESEARCHER: Mrs Kathleen Dauguet

SIGNATURE:

DATE:



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Locked Bag 4115 Fitzroy MCD VIC 3065
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CONSENT FORM
(participant's copy)

Title of Project: Understanding the 'mixed ability' program in Catholic secondary schools in
Mauritius: Perceptions of educators for best practice in the middle years
of schooling

Name of Supervisors: Dr Caroline Smith, Dr Ken Smith
Name of Student Researcher: Ms Kathleen Dauguet

I (Rector, Ste Bernadette College) have read (or have had read to me) and understood the information provided in the Letter to Participants. Any questions I have asked have been answered to my satisfaction. I agree for Ste Bernadette College to participate in this activity, realising that my interview will be audiotaped, and be signed by both the supervisor and the student researcher. I realise that I can withdraw at any time. I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify me or Ste Bernadette College in any way.

NAME OF PARTICIPANT:

SIGNATURE:

DATE:

NAME OF SUPERVISOR: Dr Caroline Smith

SIGNATURE:

DATE:

NAME OF STUDENT RESEARCHER: Mrs Kathleen Dauguet

SIGNATURE:

DATE:

Appendix 12

Letter to the Catholic Leader



Australian Catholic University Limited
ABN 15 050 192 660
Melbourne Campus (St Patrick's)
115 Victoria Parade Fitzroy Vic 3065
Locked Bag 4115 Fitzroy MCD VIC 3065
Telephone 03 9953 3000
Facsimile 03 9953 3005

**INFORMATION LETTER TO PARTICIPANT
(Catholic Leader)**

TITLE OF PROJECT: Understanding the 'mixed ability' program in Catholic secondary schools in Mauritius: Perceptions of educators for best practice in the middle years of schooling.

STAFF SUPERVISOR: Dr. Caroline Smith

STUDENT RESEARCHER: Mrs. Kathleen Dauguet

DEGREE: Doctor of Education

Dear Participant

I am writing to invite you to participate in an interview as part of a research conducted in Catholic secondary schools in the Diocese of Port-Louis in Mauritius. The duration of your interview will be approximately half an hour. It will be held during school hours, on appointment and on the school's premises.

The study is a requirement for the award of Doctor of Education, a study currently undertaken by the student researcher. The first purpose of the research is an exploration of an integral model of education that acknowledges diversity in the classroom and each learner's individual needs in the middle years of schooling, particularly in Form I in Catholic secondary schools in Mauritius. The second purpose is to investigate beliefs and understandings of educators (teachers, Heads of department, rectors and leaders) in this particular community of the integral model.

The interview will be audio-recorded and you will be given a code name. While the identity of participants will be known to the researcher, privacy and confidentiality will be maintained according to the ACU Ethics Committee Guidelines. There are no anticipated risks for participants. The study will be published as a thesis for assessment. Results from the study may be summarized and appear in publications or may be provided to other researchers in a form that no participant or school will be identified.

Response of participants is very important for the success of this research as we hope that findings from the research will provide further directions for educators in Catholic education in Mauritius in order to assist them for a more successful implementation of the 'mixed ability' program. Participants will receive feedback of the results of the research.

You are free to refuse consent altogether without having to justify that decision, or to withdraw consent and discontinue participation in the research at any time without giving a reason. Any withdrawal from the research will not prejudice in any way the participants' future care and involvement with the researcher.

This study has been approved by the Human Research Ethics Committee at Australian Catholic University.

Any questions regarding the study should be directed to:

Research supervisor: Dr. Caroline Smith
School of Education
ACU National, St. Patrick's Campus
(03) 9953 3289
C.Smith@patrick.acu.edu.au

Any complaint or concern relating to the study, the way that participants have been treated while participating in the study, or a query not satisfactorily responded to by the supervisor or researcher, could be addressed in writing to:

Chair, HREC
C/O Research Services,
Australian Catholic University,
Melbourne Campus, Locked Bag 4115
Fitzroy VIC 3065
Tel. (03) 9953 3157 - Fax. (03) 9953 3315

Any complaint will be treated in confidence and be fully investigated. The participant will be informed of the outcome. If you agree to participate in the study, please sign both copies of the consent form and retain a copy for your records. The other copy must be given to the researcher.

Yours faithfully,

Dr. Caroline Smith
Staff Supervisor

Kathleen Dauguet
Student Researcher

Appendix 13

Consent form: Catholic Leader



Australian Catholic University Limited
ABN 15 050 192 660
Melbourne Campus (St Patrick's)
115 Victoria Parade Fitzroy Vic 3065
Locked Bag 4115 Fitzroy MCD VIC 3065
Telephone 03 9953 3000
Facsimile 03 9953 3005

CONSENT FORM
(researcher's copy)

Title of Project: Understanding the 'mixed ability' program in Catholic secondary schools in Mauritius: Perceptions of educators for best practice in the middle years of schooling

Name of Supervisors: Dr Caroline Smith, Dr Ken Smith
Name of Student Researcher: Ms Kathleen Dauguet

I (the participant) have read (or have had read to me) and understood the information provided in the Letter to Participants. Any questions I have asked have been answered to my satisfaction. I agree to participate in this activity, realising that my interview will be audiotaped, and be signed by both the supervisor and the student researcher. I realise that I can withdraw at any time. I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify me in any way.

NAME OF PARTICIPANT:

SIGNATURE:

DATE:

NAME OF SUPERVISOR: Dr Caroline Smith

SIGNATURE:

DATE:

NAME OF STUDENT RESEARCHER: Mrs Kathleen Dauguet

SIGNATURE:

DATE:



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ABN 15 050 192 660
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Locked Bag 4115 Fitzroy MCD VIC 3065
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Facsimile 03 9953 3005

CONSENT FORM
(participant's copy)

Title of Project: Understanding the 'mixed ability' program in Catholic secondary schools in Mauritius: Perceptions of educators for best practice in the middle years of schooling

Name of Supervisors: Dr Caroline Smith, Dr Ken Smith
Name of Student Researcher: Ms Kathleen Dauguet

I (the participant) have read (or have had read to me) and understood the information provided in the Letter to Participants. Any questions I have asked have been answered to my satisfaction. I agree to participate in this activity, realising that my interview will be audiotaped, and be signed by both the supervisor and the student researcher. I realise that I can withdraw at any time. I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify me in any way.

NAME OF PARTICIPANT:

SIGNATURE:

DATE:

NAME OF SUPERVISOR: Dr Caroline Smith

SIGNATURE:

DATE:

NAME OF STUDENT RESEARCHER: Mrs Kathleen Dauguet

SIGNATURE:

DATE:

Appendix 14

Letter to the Rector Participant



Australian Catholic University Limited
ABN 15 050 192 660
Melbourne Campus (St Patrick's)
115 Victoria Parade Fitzroy Vic 3065
Locked Bag 4115 Fitzroy MCD VIC 3065
Telephone 03 9953 3000
Facsimile 03 9953 3005

INFORMATION LETTER TO PARTICIPANT (Rector)

TITLE OF PROJECT: Understanding the 'mixed ability' program in Catholic secondary schools in Mauritius: Perceptions of educators for best practice in the middle years of schooling.

STAFF SUPERVISOR: Dr. Caroline Smith

STUDENT RESEARCHER: Mrs. Kathleen Dauguet

DEGREE: Doctor of Education

Dear Participant

I am writing to invite you to participate in an interview as part of a research conducted in Catholic secondary schools in the Diocese of Port-Louis in Mauritius. The duration of your interview will be approximately half an hour. It will be held during school hours, on appointment and on the school's premises.

The study is a requirement for the award of Doctor of Education, a study currently undertaken by the student researcher. The first purpose of the research is an exploration of an integral model of education that acknowledges diversity in the classroom and each learner's individual needs in the middle years of schooling, particularly in Form I in Catholic secondary schools in Mauritius. The second purpose is to investigate beliefs and understandings of educators (teachers, Heads of department, rectors and leaders) in this particular community of the integral model.

The interview will be audio-recorded and you will be given a code name. While the identity of participants will be known to the researcher, privacy and confidentiality will be maintained according to the ACU Ethics Committee Guidelines. There are no anticipated risks for participants. The study will be published as a thesis for assessment. Results from the study may be summarised and appear in publications or may be provided to other researchers in a form that no participant or school will be identified.

Response of participants is very important for the success of this research as we hope that findings from the research will provide further directions for educators in Catholic education in Mauritius in order to assist them for a more successful implementation of the 'mixed ability' program. Participants will receive feedback of the results of the research.



You are free to refuse consent altogether without having to justify that decision, or to withdraw consent and discontinue participation in the research at any time without giving a reason. Any withdrawal from the research will not prejudice in any way the participants' future care and involvement with the researcher.

This study has been approved by the Human Research Ethics Committee at Australian Catholic University.

Any questions regarding the study should be directed to:

Research supervisor: Dr. Caroline Smith
School of Education
ACU National, St. Patrick's Campus
(03) 9953 3289
C.Smith@patrick.acu.edu.au

Any complaint or concern relating to the study, the way that participants have been treated while participating in the study, or a query not satisfactorily responded to by the supervisor or researcher, could be addressed in writing to:

Chair, HREC
C/O Research Services,
Australian Catholic University,
Melbourne Campus, Locked Bag 4115
Fitzroy VIC 3065
Tel. (03) 9953 3157 - Fax. (03) 9953 3315

Any complaint will be treated in confidence and be fully investigated. The participant will be informed of the outcome. If you agree to participate in the study, please sign both copies of the consent form and retain a copy for your records. The other copy must be given to the researcher.

Yours faithfully,

Dr. Caroline Smith
Staff Supervisor

Kathleen Dauguet
Student Researcher

Appendix 15

Consent form: The Rector Participant



Australian Catholic University Limited
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115 Victoria Parade Fitzroy Vic 3065
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Telephone 03 9953 3000
Facsimile 03 9953 3005

CONSENT FORM
(researcher's copy)

Title of Project: Understanding the 'mixed ability' program in Catholic secondary schools in Mauritius: Perceptions of educators for best practice in the middle years of schooling

Name of Supervisors: Dr Caroline Smith, Dr Ken Smith
Name of Student Researcher: Ms Kathleen Dauguet

I (the participant) have read (or have had read to me) and understood the information provided in the Letter to Participants. Any questions I have asked have been answered to my satisfaction. I agree to participate in this activity, realising that my interview will be audiotaped, and be signed by both the supervisor and the student researcher. I realise that I can withdraw at any time. I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify me in any way.

NAME OF PARTICIPANT:

SIGNATURE:

DATE:

NAME OF SUPERVISOR: Dr Caroline Smith

SIGNATURE:

DATE:

NAME OF STUDENT RESEARCHER: Mrs Kathleen Dauguet

SIGNATURE:

DATE:



Australian Catholic University Limited
ABN 15 050 192 660
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115 Victoria Parade Fitzroy Vic 3065
Locked Bag 4115 Fitzroy MCD VIC 3065
Telephone 03 9953 3000
Facsimile 03 9953 3005

CONSENT FORM
(participant's copy)

Title of Project: Understanding the 'mixed ability' program in Catholic secondary schools in Mauritius: Perceptions of educators for best practice in the middle years of schooling

Name of Supervisors: Dr Caroline Smith, Dr Ken Smith
Name of Student Researcher: Ms Kathleen Dauguet

I (the participant) have read (or have had read to me) and understood the information provided in the Letter to Participants. Any questions I have asked have been answered to my satisfaction. I agree to participate in this activity, realising that my interview will be audiotaped, and be signed by both the supervisor and the student researcher. I realise that I can withdraw at any time. I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify me in any way.

NAME OF PARTICIPANT:

SIGNATURE:

DATE:

NAME OF SUPERVISOR: Dr Caroline Smith

SIGNATURE:

DATE:

NAME OF STUDENT RESEARCHER: Mrs Kathleen Dauguet

SIGNATURE:

DATE:

Appendix 16

Letter to the Head of Department



Australian Catholic University Limited
ABN 15 050 192 660
Melbourne Campus (St Patrick's)
115 Victoria Parade Fitzroy Vic 3065
Locked Bag 4115 Fitzroy MCD VIC 3065
Telephone 03 9953 3000
Facsimile 03 9953 3005
www.acu.edu.au

INFORMATION LETTER TO PARTICIPANT (Head of Department)

TITLE OF PROJECT: Understanding the 'mixed ability' program in Catholic secondary schools in
Mauritius: Perceptions of educators for best practice in the middle years
of
schooling.

STAFF SUPERVISOR: Dr. Caroline Smith

STUDENT RESEARCHER: Mrs. Kathleen Dauguet

DEGREE: Doctor of Education

Dear Participant

You are invited to participate in a focus group discussion as part of a research conducted in Catholic secondary schools in the Diocese of Port-Louis in Mauritius. The questions will be available beforehand and the duration of the session will be approximately one hour, during school hours, following prior arrangements made with the Rector and on the school's premises.

The study is a requirement for the award of Doctor of Education, a study currently undertaken by the student researcher. The first purpose of the research is an exploration of an integral model of education that acknowledges diversity in the classroom and each learner's individual needs in the middle years of schooling, particularly in Form I in Catholic secondary schools in Mauritius. The second purpose is to investigate beliefs and understandings of educators (teachers, Heads of Department, Rectors and leaders) in this particular community of the integral model.

The focus group discussion will be audio-recorded and you will be given a code name. While the identity of participants will be known to the researcher, privacy and confidentiality will be maintained according to the ACU Ethics Committee Guidelines. There are no anticipated risks for participants. The study will be published as a thesis for assessment. Results from the study may be summarised and appear in publications or may be provided to other researchers in a form that no participant or school will be identified.

Response of participants is very important for the success of this research as we hope that findings from the research will provide further directions for educators in Catholic education in Mauritius in order to assist them for a more successful implementation of the 'mixed ability' program. Participants will receive feedback of the results of the research.



You are free to refuse consent altogether without having to justify that decision, or to withdraw consent and discontinue participation in the research at any time without giving a reason. Any withdrawal from the research will not prejudice in any way the participants' future care and involvement with the researcher.

This study has been approved by the Human Research Ethics Committee at Australian Catholic University.

Any questions regarding the study should be directed to:

Research supervisor: Dr. Caroline Smith
School of Education
ACU National, St. Patrick's Campus
(03) 9953 3289
C.Smith@patrick.acu.edu.au

Any complaint or concern relating to the study, the way that participants have been treated while participating in the study, or a query not satisfactorily responded to by the supervisor or researcher, could be addressed in writing to:

Chair, HREC
C/O Research Services,
Australian Catholic University,
Melbourne Campus, Locked Bag 4115
Fitzroy VIC 3065
Tel. (03) 9953 3157 - Fax. (03) 9953 3315

Any complaint will be treated in confidence and be fully investigated. The participant will be informed of the outcome. If you agree to participate in the study, please sign both copies of the consent form and retain a copy for your records. The other copy must be given to the researcher.

Yours faithfully,

Dr. Caroline Smith
Staff Supervisor

Kathleen Dauguet
Student Researcher

Appendix 17

Consent form: Head of Department



Australian Catholic University Limited
ABN 15 050 192 660
Melbourne Campus (St Patrick's)
115 Victoria Parade Fitzroy Vic 3065
Locked Bag 4115 Fitzroy MCD VIC 3065
Telephone 03 9953 3000
Facsimile 03 9953 3005

CONSENT FORM
(researcher's copy)

Title of Project: Understanding the 'mixed ability' program in Catholic secondary schools in Mauritius: Perceptions of educators for best practice in the middle years of schooling

Name of Supervisors: Dr Caroline Smith, Dr Ken Smith
Name of Student Researcher: Ms Kathleen Dauguet

I (the participant) have read (or have had read to me) and understood the information provided in the Letter to Participants. Any questions I have asked have been answered to my satisfaction. I agree to participate in this activity, realising that my interview will be audiotaped, and be signed by both the supervisor and the student researcher. I realise that I can withdraw at any time. I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify me in any way.

NAME OF PARTICIPANT:

SIGNATURE:

DATE:

NAME OF SUPERVISOR: Dr Caroline Smith

SIGNATURE:

DATE:

NAME OF STUDENT RESEARCHER: Mrs Kathleen Dauguet

SIGNATURE:

DATE:



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Telephone 03 9953 3000
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CONSENT FORM
(participant's copy)

Title of Project: Understanding the 'mixed ability' program in Catholic secondary schools in
Mauritius: Perceptions of educators for best practice in the middle years
of schooling

Name of Supervisors: Dr Caroline Smith, Dr Ken Smith
Name of Student Researcher: Ms Kathleen Dauguet

I (the participant) have read (or have had read to me) and understood the information provided in the Letter to Participants. Any questions I have asked have been answered to my satisfaction. I agree to participate in this activity, realising that my interview will be audiotaped, and be signed by both the supervisor and the student researcher. I realise that I can withdraw at any time. I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify me in any way.

NAME OF PARTICIPANT:

SIGNATURE:

DATE:

NAME OF SUPERVISOR: Dr Caroline Smith

SIGNATURE:

DATE:

NAME OF STUDENT RESEARCHER: Mrs Kathleen Dauguet

SIGNATURE:

DATE:

Appendix 18

Letter to the Teacher



Australian Catholic University Limited
ABN 15 050 192 660
Melbourne Campus (St Patrick's)
115 Victoria Parade Fitzroy Vic 3065
Locked Bag 4115 Fitzroy MCD VIC 3065
Telephone 03 9953 3000
Facsimile 03 9953 3005

INFORMATION LETTER TO PARTICIPANT (Teacher)

TITLE OF PROJECT: Understanding the 'mixed ability' program in Catholic secondary schools in Mauritius: Perceptions of educators for best practice in the middle years of schooling.

STAFF SUPERVISOR: Dr. Caroline Smith

STUDENT RESEARCHER: Mrs. Kathleen Dauguet

DEGREE: Doctor of Education

Dear Teacher,

You are invited to participate in a research conducted in Catholic secondary schools in the Diocese of Port-Louis in Mauritius by filling in a PMI (Positives, Negatives, Interesting) sheet and a questionnaire after a brief presentation of the project. The duration of the session with teachers will be approximately one hour, during school hours, following prior arrangements made with the Rector and on the school's premises or at the BEC.

The study is a requirement for the award of Doctor of Education, a study currently undertaken by the student researcher. The first purpose of the research is an exploration of an integral model of education that acknowledges diversity in the classroom and each learner's individual needs in the middle years of schooling, particularly in Form I in Catholic secondary schools in Mauritius. The second purpose is to investigate beliefs and understandings of educators (teachers, Heads of Department, Rectors and leaders) in this particular community of the integral model.

You will not be required to declare your personal details such as your name and your address. While the identity of participants will be known to the researcher, privacy and confidentiality will be maintained according to the ACU Ethics Committee Guidelines. There are no anticipated risks for participants. The study will be published as a thesis for assessment. Results from the study may be summarized and appear in publications or may be provided to other researchers in a form that no participant or school will be identified.

Response of participants is very important for the success of this research as we hope that findings from the research will provide further directions for educators in Catholic education in Mauritius in order to assist them for a more successful implementation of the 'mixed ability' program. Participants will receive feedback of the results of the research.

You are free to refuse consent altogether without having to justify that decision, or to withdraw consent and discontinue participation in the research at any time without giving a reason. Any withdrawal from the research will not prejudice in any way the participants' future care and involvement with the researcher.

This study has been approved by the Human Research Ethics Committee at Australian Catholic University.

Any questions regarding the study should be directed to:

Research supervisor: Dr. Caroline Smith
School of Education
ACU National, St. Patrick's Campus
(03) 9953 3289
C.Smith@patrick.acu.edu.au

Any complaint or concern relating to the study, the way that participants have been treated while participating in the study, or a query not satisfactorily responded to by the supervisor or researcher, could be addressed in writing to:

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Melbourne Campus, Locked Bag 4115
Fitzroy VIC 3065
Tel. (03) 9953 3157 - Fax. (03) 9953 3315

Any complaint will be treated in confidence and be fully investigated. The participant will be informed of the outcome. If you agree to participate in the study, please sign both copies of the consent form and retain a copy for your records. The other copy must be given to the researcher.

Yours faithfully,

Dr. Caroline Smith
Staff Supervisor

Kathleen Dauguet
Student Researcher

Appendix 19

Interview questionnaire: Catholic Leader

INTERVIEW QUESTIONS FOR CATHOLIC LEADERS

1. Why did the BEC and the Loreto Institute decided to implement the ‘mixed ability’ program in Catholic secondary schools?
2. What is your understanding of the term ‘mixed ability’?
3. How does mixed ability relate to human-centred education?
4. Do you think that rectors and teachers in Catholic secondary schools have a shared vision of both philosophies, the ‘mixed-ability’ program and a human-centred education?
5. How is the BEC assessing the impact of the Professional Development Programs provided by BEC/ACU in 2004 on teaching styles, particularly teaching through the Multiple Intelligences in Form I?
6. What do you think are the impediments in Catholic secondary schools that prevent the successful implementation of the mixed-ability concept?
7. Rethinking Mauritius, the conference organised in 2005 under the aegis of BEC has highlighted the need of an independent research body for research to support teaching and learning. How do you respond to this call?
8. What is your vision of an effective successful ‘mixed ability’ classroom?
9. What are your future plans for the success of the ‘mixed ability’ implementation in Catholic secondary schools in Mauritius?

Appendix 20

Interview questionnaire: Rector

INTERVIEW QUESTIONS FOR RECTORS

1. What would a successful 'mixed ability' class look like?
2. What have been some of the impacts on your school of the implementation of the mixed-ability concept at the middle level of schooling, particularly in Form I?
3. How have you responded to the change process implied with the new philosophy of Catholic secondary schools?
4. Are regular meetings with other rectors or the BEC part of the implementation of the mixed-ability concept in Catholic secondary schools? Can you give a feedback?
5. What do you consider to be the impediments in your school that prevent successful implementation of the mixed-ability concept?
6. Within your school, what Professional Development program do you think is necessary?
7. In an ideal world, what do you think are some features of an effective model for mixed-ability teaching in Form I?

Appendix 21

Interview questionnaire: Head of Department

FOCUS GROUP FOR HEADS OF DEPARTMENT

1. What would a successful 'mixed ability' class look like for you?
2. In what way do you see yourself as an initiator of school change for the implementation of the 'mixed ability' program?
3. In your opinion, what is the greatest impediment for the success of mixed-ability classrooms?
4. In what ways should school structures and operations change to enable the success of the 'mixed ability' program? Why?
5. In an ideal world, what do you think are some features of an effective model for mixed-ability teaching in Form I?
6. How far do you think the Professional Development (PD) Program provided by BEC/ACU in 2004- 2005 has been successful and how far do you think that on-going PD programs on emerging pedagogies of the 21st Century can keep teachers up-to-date with modern trends in education?

Appendix 22
Teacher Questionnaire

MIXED-ABILITY CLASSES: BELIEFS AND UNDERSTANDINGS OF TEACHERS

Name of School:	Years of Experience:
Location:	Gender:
Position:	Age:
Key Learning Area:	
Qualifications:	

Please indicate your response by a tick in the appropriate box.

SA=Strongly Agree; A=Agree; NS=Not Sure; D=Disagree; SD=Strongly Disagree

	SA	A	NS	D	SD
1. A human-centred education includes all students irrespective of ability, capacity, creed, religious and economic backgrounds.					
2. A human-centred education does not label students according to their CPE aggregates.					
3. A mixed ability class is a class with students whose CPE aggregates range from 15 to 20 units.					
4. A mixed ability class is a class with diverse learners.					
5. Learners in the classroom have 2 or 3 intelligences usually stronger than others.					
6. In a classroom there are as many differences in learning styles as there are students.					
7. Streamed classes are the best way to teach students (FI – III) i.e. top performers of the CPE in one class and same for the low performers					
8. Top performers of the CPE are not performing to their full capacity and ability in mixed ability classes.					
9. Teaching through the Multiple Intelligences is an effective way to address low and top scorers of the CPE in the same way.					
10. Teachers need to diversify what they teach, how they teach it and how they assess learning to cater for diverse learners.					
11. It is necessary to reduce content and infuse thinking in the curriculum for learners to move from surface to deep learning and higher order levels of complexity in Bloom's taxonomy, that is analyse, evaluate and create.					
12. Constructivist teaching strategies are important for student-centred learning.					
13. Literacy must be taught through all key learning areas.					
14. The use of ICT in teaching and learning is important.					
15. Assessment practices in our classrooms are arbitrary.					
16. Assessment practices should include formative and authentic assessments and students must learn to be critical assessors.					

	SA	A	NS	D	SD
17. Teachers must build effective Professional Learning Teams.					
18. Team teaching can facilitate teaching overcrowded classes.					
19. School operations are flexible for interdisciplinary team organization, team teaching and longer blocks of time.					
20. A school day must be organised around 2 blocks of 90 minutes in the morning and 3 periods of 45 minutes in the afternoon.					
21. Your teacher education had focused on teaching through Multiple Intelligences.					
22. Teachers must share a repertoire of teaching strategies.					
23. You are familiar with the emerging pedagogies of the 21st century i.e					
• Collaborative learning					
• MI/Bloom Planning Matrix					
• Thinking Hats					
• Habits of Mind					
• KWHL (What do I know? Want to know? How? What have I learnt?)					
• Interdisciplinarity					
• Thinkers' Keys					
24. Teachers must go through on-going Professional Development Programs for new pedagogical models and practices.					
25. There is no culture of professional development for teachers in Mauritius.					
26. The Professional Development (PD) Program provided by BEC/ACU in 2004, 2005 was highly effective and addressed directly teachers' needs.					
27. Since the Professional Development (PD) Program provided by BEC/ACU in 2004, 2005, you have changed your teaching practices and you now teach through the Multiple Intelligences.					
28. The whole school must become a learning community.					
29. Your principal is a pedagogical leader and supports change.					
30. Your Head of department is a pedagogical leader, gives advice for innovation.					
31. An independent research body for research to support teaching and learning is important.					
32. You are confident to implement change in your classroom.					

Appendix 23

Teacher PMI

A reflective response on the ‘mixed ability’ teaching program in Catholic Secondary schools in Mauritius.

In January 2004, in the context of reforms in the education system in Mauritius and to be consistent with the values of Catholic education in Mauritius, the Catholic Education Bureau (BEC) changed the criteria for admission to secondary schools and opted for a new teaching program in Catholic secondary schools. This program which was named ‘mixed ability’, aims at inclusiveness in all Catholic secondary schools. It draws from an understanding of best practice supported by a broad global consensus for key directions for education in the twenty-first century. The ‘mixed ability’ program which is still at its early stages, coupled with the identification of an holistic and human-centred education are the foundation for a new direction for schooling at the middle school level from Form I to Form III.

Please use the P M I tool provided to record your individual response on the ‘mixed ability’ teaching program.

P Plus = positives, success, new learnings, what works	M Minus = what has not worked, barriers to implementation	I Interesting = what are some suggestions/recommendations

Appendix 24

Collation of Teacher Questionnaire

Catholic Identity Tables.

1. A human-centred education includes all students irrespective of ability, capacity, creed, religious and economic backgrounds.				Total
	NOT SURE	AGREE	S/AGREE	
Count	1	15	81	97
%	1%	15%	84%	100%

Catholic Identity Tables Continued.

Catholic Identity Tables.

2. A human-centred education does not label students according to their CPE aggregates.					Total
	DISAGREE	NOT SURE	AGREE	S/AGREE	
Count	1	4	25	65	95
%	1%	4%	26%	68%	100%

Differentiation Tables.

3. A mixed ability class is a class with students whose CPE aggregates range from 15 to 20 units.					Total
	S/DISAGREE	DISAGREE	NOT SURE	AGREE	S/AGREE
Count	5	14	16	47	15
%	5%	14%	16%	48%	15%

Differentiation Tables Continued.

Differentiation Tables.

4. A mixed ability class is a class with diverse learners.				Total
	DISAGREE	NOT SURE	AGREE	S/AGREE
Count	1	1	31	61
%	1%	1%	33%	65%

Differentiation Tables Continued.

Differentiation Tables.

5. Learners in the classroom have 2 or 3 intelligences usually stronger than others.						Total
	S/DISAGREE	NOT SURE	AGREE	S/AGREE		
Count	1	20	48	27		96
%	1%	21%	50%	28%		100%

Differentiation Tables Continued.

Differentiation Tables.

6. In a classroom there are as many differences in learning styles as there are students.							Total
	S/DISAGREE	DISAGREE	NOT SURE	AGREE	S/AGREE		
Count	1	4	5	33	53		96
%	1%	4%	5%	34%	55%		100%

Differentiation Tables Continued.

Differentiation Tables.

7. Streamed classes are the best way to teach students (FI-III) i.e. top performers of the CPE in one class and same for the low performers.						Total
	S/DISAGREE	DISAGREE	NOT SURE	AGREE	S/AGREE	
Count	10	30	22	23	11	96
%	10%	31%	23%	24%	11%	100%

Differentiation Tables Continued.

Differentiation Tables.

8. Top performers of the CPE are not performing to their full capacity and ability in mixed ability classes.					Total
	DISAGREE	NOT SURE	AGREE	S/AGREE	
Count	16	21	39	21	97
%	16%	22%	40%	22%	100%

Learning Tables.

9. Teaching through the Multiple Intelligences is an effective way to address low and top scorers of the CPE in the same way.					Total
	DISAGREE	NOT SURE	AGREE	S/AGREE	
Count	3	13	43	37	96
%	3%	14%	45%	39%	100%

Learning Tables Continued.

Learning Tables.

10. Teachers need to diversify what they teach, how they teach it and how they assess learning to cater for diverse learners.				Total
	AGREE	S/AGREE		
Count	30	67		97
%	31%	69%		100%

Learning Tables Continued.

Learning Tables.

11. It is necessary to reduce content and infuse thinking in the curriculum for learners to move from surface to deep learning and higher order levels of complexity in Bloom's taxonomy, that is analyse, evaluate and create.				Total
	NOT SURE	AGREE	S/AGREE	
Count	4	30	60	94
%	4%	32%	64%	100%

Learning Tables Continued.

Learning Tables.

12. Constructivist teaching strategies are important for student-centred learning.					Total
	NOT SURE	AGREE	S/AGREE		
Count	12	42	36		90
%	13%	47%	40%		100%

Learning Tables Continued.

Learning Tables.

13. Literacy must be taught through all key learning areas.					Total
	DISAGREE	NOT SURE	AGREE	S/AGREE	
Count	2	8	41	44	95
%	2%	8%	43%	46%	100%

Learning Tables Continued.

Learning Tables.

14. The use of ICT in teaching and learning is important.					Total
	DISAGREE	NOT SURE	AGREE	S/AGREE	
Count	1	8	47	37	93
%	1%	9%	51%	40%	100%

Assessment Tables.

15. Assessment practices in our classrooms are arbitrary.					Total
	DISAGREE	NOT SURE	AGREE	S/AGREE	
Count	13	26	48	8	95
%	14%	27%	51%	8%	100%

Assessment Tables Continued.

Assessment Tables.

16. Assessment practices should include formative and authentic assessments and students must learn to be critical assessors.				Total
	NOT SURE	AGREE	S/AGREE	
Count	11	37	47	95
%	12%	39%	49%	100%

School Organisation for Learning Tables.

17. Teachers must build effective Professional Learning Teams.				Total
	NOT SURE	AGREE	S/AGREE	
Count	4	43	46	93
%	4%	46%	49%	100%

School Organisation for Learning Tables Continued.

School Organisation for Learning Tables.

18. Team teaching can facilitate teaching overcrowded classes.					Total
	S/DISAGREE	DISAGREE	NOT SURE	AGREE	S/AGREE
Count	2	5	11	37	40
%	2%	5%	12%	39%	42%

School Organisation for Learning Tables Continued.

School Organisation for Learning Tables.

19. School operations are flexible for interdisciplinary team organization, team teaching and longer blocks of time.					Total
	S/DISAGREE	DISAGREE	NOT SURE	AGREE	S/AGREE
Count	9	11	36	24	11
%	10%	12%	40%	26%	12%

School Organisation for Learning Tables Continued.

School Organisation for Learning Tables.

20. A school day must be organised around 2 blocks of 90 minutes in the morning and 3 periods of 45 minutes in the afternoon.						Total
	S/DISAGREE	DISAGREE	NOT SURE	AGREE	S/AGREE	
Count	2	23	45	19	5	94
%	2%	24%	48%	20%	5%	100%

School Organisation for Learning Tables Continued.

School Organisation for Learning Tables.

28. The whole school must become a learning community.					Total
	DISAGREE	NOT SURE	AGREE	S/AGREE	
Count	1	1	28	67	97
%	1%	1%	29%	69%	100%

Teacher Professional Learning Tables.

21. Your teacher education had focused on teaching through Multiple Intelligences.					Total
	S/DISAGREE	DISAGREE	NOT SURE	AGREE	S/AGREE
Count	4	12	14	42	19
%	4%	13%	15%	46%	21%

Teacher Professional Learning Tables Continued.

Teacher Professional Learning Tables.

22. Teachers must share a repertoire of teaching strategies.				Total
	S/DISAGREE	NOT SURE	AGREE	S/AGREE
Count	2	2	34	58
%	2%	2%	35%	60%

Teacher Professional Learning Tables Continued.

Teacher Professional Learning Tables.

23A.You are familiar with the emerging pedagogies of the 21st century: Collaborative learning.						Total
	DISAGREE	NOT SURE	AGREE	S/AGREE		
Count	8	19	33	27		87
%	9%	22%	38%	31%		100%

Teacher Professional Learning Tables Continued.

Teacher Professional Learning Tables.

23B.You are familiar with the emerging pedagogies of the 21st century: MI/Bloom Planning Matrix.						Total
	S/DISAGREE	DISAGREE	NOT SURE	AGREE	S/AGREE	
Count	1	9	22	27	23	82
%	1%	11%	27%	33%	28%	100%

Teacher Professional Learning Tables Continued.

Teacher Professional Learning Tables.

23C.You are familiar with the emerging pedagogies of the 21st century: Thinking Hats.						Total
	S/DISAGREE	DISAGREE	NOT SURE	AGREE	S/AGREE	
Count	4	8	35	19	15	81
%	5%	10%	43%	23%	19%	100%

Teacher Professional Learning Tables Continued.

Teacher Professional Learning Tables.

23D.You are familiar with the emerging pedagogies of the 21st century: Habits of Mind.						Total
	S/DISAGREE	DISAGREE	NOT SURE	AGREE	S/AGREE	
Count	3	10	37	12	13	75
%	4%	13%	49%	16%	17%	100%

Teacher Professional Learning Tables Continued.

Teacher Professional Learning Tables.

23E.You are familiar with the emerging pedagogies of the 21st century: KWHL (What do I know? Want to know? How? What have I learnt?)						Total
	S/DISAGREE	DISAGREE	NOT SURE	AGREE	S/AGREE	
Count	2	8	23	30	21	84
%	2%	10%	27%	36%	25%	100%

Teacher Professional Learning Tables Continued.

Teacher Professional Learning Tables.

23F.You are familiar with the emerging pedagogies of the 21st century: Interdisciplinarity.						Total
	S/DISAGREE	DISAGREE	NOT SURE	AGREE	S/AGREE	
Count	3	6	31	24	18	82
%	4%	7%	38%	29%	22%	100%

Teacher Professional Learning Tables Continued.

Teacher Professional Learning Tables.

23G.You are familiar with the emerging pedagogies of the 21st century: Thinkers' Keys.						Total
	S/DISAGREE	DISAGREE	NOT SURE	AGREE	S/AGREE	
Count	4	8	41	9	14	76
%	5%	11%	54%	12%	18%	100%

Teacher Professional Learning Tables Continued.

Teacher Professional Learning Tables.

24. Teachers must go through on-going Professional Development Programs for new pedagogical models and practices.				Total
	DISAGREE	AGREE	S/AGREE	
Count	1	23	71	95
%	1%	24%	75%	100%

Teacher Professional Learning Tables Continued.

Teacher Professional Learning Tables.

25. There is no culture of professional development for teachers in Mauritius.						Total
	DISAGREE	NOT SURE	AGREE	S/AGREE		
Count	9	21	28	39		97
%	9%	22%	29%	40%		100%

Teacher Professional Learning Tables Continued.

Teacher Professional Learning Tables.

26. The Professional Development (PD) Program provided by BEC/ACU in 2004, 2005 was highly effective and addressed directly teachers' needs.						Total
	S/DISAGREE	DISAGREE	NOT SURE	AGREE	S/AGREE	
Count	3	11	47	27	3	91
%	3%	12%	52%	30%	3%	100%

Teacher Professional Learning Tables Continued.

Teacher Professional Learning Tables.

27. Since the Professional Development (PD) Program provided by BEC/ACU in 2004, 2005, you have changed your teaching practices and you now teach through the Multiple Intelligences.						Total
	S/DISAGREE	DISAGREE	NOT SURE	AGREE	S/AGREE	
Count	1	17	28	31	9	86
%	1%	20%	33%	36%	10%	100%

Teacher Professional Learning Tables Continued.

Teacher Professional Learning Tables.

31. An independent research body for research to support teaching and learning is important.					Total
	S/DISAGREE	NOT SURE	AGREE	S/AGREE	
Count	1	4	38	53	96
%	1%	4%	40%	55%	100%

Leadership Tables.

29. Your principal is a pedagogical leader and supports change.						Total
	S/DISAGREE	DISAGREE	NOT SURE	AGREE	S/AGREE	
Count	1	2	15	33	43	94
%	1%	2%	16%	35%	46%	100%

Leadership Tables Continued.

Leadership Tables.

30. Your Head of department is a pedagogical leader, gives advice for innovation.						Total
	S/DISAGREE	DISAGREE	NOT SURE	AGREE	S/AGREE	
Count	8	8	14	38	18	86
%	9%	9%	16%	44%	21%	100%

Change Table.

32. You are confident to implement change in your classroom.				Total
	NOT SURE	AGREE	S/AGREE	
Count	12	47	38	97
%	12%	48%	39%	100%

Appendix 25

Collation of Teacher PMI

PMI: Positives

Pedagogies	Number of Responses
Change of pedagogy/ innovative programs/ develop competencies other than academic / variety of learning activities/ different tasks/ hands-on/ experiments/ models/ body language/ visuals/ project work/ research/ display/ learning by playing/ reflective practice/ personal diary/ creative writing/ child-centered/ friendly approach/ quiz tests/ brainstorm/ outside classroom activities/ reading skills/ reading with others/ partner retell/ Constructive learning through video/ literature/ playwriting/ mindmapping/ discussion/ role play/ singing/ story telling/ kinesthetic/ audio-visual/ flash cards/ poetry (1, 2, 3, 4, 8, 10, 11, 12, 13, 15, 20, 28, 29, 30, 31, 35, 36, 38, 40, 46, 47, 49, 52, 59, 61, 62, 63, 64, 81, 84, 85, 86, 88, 90, 91, 92, 94)	37
Cooperative Learning/ Group work (1, 6, 7, 12, 15, 16, 19, 21, 27, 28, 31, 33, 35, 38, 39, 44, 45, 46, 47, 48, 51, 52, 54, 56, 59, 60, 62, 64, 79, 82, 88, 89, 90, 91, 94)	35
Peer teaching (5, 12, 15, 17, 25, 28, 31, 33, 34, 37, 38, 51, 52 60, 62, 67, 73, 76, 79, 82, 84, 88, 89, 90, 96, 97)	26
Multiple Intelligences (6, 8, 10, 11, 14, 90, 91, 95)	8
Reward and praise (10, 11, 19, 78, 85)	5
Teach through Learning styles/ differentiate curriculum/ learner's uniqueness/ needs (90, 94)	2
Remedial work (1)	1
Teaching students how to study (1)	1
Pre-existing knowledge of the student (49)	1
Student's conceptual mind (49)	1
Regular homework/ easy to correct (51)	1
Effective transition between CPE and FI (51)	1
Assess learning styles and teach accordingly (52)	1
Total number of responses	120

Assessment	Number of Responses
No stress/ not exam oriented (43, 51, 93)	3
Different ways of assessment: drama, songs, drawings/ paragraph writing instead of essay writing (21, 26, 48)	3
Summative assessment/ regular test after each chapter (15, 89)	2
Formative assessment (1)	1
Non formal assessment (11)	1
Assessment that suits the students (30)	1
Less competition (86)	1
Bloom's Taxonomy in evaluation: less failure (95)	1
Break down performance- based education (94)	1
Total number of responses	14

Teacher Attitude	Number of Responses
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Innovative and different teaching strategies (39, 42, 58, 71, 77, 90, 93)	7
Teaching less boring/ challenging/ rewarding (32, 50, 54, 57, 59, 93)	6
Team building (teachers)/ teacher collaboration/ sharing new strategies/ facilitators (24, 48, 51, 71, 77, 88)	6
Learn to work with mixed ability (54, 55)	2
Weekly teacher self assessment (49)	1
Total number of responses	22

School Structures and Operations	Number of Responses
'Lighter' curriculum/ revised curriculum (11, 28, 30, 48)	4
New graded syllabus (94)	1
Less students in class, from 40 to 30 (94)	1
Double periods (93)	1
Total number of responses	7

Profile of the Learner	Number of Responses
Socialization/ 'people skills' developed (25, 58, 90, 95)	4
Deep understanding of the subject/ subject more appealing/ greater interest in the subject (35, 51, 95)	3
Motivation of average/low students (34, 44, 51)	3
Student's ownership of their work/ invested in their learning (35, 51)	2
Students' enthusiasm (70, 92)	2
Low achievers participate (31, 66)	2
Quick learners as team leaders (10)	1
Closeness with teachers (92)	1
Develop sense of responsibility (96)	1
Willingness of students to work and improve (71)	1
Total number of responses	20

Vision	Number of Responses
Inclusiveness [not only 'academic', different backgrounds, family; all children have a right to a Catholic schools; teach one and all] (6, 8, 9, 14, 66, 75, 77, 78, 79, 83, 84)	11
Equal chances (low performers, poor) (33, 35, 36, 41, 53, 66, 68, 74, 83)	9
Sharing/ collaboration/ positive interaction between students regardless of aggregates/ backgrounds (4, 27, 32, 44, 50, 65, 67, 79, 82)	9
Individual attention to student's needs/ recognition of individual talents/ interesting environment for the pupils of different abilities/ focus on learners (1, 13, 14, 15, 16, 23, 35, 75)	8
Peer support for self confidence (shy students) (5, 10, 31, 51, 58, 64)	6
Dignity/ second chance/ high self esteem/ praise and encourage weak students/ avoid 'labeling'/ stigma/ sense of belonging (6, 14, 35, 68, 78)	5
Promote good learning atmosphere/ reform our educational system (18, 32, 51)	3
Total Number of Responses	51

PMI: Minus

Profile of the Student	Number of Responses
Students	
Bright students feel left out, at a loss, bored as more time is devoted to low performers; more emphasis on weak students; needs of bright students ignored; discrimination (5, 6, 7, 10, 12, 13, 14, 15, 22, 34, 35, 37, 38, 41, 44, 50, 51, 58, 65, 69, 71, 75, 80, 83, 87, 96, 97)	27
Low performers not always interested in improving or working, discouraged, lazy, shy or wary [family problems, laziness, no intrinsic motivation, unjustified absences, disturb class, violence, restless] (6, 7, 10, 16, 21, 25, 27, 29, 36, 42, 43, 45, 49, 50, 75, 78, 79, 80, 82, 84, 88, 89, 92)	23
Students refuse to work in groups, have always worked alone; bright students do not want to help weak ones/ negative attitude towards cooperative learning; weak ones do the strict minimum; clans (3, 16, 17, 20, 21, 22, 35, 49, 52, 60, 92, 94)	12
Family culture about learning habits; home; socio economic background, poverty (4, 14, 29, 46, 47, 49)	6
Parents uncooperative/ Parents did not respond to pedagogical meeting (11, 14, 49)	3
Inferiority complex of weak students/ Low self esteem; don't know how to express feelings (10, 49)	2
Lack of basic competencies of some students for the syllabus proposed/ Some students have not even mastered the basic concepts (12, 93)	2
Social environment (14, 21)	2
Slow pace (36, 44)	2
Weak pupils prevent the whole class from attaining higher standards (86)	1
Form I students completely disorganized in their behaviour, academic levels, degree of understanding instructions; a lot of time spent in giving instructions (78)	1
Some parents reluctant, prefer homogeneous classes (53)	1
Superiority complex of bright students (10)	1
No motivation for project works (20)	1
Different types of behaviour (29)	1
Students become robots (42)	1
Low achievers are not able to express themselves and the purpose of completing a lesson is defeated (72)	1
Fewer and fewer students turn up every week for the extra classes (78)	1
Total number of responses	88

Learning	Number of Responses
Bulky syllabus/ largely academic (15, 19, 27, 42, 43, 45, 59, 67, 94)	9
Syllabus coverage over the year: choice between explicit understanding of some topics and coverage of syllabus with partial understanding (2, 7, 9, 10, 13, 19, 26)	7
Reduce content of syllabus, good for weak students but loss of time for bright students when doing same thing over and over again, not working to their full capacity (27, 39, 65, 83)	4
Curriculum: a barrier/ no in-depth change for quality/ no change in middle school level program/ not enough extra- curricular activities for students to develop their skills/ no prepared and similar program for all schools (16, 67, 77)	3
Too many subjects at middle level for weak students (77, 81)	2
Because content has been reduced, more topics have to be covered in higher classes (76)	1
Even after reducing workload, % of failure is still the same (65)	1
Total number of responses	27

Language	Number of Responses
Language barrier: English, a foreign language, not a second language/ as a medium of instruction (2, 3, 10, 17, 19, 59)	6
Literacy (technical terms, theory) (59, 84, 92)	3
Medium of instruction never defined (10)	1
No politics for use of Creole (94)	1
Total number of responses	11

Teacher Attitude	Number of Responses
Difficult for teachers [not all students understand what the teachers explain/ what type of work to give to students of different abilities, have to explain the same topic several times/ more attention to weak ones/ preparation of work load/ match teaching style with individual learning styles/ class management/ what level to teach, bright or weak?/ in most cases have to force students to work] (5, 8, 9, 14, 18, 34, 38, 40, 41, 44, 45, 54, 57, 61, 69, 75, 82)	17
Cooperative Learning can be time/ energy consuming (14, 19, 26, 69, 95)	5
Teachers attached to their syllabus which must be completed (92, 93, 96)	3
Less attention to weaker students because of time (57, 58)	2
How to make some chapters and concepts always interesting (25)	1
Loss of time in making students understand as all do not have the same intellectual capacity (75)	1
Difficulty in demonstrating certain experiments (75)	1
Slow learners need special attention (84)	1
Inclusion of Pre-Voc in Form II is disastrous [16 year olds mixing with 12- 13 year olds (94)	1
Teachers handle other problems: psychology (85)	1
Teachers' inability to do things differently to get students' interest [other than academic] (9)	1
No Special Education Needs Awareness [students with learning difficulties, dyslexia] (94)	1
Some teachers not qualified (86)	1
Team teaching; sharing of strategies and material (92)	1
Many teachers not motivated (88)	1
Cooperative learning cannot be done until end of 1 st term assessments (20)	1
Strategies for only auditory intelligence (91)	1
Total number of responses	40

Pathways	Number of Responses
Weak students won't reach SC level (23)	1

Assessment	Number of Responses
Exam oriented/ assessment has not changed/ result- oriented perceptions instead of process- oriented (4, 43, 88, 93)	4
Continuous assessment not well planned (29)	1
Same exams for slow and fast learners (46)	1
Primary education: too exam oriented (96)	1
Weak students won't reach SC level (23)	1
Total number of responses	8

Resources	Number of Responses
Lack of resources: books, CDs, videos, photocopies, computers, overhead projector, slide show (1, 15, 16, 18, 19, 33, 50, 60, 61, 62, 64, 86, 88, 90, 93)	15
Old, traditional books/ do not cater for all needs of students (38, 52, 94)	3
Total number of responses	18

Leadership	Number of Responses
School management: syllabus – centred (86, 88)	2
No common guidelines for all schools (90)	1
Schools not using same syllabus (90)	1
Schools do not share a common curriculum (90)	1
Management refusal for new structures: different seating arrangement, number of periods/ classes per week (90)	1
Management’s attitude to change (90)	1
Total number of responses	7

School Operations and Structures	Number of Responses
Teacher- Student ratio; overcrowded classes (1, 3, 6, 9, 11, 14, 19, 21, 23, 25, 27, 28, 29, 33, 36, 39, 42, 46, 48, 57, 58, 60, 61, 62, 65, 67, 71, 73, 76, 77, 78, 81, 82, 84, 85, 88, 93, 96)	38
Time table/ time constraint/ consuming [e.g. for group work] (1, 3, 9, 15, 18, 19, 27, 28, 35, 36, 40, 41, 42, 46, 47, 48, 92)	17
Infrastructure/ resources do not respond to creative teaching/ lack of infrastructure/ space/ additional classrooms for pooling and remedial work/ classrooms not always appropriate for group work activities (1, 16, 17, 18, 21, 28, 31, 50, 52, 75, 77, 81, 82, 86, 88, 90, 93)	17
Short periods (57, 58, 59, 60, 64, 89, 95, 96)	8
No time to work together with colleagues (32, 47, 48, 52, 62)	5
Noise management as classrooms are not soundproof (31, 33, 43, 50)	4
Not enough time for individual teaching (71, 76, 75)	3
System inherited from the past/ practical logistics (4)	1
Funds for particular pedagogical practice (4)	1
Waste of time [to move in for students to get started] (31)	1
Periods not enough when teaching language (56)	1
Total number of responses	96

Professional Learning	Number of Responses
Teachers have not been prepared to work in 'mixed ability' classes, not trained before implementation/ not all Form I teachers/ teachers participated, attended the PDs not on-going/ don't know about the many teaching strategies/ new trends in the field of education/ teach and research at the same time (8, 18, 30, 52, 66, 71, 74, 80, 82, 86, 90)	11
No follow-up after BEC PDs (29, 90)	2
Not all teachers have implemented changes in classroom practices / How far and how true are teachers really prepared and motivated? (30, 68)	2
No mentoring (82)	1
Mixed ability program not fully worked out before implementation (90)	1
Total number of responses	17

Vision	Number of Responses
Teachers refuse to change teaching style; make as if still working with top students; not persuaded about the change and think the BEC will revert back/ teachers voice out frustration: have chosen to work in 5- star schools (8, 14, 16, 24, 88, 90)	6
Lack of clear vision from leaders; Final goal (9, 23, 29)	3
Not all teachers understand the concept of mixed ability/ teachers do not know where the mixed ability program will lead (30, 90)	2
Streaming still applied; elitist system (93)	1
Social/ Psychological Impact (94)	1
Kids are sacrificed for a moral feel good purpose without their needs identified (94)	1
Lack of support (29)	1
Total Number of Responses	15

Differentiation	Number of Responses
Large gap between top and low performers (9, 14, 17, 18, 19, 87)	6
Diverse abilities not well catered for (75, 76)	2
'All eggs in same basket' (7)	1
Some parents reluctant, prefer homogeneous classes (53)	1
Not working at times when it is too mixed (55)	1
'Mixed ability' teaching in BEC schools has failed (74)	1
Total Number of Responses	12

PMI: Interesting

School Operations	Number of Responses
Reduce number of students in 'mixed ability' classes [a maximum of 25; +/- 20; 25-30] (2, 6, 9, 15, 21, 22, 23, 25, 26, 27, 28, 36, 39, 44, 46, 47, 50, 53, 54, 55, 58, 66, 67, 68, 71, 73, 76, 77, 79, 81, 82, 84, 88, 94, 96, 97)	36
Classrooms [space, furniture display for group work/ flat desks/ adapted to student's age/ soundproof] (4, 6, 21, 31, 43, 60, 66, 67, 82)	9
Team teaching [2 teachers in the same class, at the same time for closer observation of student's personal difficulties, learning style, abilities, attitude towards learning in general and towards specific aspect of learning] (46, 47, 58, 73, 82)	5
More time for a lesson – 1 hr period instead of 40 mins/ flexibility [for teachers to observe each others classes/ mentoring] (5, 44, 58, 82)	4
Lower fliers in smaller groups for core subjects [English, Maths, French] so that they can be more at ease (93)	1
Classroom assistants (21)	1
Interdepartmental sharing (1)	1
Include more practical subjects: drama, music for a better development of learner (96)	1
Cross- curricular classes (29)	1
Facilities to teachers so that they can easily learn, grow, change (30)	1
Management support (30)	1
Department- wise: common curriculum, formative assessment, shared views and suggestions (32)	1
Teachers timetable include specific periods to discuss teaching techniques (33)	1
Reduce workload (38)	1
Extra classes for the very weak (78)	1
Set up of mentoring unit (82)	1
1 st term FI: teaching of literacy and numeracy before teaching any program ((92)	1
Total Number of Responses	68

Learning	Number of Responses
Multiple Intelligences teaching; different techniques (1, 6, 8, 9, 15, 16, 19)	7
Syllabus revision [reduce content; less chapters in 1 st term (2, 13, 17, 25)	4
Change syllabus: too bulky (87, 88, 93)	3
Revisit curriculum (74)	1
Decrease amount of subjects from Form I to Form III (77)	1
Encourage learning rather than teaching a lot (93)	1
Total Number of Responses	17

Resources	Number of Responses
Resources [Interesting videos; books] (4, 6, 15, 16, 19, 88)	6
Resources [teaching materials, aids, overhead projector in computer room, TV and DVD in specialist room] (30, 39, 51)	3
Modern teaching materials (61, 63, 64)	3
Text books (51)	1
Whiteboard (82)	1
Total Number of Responses	14

Pedagogies	Number of Responses
More group work (13, 15, 37, 42, 43, 61, 71, 79)	8
More activities than spoon-feeding teaching i.e. quiz, outings, guided discovery, experiments, games (27, 28, 38, 42)	4
Peer teaching (21, 25, 42)	3
Develop creativity by using drawings or plans; music, dance, drama, sculpture (38, 40, 53)	3
Different learning environments i.e. visuals (26, 38, 59)	3
Projects (4)	1
'Reading' and 'Writing' programs for language classes (1)	1
Interdisciplinary approach (1)	1
Enrichment programs for students performing at high levels (1)	1
For science choose topics that are related to everyday life (17)	1
Improvement of literacy (17)	1
Effective monitoring by teachers for collaborative learning, peer teaching and class discussion (17)	1
Student-centred teaching (40)	1
Balance between academic and non-academic work (41)	1
New teaching style, strategies and methods (42)	1
Total Number of Responses	31

Teacher Professional Learning	Number of Responses
Formation on 'mixed ability' project; ongoing not yearly [how to teach through the Multiple Intelligences/ specific topics/ practical for ICT/ internet/ different teaching strategies/ how to work in teams/ how to deal with specific problems/ class management/ learn 'how to teach'] (1, 3, 6, 29, 30, 35, 42, 46, 47, 48, 51, 68, 74, 75, 81, 86, 88, 90, 91)	19
Weekly teacher meetings for collective work and sharing approach strategies (10, 15, 24)	
Professional pedagogical leader/ specialised bodies/ help from other professionals for pedagogy (16, 83, 85)	3 3
Share ideas, solutions and difficulties with other teachers from different schools (86)	1
Total Number of Responses	26

Vision	Number of Responses
Objective of the BEC clearly defined as far as 'schooling career' of 'low performers' is concerned i.e will they be expected to sit for same academic exams (SC, HSC) or different assessment/ exams for them? (1, 23)	2
Develop consciousness and awareness both for parents and staff of Catholic schools (4)	1
Break down habits, wrong ideas, concepts, rat race at primary level (11)	1
Total Number of Responses	4

Assessment	Number of Responses
Variety of assessment methods [singing/ sports/ drama/ poem- writing/ practical] (8, 25, 28, 45, 74)	5
More attention to class work of each student everyday (13)	1
Continuous assessment (29)	1
Cambridge Exams, a future prospect to be reviewed as Cambridge kills (94)	1
Examination/ Promotion criteria need to be reviewed (94)	1
No tests and exams which nullify the efforts teachers bring into building up the self- confidence and self-esteem of less able students (92)	1
Total Number of Responses	10

Streaming	Number of Responses
Back to streamed classes [learners with same level together/ for the first 30 students / semi- streamed classes in Form II (mixed grades: A+B, B+C, C+D/ a narrower range:15-16; 17- 20] (2, 12, 17, 20, 22, 34, 35, 55, 69, 75, 80, 96, 97)	13
'Mixed ability' school instead of 'mixed ability' class (45, 69)	2
Total Number of Responses	15

Appendix 26

Transcript: A Catholic Leader's Interview

David (Catholic leader): Interview Transcript.

David: OK first I'm going to talk a little bit about the mixed ability background

Researcher: yes

David: first we need to say that all our schools have an educational program rooted in, rooted in let's say, which is already rooted in the mission of all religious institutions which have managed, ... that is all our schools are under the management of religious institutions ... Loreto, inspired by Mary Ward, who was inspired by the Christ, the Gospel and this is fundamental to everything, it's the first inspiration and then came the founders' intuitions ... St John the Baptist, Salesian Christian Brothers, St. Mary's, St. Joseph, La Confiance ... Filles de Marie, a woman from Reunion Island; BPS, a Mauritian, Mrs. Lenferna; St. John Bosco ... so all that ... they are the founders of religious institutions ... and the mixed ability ... but the mixed ability is rooted in the educational program of the Catholic school and it has been like that for many years o.k. what is this project? it's a school open to all, it's a project which confirms, you know the 1997 Vatican Millenium Document, OK this document confirms all the founding intuitions, reasserts all the founding intuitions of our institutions, therefore we were born in the mixed ability but what happened then ... the educational program includes a school open to all with special attention for the poorest, the weakest, for the weakest economically, for the weakest morally etc. and for the very poor and all that o.k. this is in the option

Researcher: yes

David: now what is happening, I think one of the turning points particularly for the secondary is free education in 1977, January 1977, secondary education is free, this means that access to education is open to all, before due to circumstances, education was fee- paying, therefore it was only a category of the middle class let's say that could be educated

Researcher: yes

David: but since January 1977, access is open to all in secondary schools but this access has been made possible but without the infrastructure to back up this access as there were no quality schools and the Government which had decided about this access, the Government had only 4 schools

Researcher: yes

David: 3 boys' and 1 girls', Royal Curepipe, Port- Louis, John Kennedy

Researcher: John Kennedy and QEC, Queen Elizabeth

David: OK they had only 4 colleges and the others were private which were becoming free, therefore total lack of infrastructure, resource ... and consequently how are going to decide between the pupils and tell them who is going to that school, therefore the introduction of ranking, therefore this dates back up to the 80's, o.k. just after free education and the ranking now is influencing, determining in our education system and this since ... I would say since the pre- primary

Researcher: yes

David: OK well because the pre- primary is still not, is still not free ... this is another problem

Researcher: yes

David: therefore this influences the way we see, we do, we act, CPE

Researcher: yes

David: ranking o.k., therefore what is the impact on our colleges, well I'm going to give you an example, La Confiance which has been founded in 70 to educate the lower middle class in Beau- Bassin, Rose- Hill area, it's a population which had migrated from Port-Louis, therefore very mixed OK this means that there were good, average and weak students

Researcher: yes

David: o.k. with free education, what happens? and the ranking, what happens? The profile of students who enroll in your school is the best academically because our school is on the ranked list therefore, you have the best students and since you have the best students, you have the best results and since you have the best results, you attract the best students, therefore ... and everybody is very happy because your school is progressing, you see your results, your % HSC pass go from 50% and in 10, 15 years reach 80 to 90%, you tell yourself, the school is a success, therefore everybody is rewarded by this system, everybody is very happy, we are happy because we have results beyond expectations but there remains in the dark, care for the weakest, for the poorest

Researcher: the poor

David: well we remain in that system, we are also in connivance with that system, this must be said and this fits everybody, everybody is rewarded ... with success and then the other turning point let's say for our schools is the Synod OK the Diocese

Researcher: in 2000

David: initiates the Synod as from 1977, there have been surveys which had been carried before, partial consultations with the Christians ... 1995, there was a survey and in 1996,

the XXX decides that the Diocese as from 1997 will be having a Synod. What is the Synod? The Synod is a popular consultation at all levels with the Christians in the Diocese of Port- Louis, right in the Diocese of Port- Louis. In the Synod, Commissions set up according to the issues raised by grassroots militants if you want, by the Christians, there is an Education Commission, a Social Commission ... Liturgy etc. and the Education Commission uncovers the huge frustration of the Catholics who at the end of the day have no more access to Catholic schools, in a great majority, the Catholic schools are no more accessible to them and this shakes up widely the Diocese because the Diocese, the Diocese leadership is contested by saying that we have sold our schools to the Government and we are taking only the best and we know who are the best in this country, the Asians etc. therefore Catholics and not Catholics who are most in need of our type of education and you can have the documents of the Education Commission at L' Eveche, they will give you the recommendations

Researcher: o.k.

David: and this document finally has been highly enlightened by the 1997 Vatican Third Millennium, it has also largely influenced which direction to take, well and then because the 50% were already existing and we were trying to find a balance in the enrolment of children in our schools by encouraging anyway, by making sure, I was telling you shortly that there were at least in our schools, 50% of Catholics because if we left everything to the Government, in our schools there were 20% of Catholics and we were asking ourselves what was the purpose of being Catholic because there were no more Catholics in our schools, the reason for these 50% since 1995 OK and then therefore the religious criterion is contested in Supreme Court and we went up to the Privy Council 2002 and the Privy Council ruled that we did not have the right to recruit on the criterion of religion o.k. but there are all the conclusions of the Synod

Researcher: which had to be taken into consideration

David: there were all the resolutions of the Synod etc. which had to be considered to manage education and the XXX set up a task force comprised of rectors of colleges, all the rectors ... parents' representatives, teachers' union representatives and the partners of Catholic education to think about how to respond to the Christians' claims, the Synod's requests and therefore it's then that we realized that we were admitting only the best ranked pupils in our schools and therefore with all this we had to somehow find a way out of this ranking system at least as far as the criteria of admission were concerned and then the criterion of mixed ability was proposed therefore I'll explain, that is we would enroll children with lower aggregates, therefore as from 15, 16, 17, 18, OK now to be prepared for this, the introduction of this new criterion in January 2005, therefore there was a need because we find out that our teachers who long ago were used to work with mixed groups, had taken other habits, if you want in the past 20 years

Researcher: yes

David: working with students academically strong, therefore they had to be prepared for a change of mindset, to change the whole pedagogical approach, for some, not a lot of effort was required because they were back to what they already knew but for those who were used to, who were stuck, who knew only this system somehow elitist ... this has claimed a radical change in mindset, therefore some difficulty and reluctance which still exists in our system, o.k. therefore now, what has been set up? There has been the help of Australian University which sent 4 lecturers for 3 days of Professional Development founded on the pedagogy of multiple intelligences, invitational education that is attention to welcome, induction and all that and after these 3 days, there are 400, more than 450 teachers, heads of departments reached by this formation

Researcher: yes

David: ... therefore on a large scale and at the end of these 3 days, each school, each institution established its Action Plan and discussed it with the rector, there are some rectors who have followed, others who have less followed, therefore this first group which was going to work, this first group of teachers which was going to work in January 2005 with the pupils who would be admitted had at least an initial formation, it was not a workshop too much, then in 2005, as this was somehow suggested by Australian University, instead of having all the time people coming from abroad, those who could come, XXX for Science, XXX came for a second batch for FII in September 2005, but the recommendation was, you have your own resources and you need to develop the networking culture therefore what the mixed ability has brought in Catholic schools, the 17, 18 Catholic schools, Ste Marie came after, it was the first time in the history of the Catholic school except maybe a little bit for the Loreto Schools who had, who worked a bit in network but I'm not too sure up to what extent, probably not subject- wise, but well you have a type of, but the other schools have never worked in network ... not even in their own school, some, but definitely not in school network where each school could bring its knowledge, its experiences, this sharing ... well the first time this has started, therefore we had meetings, 2 types, there has been a first series of meetings in 2005, first meeting of all schools with all the teachers that is the teachers in Port- Louis, schools of Port- Louis, Beau- Bassin met and shared difficulties, experiences etc. at all levels, all subjects, all the teachers etc., this happened in all regions, there has been 5 or 6 regions like that ... and then at the same time the rectors met several times at the end of the first term, mid second term, ... after it had started in 2005, rectors have been reflecting, from the feedback in their school, how this was working, therefore there have been evidently lists of positive points and negative points, I don't know if you have had the document, I'm going to hand it to you and from there, we have decided upon some actions in each of our schools, therefore one of the requests that had been made was that we had to proceed subject- wise because each subject has its own requirements, then we have, later in the year ... made up, as from July, August, groups, schools had meetings, now not school- wise but subject- wise that is Science teachers met and also region- wise because we can't have all this in one session, therefore regions 2 and 3 were meeting but all French teachers were meeting and sharing experiences and difficulties which they were having and what followed, therefore it happened end 2005, it has been decided finally in these meetings, subject- wise, it was found that it was important to revise the syllabus, the

syllabus which was being applied in our schools was no more appropriate in mixed ability situations therefore for each subject there are clusters set up and these clusters with the feedback of teachers who meet, these clusters work, are still working, therefore 3 programs, FI syllabus, looking at the elements that must be put in place, what are the essential learning competencies as they are called, we need to make sure that they are acquired by all pupils and how to build up on it after, therefore we have been working for FI and some subjects are going faster than others and are working for FII and within each subject there is a rector who is related to ... well this is somehow where we are up to, now, at the same time, in the big picture the mixed ability brings also a cultural mix which is happening and with the help of competent people in the Diocese, XXX, XXX, XXX, ... we have tried with the rectors to look at the implications of inter cultural and what are the problems this is causing in our schools in relation with the mixed ability, therefore there has been a first reflection, enculturation as a unit in the Masters in Educational Leadership ... there is a second cohort finishing now and as for the rectors this will continue at the end of the year with a 3 days retreat on this topic; and then while the BEC we are telling ourselves that to support effectively the mother tongue issues with the PreVok BEC, therefore the Diocese has provided himself more means with its formation centre ... we also found at this level there were big psychological issues revealed, we were not or a little bit prepared, we were more or less lacking formation for, attention etc. in our schools, therefore there are many certificate courses that we have started for 2006, for psychology, Certificate in Counseling for the teachers, the formation centre has started a Certificate in Counseling to help teachers in our schools to develop counseling units and to be able to listen to etc., a Certificate in Christian Leadership and which is not only for secondary school teachers but also primary school teachers and there is an interaction primary secondary which is very important, ... the Masters in Educational Leadership, there is a second cohort finishing, there is a third cohort soon starting, beginning next year, therefore let's say there is nevertheless some support and in each school, naturally, it varies from school to school according to the school culture, you'll find out in your survey, this will come out, there are schools where the mixed ability forms well part of the culture, in the school organisation, ... there are schools well organized, there are some departments well organized in the school, there are schools where between departments, it's not too bad, ... there are other schools which are more slow and which are at different levels of evolution ... therefore I think that there are schools which are somehow leading, which are really one of their kind with experimentations, therefore now what are the challenges ahead of us, there are many challenges, therefore there is a challenge which must be considered it's ... all the research, documentation related to what is going on, we are very weak in that field, we don't have this culture, it's starting, another formation group is the Action Research group that XXX Alfred had started here with, there are secondary school teachers engaged in there, therefore the idea of Action Research, of documentation is getting in gradually, little by little in our culture, it's taking a bit of time, well we still have big challenges ahead of us ... the challenge of what type of assessment, of exams for our students

Researcher: yes

David: is it compulsory for everyone to continue with SC, HSC, what other type of assessment or other examining body we can access ... City and Guilds for students who would not be taking the pathway ... there is still the big challenge of the school as a learning community ... we are still far from the networking

Researcher: yes

David: which must be strengthened ...

Researcher: ... ongoing professional development of teachers that is constant formation with a lot of support, observation in class and also ... when the lecturers from Australian University came for lectures on multiple intelligences, do you have a feedback that, are there some teachers in class who now teach through the multiple intelligences

David: well another support following Australian University was that we got XXX's books which have been distributed, for this I already have the feedback from teachers who would tell you, some teachers have told me that these have enlightened them when working some elements in class ... as I've been telling you, once more, there has not been any systematic follow-up like the Action Research, in relation to this, it needs to be set up, we need to find someone

Researcher: if the research culture is well structured, this will help a lot

David: absolutely

Researcher: because then vulgarization of research to give strategies to teachers because this is what is somehow coming out, from what I've been told, I've been told that there is no follow-up, they are somehow let down, there is this lack of ongoing Professional Development, this is what they are saying, what teachers are saying

David: yes, OK but I think that one kind of Professional Development is not necessarily, for me my conception of Professional Development, it does not necessarily come from an external provider like Australian University; XXX came back for 2005, for the beginning of the 2006 school year, the teachers who would work in FII, it's a kind of Professional Development for me and maybe some teachers don't realize that, the clusters working, subject-wise is essentially for me also a Professional Development because there is sharing of success, there is sharing

Researcher: of failure

David: of difficulties and to find out solutions ... for me and unfortunately when teachers have probably, it should be verified, what is before we ask them, is there enough PD, we should look first at the conception of Professional Development, let's say if for them Professional Development is a lecture done by one person, effectively, it's not easy to find resource persons and we can't each time ask Australian University

Researcher: I think they are talking of support

David: then ... probably it's lacking, that's for sure but there must also be support at school, through the Heads who are implicated, again this varies from school to school

Researcher: to school

David: there are heads who are very concerned, I've been reading in your paper, you have written you were thinking of an innovative program in your school, it's the work of the Head, you see ... you can't always depend on outsiders, they have their own resources, they have their own solutions and I think finally it's this idea that we should develop

Researcher: yes

David: it's this culture which should be developed in our schools and we should stop saying each time well we don't know, foreigners know better than we do and therefore I can't learn if it's not from someone who comes from abroad

Researcher: very good but the Heads also say that they have not been trained for mixed ability, sometimes they say they can't define it, what is the mixed ability, there has not been any special formation for Heads, has there been any special formation for Heads?

David: they have been invited to all sessions o.k. and unfortunately many Heads did not turn up for many reasons

Researcher: yes

David: there are good, there are not good ones too, but it's very easy to say, I did not get, but they must be asked, were you present for the 3 days, induction ...

Researcher: yes very good

David: they should also be asked that question, well there were teachers who were engaged in the marking of exams at the same time ... but did that teacher ask for information afterwards to know what was done during these 3 days? What documentation was given during these 3 days and what is the thinking behind this? then it's very easy to say ... yes mixed ability I don't know anything, I haven't been given a formation therefore I can't do anything, too easy, I think this sort of persons even if you give them the greatest expert I'm not sure things will change

Researcher: something else which comes to my mind, do you, well you are very implicated in secondary schools, you have a great experience ... you have lived all that, like you have traced the whole history, but do you think that teachers get on with what you intend doing, what you are actually doing

David: your survey would give us some idea, we have not been doing a specific study on that therefore I can't give you a scientific answer, if 20 or 30, 40 or 60% get on, as you've been saying, we don't have yet a definite research structure which needs to be set up, this is for sure and certain

Researcher: for the mixed ability?

David: for the mixed ability, we are setting this up for PreVoc, for PreVoc Bek

Researcher: yes you are well advanced

David: the culture, the research culture, documentation is very weak, this is indisputable

Researcher: but shouldn't it be a priority and it's therefore

David: yes, I've told you a challenge

Researcher: a challenge and therefore the future projects, it should be included in future projects?

David: no, it should be included in existing projects

Researcher: existing OK

David: before looking for other projects again

Researcher: o.k. so you are somehow going now in this direction and you realize that research will help for more successful mixed ability

David: but I'm thinking then but when you talk about research and all that

Researcher: but it must be popularized

David: we need people who are a little bit experienced in research, it's not, you can't ask a first comer ... the XXX asked to document our thing ... I'm asking myself how is he going to start this poor teacher, well a small group had started with XXX, unfortunately she's left and it's a pity ... well it's still to be done again, to find out how to set up documentation techniques

Researcher: ... yes, you've been telling me lately of the number of persons we know who have a doctorate etc. very small, would you of people in Mauritius, I'm talking about the Teacher's College, lecturers who are specialists in mixed ability

David: don't know but as a rule mixed ability is a component of the Teacher's Diploma and the BEd, there are courses at the University of Mauritius or at the Teacher's College, therefore at a pinch, teachers have in their hands a variety, they can't say they have not heard, you understand, again it's this famous cliché that I don't have the solution and I don't ... the solution can only come from abroad and at a pinch this has somehow been

uncovered with the 3 people from Australian University, a model was somehow expected from them but you know very well, Kathleen, in any education literature, there is no model, everyone is experimenting, is looking for information ... sets up networks, work together, this is how you find your way, because at the time with the mixed ability, what is happening, there are so many things changing in society, therefore the mixed ability, we must not focus too much on the mixed ability only because as I've been telling you with counseling, we are raising a lot of issues, violence, suicide, all this for me is a whole, the mixed ability should not be isolated; the Pre Vocational in our classes is still questionable, each school is trying to look for answers. There are some schools, I would tell you, La Confiance is a school of proximity, therefore it has not been difficult

Researcher: therefore all these questions about Pre Vok, we are ahead of all the others, you understand, therefore but well a school like Saint Esprit or Loreto Port Louis which has been somehow isolated from a certain group of persons, they find it definitely more difficult that's for sure but it's interesting and what I consider positive is that teachers inter- colleges are, there are more and more, there are many meetings, you are organizing another meeting ... you are going to have all these teachers from these colleges who will be here ... it's this, Saint Esprit can be questioned by St. Mary's Bambous, St. Esprit Case Noyale in their approach, in the way they tackle problems because they've been used to that, whereas in Case Noyale, it's their reality so I think that the mixed ability has already brought we can say, we must not only look at the negative ... we still have many challenges, you know that education is a permanent challenge but we must also look at whatever new this has brought to our system, unimaginable 5 years ago

Researcher: very good, thank you

David: I don't know if we've covered everything, your questionnaire ...

Researcher: ... you have answered the different questions in a peculiar way

David: ... the greatest impediment which still exists in our schools is the question of leadership, a leadership with a vision, convinced of the intuitions of the educational program of Catholic colleges, that is ...

Researcher: would you be able to talk, do you mean a pedagogical leadership?

David: it's holistic, leadership embraces everything, the school is not only pedagogy, it's everything, it's the culture, it starts with welcoming, you understand, care to the pupil, this is pedagogy, pedagogy is not a technique, how to teach English, French, Mathematics for a problem; the human being is taken in the pedagogy; well there is an educational program, it's our reality, it has been our reality but it's still to be acquired, it's still to be set up, we make 3 steps, we move back 2 paces each time, this is the big question, therefore when you speak of Professional Development I think about the importance of this course, the Masters in Educational Leadership and now somehow in this same perspective at a level, you would say, a bit lower than the Master, we have

started a Certificate in Christian Leadership, therefore it's all this leadership aspect for me which is the problem number 1 that needs to be tackled more and more

Researcher: but let's say what is your vision of a school or a class where one can see that the mixed ability is well implemented, that it's working, it's positive. What is your vision?

David: yes, once more we keep to the word mixed ability, I think we need to move out, my vision is a school where the child feels at ease at his level and that we are able to take him where he is and we are not only busy to fill his head but he is allowed, he is given opportunities to show somehow other talents, this is the educational program of a catholic school that is to have a balanced child, integral.

Researcher: yes, that's good

David: where he is given the opportunity to express himself in sports, in art, in music, in his relationship with others and also spiritually, giving a firm spiritual grounding

Researcher; therefore it's a

David: this is the dream of the educational program

Researcher: therefore it's an inclusive curriculum

David: absolutely, mixed ability is a part of a whole and at a pinch well, its maybe, its fantastic that we have had this intuition of having students of different levels, lets stop speaking of mixed ability, students, a school open to all, what does this mean, it means at all levels and students with different talents

Researcher: yes, because in fact there is a difference, there is...between the two terms, are we speaking of mixed ability or diversity

David; I would prefer that

Researcher: you prefer the term diversity?

David: yes, of course

Researcher: but, a name had to be given, it has been called mixed ability program, mixed ability concept

David: exactly, exactly

Researcher: a name had to be given

David: that's it, but we need to go beyond that

Researcher: but, at the start it's the diversity that's important

David: we need to go beyond that

Researcher: yes

David: we need to go beyond that... I still think that leadership, the formal courses but there is also the reflection of leaders in relation to the modern challenges, sorry...things move on

Researcher: there is the pedagogy of the 21st Century, there is all this to be considered

David: when you think that 5 years ago, all the mobile issue in schools and sms and things was unthinkable, therefore it's going incredibly fast, therefore all this must be considered

Researcher: OK thank you

Appendix 27

Transcript: A Rector's Interview

Chantelle (rector): Interview Transcript

Researcher: What is a successful mixed ability class? How does it look like for you?

Chantelle: Let's take it... 3 points. First of all, anybody would mention to you the infrastructure, that we need a proper infrastructure, and I'm myself thinking not only of having classrooms and study rooms for Form I Green or Orange or whatever but also an activity room, a classroom, traditional classroom and activity room, that's for the infrastructure because if we're going to have more activities we must have another centre for group work for example but there are times when pupils have to be on their own for let's say for reflection, for usual classroom, we can't have always, we can't have activities during the whole day, it's not possible, neither for the kids nor for the teacher and for infrastructure, classrooms, let's say photocopies, also kitchen paper, the materials because we need more visuals etc., etc. and then second point teachers, teachers who have to be trained, teachers who are motivated, teachers who want to work with the kids, mixed ability kids, teachers who are convinced

Researcher: Teachers' attitudes

Chantelle: Yes, yes, exactly and teachers who are prepared for ongoing training whether during school hours or outside school hours, school time/vacation and ongoing training where they will be trained, let's start with say the technical skills if we look at the different skills that we educators have to possess, we see at the base the technical skills we have to speak the same jargon and before we move on to conceptual skills whatever and human skills as well, technical skills and then I was thinking of our teachers for new class skills, management skills, new class management skills because one teacher just told me that she has started having headaches. At first I took it for a joke but she has normally good class management skills, she doesn't have problems with kids but it happened that with a particular Form I she has headaches. I think that we need new skills to manage our class. I was thinking of more drilling, not drilling in lesson but drilling in how to be in class. If we have to move from the classroom to the activity room, we know when to do it, how to do it in less than one minute, no noise, o. k. I think that we must be drilled, that this has to be drilled. It's like in a drama, when we write a drama or when we study, we don't only have the content but we also exit, enter so and so... directions. I think now we have to see our class as a piece of drama, there's a content, there's a message, but we have to have directions well established and for teacher's preparation of lesson plans, therefore we have to be more careful and think each time as the drama rehearsal, it's not we need to experiment in class but before we go in class we have to rehearse it, we have to sit, to visualize how we want our class and then we have the unexpected which will be most welcomed but we must rehearse our class and if the teachers are well trained, technical skills, class management skills etc., there will be unnecessary noise, less stress, less headache, no waste of time, energy. Now thirdly... PSSA, Ministry, less constraints, timetable, lightened load for teachers.

Researcher: So that you can have some flexibility?

Chantelle: Exactly. Flexibility in terms of time-table if I want to give 20 periods instead of 28 periods to my HOD or to any teacher I can't do it; the teacher/ pupil ratio. We are prepared but we have to think about the capita per head grants. We need the money as well to run the school therefore more pupils means more money; staff entitlement, can I have more teachers and have floating ones as well and floating ones who will be the language and maths teachers, good at both you know, to help the teachers with remedial work, that's Ministry, PSSA, therefore more flexibility which we don't have but which we have to fight for. I think for the model we could go on and on for a successful mixed ability but I just wanted to stress these 3 points, infrastructure, teachers and ...

Researcher: There must have been some impact on your school with the implementation of the mixed ability at the middle level, particularly in Form I. Can you talk about these impacts?

Chantelle: Let's say that there has been what we say in French 'une prise de conscience' (awareness), o.k. that we are and we'll be more and more towards mixed ability and there has been 'une prise de conscience' (awareness) in St Pierre I can say and therefore we did give much time to reflection, we did meet, we did meet during the holidays, we met at the beginning of last year for our first staff meeting, therefore we really did a good, a lot of reflection at meetings etc. and we discussed about the content, the curriculum and the assessment. You know we've always been having let's say continuous assessment 1st Term, 2nd Term, 3rd Term exam and then pupils are promoted to a higher form on basis of 3rd Term exam. It was quite summative therefore we wanted to change, we were going to change and when last year we started mixed ability we said it was time to change therefore now it's less summative with a certain let's say % 1st Term, 2nd Term and 3rd Term and more continuous assessment. That was quite important. And we have a new set-up in Form I in terms of desks.

Researcher: Tables?

Chantelle: You just have one in front of you.

Researcher: Trapezium form.

Chantelle: Trapezium form for group work and new set-up, arrangement, classroom arrangement and then the Form I teachers since last year, teachers choose to be in Form I, it's not imposed o. k. they choose to be in Form I and I can tell you that there are senior teachers as well as..... Teachers, HODs or simple teachers who chose to work in Form I and they're used to meet other people who come to discuss mixed ability. They know that they have to go on training. They are prepared to go on training. They are let's say, I personally I'm on a committee for curriculum, for one curriculum- English, French and Social Studies therefore since I'm on the committee, my teachers are involved therefore we did work the content, a new content, a new curriculum for French in Form I, for English and Social Studies as well and I think that I can say the main device that we are changing.

Researcher: There is we can say a culture of change?

Chantelle: Yes, we cannot do otherwise, that's my point of view.

Researcher: And what about the regular meetings with other rectors or the BEC, can you give a feed-back?

Chantelle: We do meet with other principals, rectors and we do meet according to let's say level. We have different meetings, we have meetings at Loreto level and we have meetings at RCSSU level and meeting at BEC level.

Researcher: The RCSSU is...

Chantelle: Is the union of all rectors of secondary schools.

Researcher: You mean only Catholic schools?

Chantelle: Normally, it should be Catholic and Confessional. Yes we do meet, we do discuss of what we do in our own schools at Loreto levels, we normally have a sort of 'bilan' (assessment) at the end of the year OK or whenever we need to meet specially when we have reports from the BEC that not all Loretos are working with mixed ability, that in Form II, some of us are going back to streaming, therefore there is a report from BEC to Mother Provincial who asked for a meeting and listened to us, why, the why of, more, let's say the difficulties, we stress rather the difficulties of having mixed ability o.k. and as for BEC whenever there is training for teachers, we are informed, we do participate and well I was talking about workshop, about the committee for curriculum, when we were asked to have a look at the curriculum for Form I French it was the BEC who asked the RCSSU to have a committee on the curriculum and then the RCSSU decided on different sub committees therefore four rectors did meet for the whole thing of curriculum.

Researcher: Only four rectors?

Chantelle: In sub committees to discuss curriculum and then we found that it was really impossible for the four of us, therefore we did asked, we did prepare a questionnaire for teachers, all teachers on what is your program in Form I, for your subject matter, what is your program and program means program that you submitted to the PSSA, because you normally do what you submit what you say you do, therefore what's your program? 2nd column, observation and 3rd column, propositions and then we had all these papers from different Confessional schools and we decided the four of us that we are going to work in clusters, this is how I found myself in English, French and Social Studies and we did call after teachers to meet on the committee of English, French and Social Studies and then to try to have a look at all that have been sent and try to sort of synthesis and eventually a proposed curriculum.

Researcher: What I understand is that you've made cluster groups?

Chantelle: Yes.

Researcher: One cluster for one particular subject...

Chantelle: Yes

Researcher: And this cluster group is working on a program...

Chantelle: Yes

Researcher: For let's say French...

Chantelle: French

Researcher: English

Chantelle: English

Researcher: Maths

Chantelle: Maths

Researcher: Science

Chantelle: The others etc.

Researcher: But how do you think that you can move this together to build up a curriculum because, do you understand what I am saying, there is a distinction between a curriculum and a program for each subject.

Chantelle: Exactly, that's different, that's different, yes exactly we always thought that we were, that we did have a curriculum whereas we have a syllabus OK therefore what we've already done, we've already met with the Form I teachers, we've already gone through all their proposals etc., etc. and what BEC has actually is a proposed program for Form I, let's say French or English or Social Studies. Now when I was given the job of you know the committee I was thinking of curriculum, of content and methods, methodology. I could not see them separately and then the colleagues said ... content is huge, let's stick to content but what we have to do now I think is to see the methodology, strategies o.k. you don't propose to say OK we are going to reduce let's say passive voice, we are not going to have passive voice in Form I, we're going to have this and that, that's good o.k. but how are we going to introduce, what are the new strategies etc., etc. therefore we have to move on to methodology and if we finish with content and methodology Form I and then we do the same thing for Form II and propose our it should be experimented as well. You can't just propose Year 1 and at the end of Year III...OK

therefore but at the same time it's BEC o.k. the assignment, there are ... some kind of follow-up I would like to have, I can't OK I must report to BEC and BEC must contact the other rectors and it takes time and we are not going very fast, that's a problem.

Researcher: So what do you think is the greatest difficulty, the greatest impediment?

Chantelle: The greatest impediment, I think, is that I'm thinking of at the end we want to bring the child in FI point A to point B o.k. we are thinking of new curriculum and new methods but what about exams? I think that so far we do not do everything in terms of exams. We've started reflecting at Loreto level but I know at BEC level not very much because we are in Year 2, next year will be Year 3 mixed ability and then teachers will ask me what do we do in Form IV, are we going to train because our pupils have to be trained for the proper base. Therefore I don't see much coming as far as exams are concerned I'm speaking of should we have other examining bodies? No, not ... should we not have the same examining bodies Cambridge but have other subjects, additional ones? Should we not keep the same body more or less the same subjects because if we had subjects too many what about the time table, 40 minutes, so many periods a week, 8-30 to 2-30. Therefore, we keep the same examining, we keep more or less the same subjects but we should fight for different contents examined. What I mean, let's say for languages the teachers, surely would have want them to be functional, they want language to be functional, that's good to be able to understand, to read, to write, to speak the basic skills, now we should more from functional only to correct English ... Where does this lead? Therefore it is functional yes but it should be correct, that's one step further and then we can move on to good English, creative, good writers etc. We can't have mixed ability and then work with different methods, group work and so on and so forth and then after 5 years the same paper, That's a problem and which has not been discussed, did not give much time, much energy, you know to this. What are exams at the end of 3 years, at the end of 5 years? OK and for science 1st understand the world we live in, that could be o.k. Let's assess the kids on this and then those who want to do science up to Form V and then who are going to do medicine engineering, cater for all these I was speaking of. Home Economics we can't continue with that load of theory we can't. When we introduced Home Economics in St. Pierre, we were thinking of the low achievers, right and then we said OK you bright pupils you can choose because, we know that you are going to do design or whatever nutritionist etc. etc. but our poor low achievers they are very good at practical but they can't cope with the theory. Therefore Cambridge should give more, the weightage must change for these type of pupils and for let's say this offer type if pupil. Therefore in St. Pierre we can't have practicals assessed, Art as usual, Home Economics where we can have ... practicals assessed 60%.

Researcher: Otherwise

Then he will have to repeat Form I and repeat Form II and ... that's for exams impediment, exams, we are trying to give you know for our papers 40% for anybody should be able to answer the first part of the test paper, whether in Maths, Science, English and French as far as St. Pierre is concerned but what about next year, what about three years time. I think I myself, I'm worried you know, because I want to know where

I'm going, I want to tell my teachers we know where we are going, tell pupils, tell pupils, and parents to whom we are accountable.

Researcher: Yes

Chantelle: OK.

Researcher: Yes, so and what... if you have a vision, you have a strategic planning and where does the Professional Development Program fit in there and what do you think is necessary?

Chantelle: We must for the Professional Development Program, it's for teachers OK, now it's known that's it's important, first of all. As I mentioned earlier, all teachers should have the necessary technical skills. They got it, already on their first degree, which has nothing to do o.k. and when we are going to be on the same length wave as far as technical skills are concerned then we have to go on an ongoing Professional Development program, ongoing and we, the Professional Development program must present different pedagogies, teachers must be presented with different pedagogies which would motivate them in the first place. They will be motivated which will give them self confidence because what I discussed with my teachers about mixed ability the first thing which comes is the low esteem of pupils, labeling "machin" (thing) etc. but we are going to, we'll be able to bring self- esteem of pupils only if we are self- confident but teachers when they are faced with mixed ability they say oh! What do we do? We're not trained; we can't cope; we have headaches but therefore if they are presented with different ways, different strategies, they will feel more confident and feeling more confident will help them to go on and to bring innovative strategies.

Researcher: Yes and who do you think should provide this Professional Development Program?

Chantelle: Now, you said Professional, let's say we already had Australian University coming, most welcome, but Australian University, we can't even say once a year, OK it costs a lot of money. Now we should look at the people around us when we have people coming from other countries, that's fine but we do have professionals here, we just have to use these people to call these people o.k sharing is part of development. Therefore when we had first ACU meeting some 2 years ago we were asked to ... not all, I was asked to chair a sort of workshop on French, it was not difficult because I had already started with the staff. That was a way of meeting French teachers. They were happy to come here. They were happy when they left but are still waiting for the follow- up o.k. we did have workshops led by rector, led by people: XXX who has something to give always and led by XXX who came back for Science and XXX, the Loreto Coordinator. I just give a little title just to see that who are the people who can help when you don't have people coming, professional from abroad: the Loreto Coordinator, a rector, XXX who is well known you know in the sector.

Researcher: But who is gone now

Chantelle: Who's gone now, how come! And I think that we, can we, must start by asking, by meeting people and tell them about our concerns and how they can help. Teacher's College, we should keep you know a contact and I'll say direct one with Teacher's College because Teacher's College formed our teachers, therefore trained our teachers and then it's a stop.

Researcher: But don't you think that there should be structures, build up a unit which is only for ongoing Professional...

Chantelle: Yes, that would be great

Researcher: and that would be a resource centre at the same time?

Chantelle: We are looking for a resource centre, you are right for a resource centre, you are right and sometimes I want to tell Mother Provincial, let's do it the Loretos.

Researcher: And so what is preventing it, lack of money, lack of funds?

Chantelle: I don't think that they tell you even if it's hard to find money but it's not impossible you find money through perhaps people, organizations who believe in the project; the main thing you can have the money, you can have the people if you have the project well presented, well structured, well thought about. You do the project, you think, you do all the thinking and then you go with the project and they can see what your agenda, your objectives and they can see how time... ongoing Professional Development, now not only we have to train our teachers but we must have to train the trainers. Should by starting training trainers.

Researcher: Looking for trainers

Chantelle: Looking for trainers, give training to some because if others are OK to start with and...

Researcher: Now don't you think that this training unit, whatever you call, call it well you should be training teachers but don't you think that Heads of Department, rectors, all these categories of people should have courses designed for them?

Chantelle: Exactly. No we are not using them.

Researcher: No

Chantelle: In the real sense, they are not...

Researcher: Fully optimised

Chantelle: Yes, because one thing which we noticed was that we had representatives of staff on the endless list for the choice of so what, texts etc. and when we were looking for people, resource persons for curriculum who is going to chair the English committee, the French committee etc. We said why should we not use those people and they were you know let's say astonished, ... when you call them, they said how come that you think of us. I said but you are on the list, you represent your school, you've never been asked to do something. There's a list of teachers representing at the PSSA (Private School Secondary Authority), at MES. But they've never, never, never, never call these people. Therefore there are people who are willing to ... we know rectors ... and I was thinking of let's say Australian University can't come every year, but Australian University does still come for MEd

Researcher: Yes

Chantelle: Now, why don't we look at these people who've finished MEd, those willing to do something because we can still be in contact through email to our lecturers OK. we can still ask for handouts and look and try to meet. What's the point of having done the MEd?

Researcher: Yes

Chantelle: Therefore it's true that we have resource persons and they are not being properly used.

Researcher: And they can be the link between the tertiary level where there is this research culture and with the secondary schools.

Chantelle: Exactly, exactly and it's, it's, it's quite time that we don't have this. We should cultivate this.

Researcher: You mean the research culture?

Chantelle: The research culture, yes, we have to cultivate it.

Researcher: Yes, so what in an ideal world, would be the features?

Chantelle: ... but in an ideal world, for a model, I think it's, we have to be professionals: the rectors, the HoDs, the teachers, the librarians.

Researcher: And at the top?

Chantelle: And mostly at the top, and they have, we have to anticipate, we have to be on top, a few steps

Researcher & Chantelle: Ahead

Researcher: A vision, you mean?

Chantelle: Yeah, we have to , we say that we live in a global village, what's that?

Researcher: Or the world class...

Chantelle: World class education, what I wanted to say how I reacted when we were called to have mixed ability, nothing new for us at St. Pierre, nothing new,... we were used to work with mixed ability.

Researcher: That's what I've been able to understand too?

Chantelle: But let's say that now we are more aware of what is required, o.k all the requirements to ... I told that it's a "prise de conscience" that really, that is our reality now OK there's nothing new except perhaps that our low achievers are weaker and our supposedly good ones aren't that good. Therefore that's one point. Secondly for St. Pierre with regionalization, we are having pupils coming from a specific area, east and that's a different culture, even if we are talking about pedagogies, mixed ability is a package. For BEC, for Catholic schools to give access to their schools to 15 aggregate and be happy is not enough, that's just the beginning of the race. Therefore these pupils come to us with their biography and we have no contact with primary, no "dossier" (personal file) from primary. These pupils have been , have been, have gone through one exam, a common exam fro bright, for low, for middle and these people, these pupils have been labeled 15, 16, 17, 18 as from a, one exam, ... Therefore we have to look at that "un nouveau regard" (a new way to look at), "il y a un changement de regard, il y a un nouveau regard" (there is a change in the way we look, a new way to look at) but we need help if we want to do well.

Researcher: Yes

Chantelle: Therefore... effective... we are aware of difficulties, yes, that we try to reflect and find solutions and experiment things, little ones in our school and also we have to have good will, motivation and enthusiasm and you know we need because we have to run a long race, marathon, it's not a sprint, that will be the race, it's a marathon and how are we going to do this and if the teachers are not supported by the Head and the Head by Top Management, we can say parents, parents are important but we have no control on them, we can't compel them.

Researcher: You are right yes... we can't decide for them also

Chantelle: They are important partners but when we are meeting, a round table, let's say, they can't, they're not among the deciders and if we are at a loss we want the sector to set a boundary, how ... Therefore for effective what I'm going to do, I'll say my concerns to BEC, that at the same time we have to run 2 races. I'm just using this image Kathleen, sports, 100ms and a marathon and short term and long term meetings. When we meet with BEC, with others it's long term most time we are thinking what would be effective,

an effective model what we could but time goes. The rector is accountable to the parents, the teachers are accountable to the pupils and parents and so. Therefore why discussing with BEC and other colleagues from different schools we have to find ways and means in our own school. Therefore there are things that we are doing that we are not, which are not necessarily being discussed or I'm sorry but we can't do otherwise.

Researcher: There are urgent matters

Chantelle: There are urgent matters

Researcher: There are urgent matters for schools

Chantelle: Therefore we must know...

Researcher: What are their guidelines?

Chantelle: Exactly. Therefore we can take 1 or 2 or say next week and then report to them and say you know we did this and that, it didn't work, what do we do and so on. It's like you know going back from and to, from and to, not one we meet and then and then

Appendix 28

**Transcript: A Heads' of Department Focus Group
Interview**

Ste Bernadette Focus Group: Interview Transcript

Researcher: OK so what would you consider, for you what is a successful mixed ability class, what does it look like?

Roy: well first of all I think we'll have to start by asking ourselves the question what is ability, we are talking of mixed ability compared to ability teaching, the question ability itself gives us several definitions and to start I'd like to say that when we talk of ability everybody is born with an ability so basically mixed ability we are already in the context of a mixed ability and ability is something which is not static, it's dynamic, it changes, it evolves, it adapts according to circumstances and situations, all sorts of situations and all sorts of circumstances and if we start by saying are we or is mixed ability class successful, I have been teaching for 30 years and I can already say that for 30 years, perhaps the word has not been used as it is being used actually, we have been teaching mixed ability, we have teaching mixed ability with the means and resources we had and God knows how far these resources and means were very limited and are still limited, now there is a lot of interpretation which has to be given to that ability and I think the first thing is we have to agree on what is ability, now we have been looking at the problem with my colleagues here on whether mixed ability has been successful, without any doubt it has been a success for us because

Researcher: you mean in these 2 years

Roy: not these 2 years, I mean those past years we have been teaching

Researcher: OK

Roy: students of different abilities, of different age group, of different social backgrounds, of different community, of different religion and we can say that we have been successful because the yard stick is the result that we produce at the end of either 5 years' school or 7 years' schooling at School Certificate and Higher School Certificate

Researcher: so you are result oriented

Roy: yes

Researcher: performance

Roy: yes, we have to be result oriented, performance oriented because this is the target which has been imposed on us for years and years, whenever somebody joins the secondary school what is the objective? what is the target? the target is that that student should go through his School Certificate examination or the Higher School Certificate examination and get a passport for future studies or work, this is the end for them, how we go there is something totally different OK so whatever we say the context in Mauritius hasn't changed and it is still the same being exposed to what is going on in the world around us, being exposed to the type of student we are having and so on there are a

lot of theories for education for teaching, the learning teaching process but as far as this country is concerned the policy is still the same, 30 years or 40 years when I was at school, the target was School Certificate, Higher School Certificate, then you get your passport for work or university, actually the objective is still the same, we still have that system where the students have to go through the SC or the Higher School Certificate

Researcher: yes, so your focus is on academic results, you're not targeting other skills

Roy: part of it, part of it, the target of parents as well, the target of parents also is my child has to go through this School Certificate and succeed, he has to get a good grade and he could continue to Higher School Certificate because he needs that Higher School Certificate either to go on the labour market or for further studies, this is the basic requirement, so what has happened is that teacher, education itself in that country has been a sort of closed, in a sort of, let us say ghetto where you do whatever you want, now we are talking about the child development, intellectual development, but what has happened when we look at the system, it starts at primary level what is the topic? CPE, you have no CPE, you don't go to secondary school, so every parent, there is the pressure of society, there is the pressure of government, there is the pressure from parents, we have to work according to what they want, they want the child to go through the CPE which is the Certificate of Primary Education, then there is a second target, is you have to succeed your secondary level, if not you're left down by the system, if you take the statistics, take the number of students joining the primary school, the number of students who go through that examination, let us say 33,000 approximately per year, how many of them reach School Certificate, how many of them succeed and the end product, you can start with let us say 200, 000 students at primary school and you are finishing with 4,000, 5,000 passing the School Certificate, this is the system

Researcher: do you agree?

Tony: there is one thing I can't understand when my colleague is saying that the mixed ability project has been successful here at St. Mary's College, right, we all know that our colleagues working in FI are having lot of problems, I can't agree with my colleague when he is saying that it has been a very successful project at St. Mary's College, OK

Roy: that's a question of interpretation, I would reinforce what I said if you just take the results produced by the school

Researcher: yea but for these last 2 years, you're talking about FI teachers having problems, what problems are they, are they?

Roy: I'm not talking of these last 2 years

Researcher: yes

Roy: because we haven't seen the result yet

Researcher: but still what problems are you facing

Roy: now this is going to be something totally different, we are facing a lot of problems OK first of all the mixed ability teaching has not been properly defined as it is being said somewhere there is an mixed program, nobody has seen that program, we have heard about that program, there has been no proper guideline, no proper, what would I say, training, in spite of the fact that I don't like that word training, there has been no proper communication, that is nobody knows exactly what are we looking for, taking mixed ability as it is being used or taught in U.K. compared to France, to USA or even to Australia, it's totally different, the context is totally different

Researcher: yes and in January, the XXX, he met teachers in Loreto Curepipe and he tried to give a sort of definition of mixed ability by saying it's a, it's based on human pedagogy, have you heard about that, were you there?

Roy: yes

Charles: yea

Researcher: so what do you think about this

Roy: now this is a theory, but this is a theory

Researcher: yes

Charles: but in the end you know, everybody wants to succeed with very good results, a very good SC, very good HSC and whenever you try to deviate from that academic principles, they want only to learn to pass examinations, they are not so much interested in other things, this is the difficulty because

Researcher: yea but still, still you've got these problems you said in these past 2 years, so what problems do you have, what problems do you know teachers in your department are having

Roy: all right first of all

Researcher: you need to ...

Roy: first of all what we have to say is the teaching structure has not changed, is still the same, you have been teaching in the St. Mary's College, I don't know when was that, some 15 years back?

Researcher: yes

Roy: approximate

Researcher: most

Roy: more or less

Researcher: more, more

Roy: if you just would take the pain in getting in one of those classes and you will see that it is still the same

Charles: same furniture, same table, same desks and same blackboard and even in worse condition

Roy: we start by saying what we have as infrastructure, a change in methodology, a change in teaching, a change in the philosophy of let us say education should be followed by a lot of other factors, first of all you have to get the parents to accept the idea, what it means, what it implies, teachers who are informed, should be properly armed OK in the broadest sense of the word, the facilities, the infrastructure that we have should be modified and changed to adapt to those new ... the point I'm trying to make is I have been a student here, that was in 67, 67 to now we are talking of 40 years, St. Mary's College is still the same ..., what has changed, there have been changes but these are not been changes suitable for changing teaching philosophies and policies, we are still in that relationship of each student with his chair and table, the teacher in front, chalk blackboard, we're still in that context and yet the school has generations and generations of pupils, right the first problem is, I've said there has to be a thorough change, but change implies ... and there is nobody

Researcher: yes but still you are Heads of department

Roy, Charles: yes

Researcher: and do you see yourself as initiators of change

Roy: this is one of your, your second question

Tony: yes

Researcher: yes, so we move to the second one

Roy: I'll just mention about regarding these problems, so the first problem is infrastructure, the second problem is the number of pupils, we are still in classes of 40, 42 students, how can be mixed ability be taught in such circumstances? We, as I said, are still, with the teacher with a chalk on the blackboard, the resources that we have are very limited, we have to fight for a photocopy, we don't have the means, all right and as I said if everything does not move together how do you want to succeed in something which as I've said from the very beginning, mixed ability

Researcher: is still not defined

Roy: we have been doing it in spite of the fact we didn't say we are doing mixed ability for years we have been in a class where we have got each student is an ability in himself so we have been dealing with mixed ability all right but we haven't named it because there is the opposition streaming. Ability grouping, mixed ability grouping and so on and so on but for mixed ability to function it should be accompanied with a series of measures and it should be a general principle where all the schools belonging to the Roman Catholic or not should move in the same direction, we can't have schools moving in this direction, other schools moving in the other direction, this is the specificity of ... and at a certain time we just ask ourselves the question whether it is good or not, the results are here, people are happy, parents are happy,

Researcher: that's it

Roy: that's it this is the philosophy ...

Researcher: yes, so let's move to how you see yourself as an initiator of school change for the mixed ability program to be successfully implemented

Tony: my friends and I we discussed about the word, the use of the word initiator, are we already being ... the initiators, when last year in January 2005, we were asked simply to cope with this concept of mixed ability we just had to implement, implement something that has been decided, right, so instead of seeing ourselves as initiators, simply we see ourselves as implementing ...

Roy: executors

Tony: executors

Roy: we just execute

Tony: of a project which as mentioned by, stated by my friends, my friend, it's not very clear in our minds, what this is really about or when you mention about the PD, the Professional Development program what is it all about? well, concerning PD, I myself I, I know, I was invited to a number of meetings where we met, lecturers from the Australian University, it was informative but is it going to be sufficient for us as HoDs or as teachers to really cope with this new situation

Roy: we should have perhaps that we are, we have, because we have been given one of the task is to implement mixed ability grouping last year, we had to initiate and take measures and steps to implement the philosophy or the idea but according to the means and the level, at our level and the means we have for instance we had to review

Charles: the syllabus

Roy: the whole workload, the scheme of work to be able to cope because this scheme of work had already been prepared, was prepared one year before for next year

Charles: it was used for generations here

Researcher: yea, so each year, you would use the same

Charles: the same thing

Roy: no, with modifications

Researcher: some modifications

Charles: according to the syllabus changes but to have done specifically for these last 2 years, so we have diluted the syllabus, we have reduced the amount of the work, the program, the syllabus, something to 60 to 80% of what we used to do in the past, so we concentrate more

Researcher: you mean you cut 60 to 80%?

Charles: no, no it is 60 to 80% of what we ...

Roy: we have cut 20 to 25%

Charles: 20 to 25% and ... so we have reduced the syllabus, decreased work load and at the same time we have redefined the objectives clearly, we have redefined the objective of each topic of the syllabus clearly so that we have more time to devote to revision, to review everything in class

Roy: and also we have to add this that the secondary scheme of work from Forms I to V were established, I think it's for all departments as per the requirements of Cambridge, Cambridge has already set the target, these are the topics which have to be covered, so what we do is plan the work in such a way that when that student reaches that FV level, he has been armed to go

Researcher: and sit for the exams

Roy: sit for the exams, now we are trying a new experiment, we have cut down the syllabus by 15%, we have reduced the level, the setting out of papers, the type of question papers for internal examination, term examinations have been changed, the system of marking has been changed that is instead of going upwards, it has been brought downwards just to cater for those students who are having difficulty all right, so there are implementations which are being made the result nobody knows but we will know the results when the Rector will call us and say we have 70% failure in SC, can you account for that, then we'll have to sit down and review the whole thing and discuss the whole thing but at the end of the day there will 5 generations of students who would have gone through that

Researcher; yes, I'm going to ask you something about the workload you have reduced, have you been thinking about infusing thinking skills which means yes you cut the

workload by 20%, there are some chapters maybe that you have put aside to say it's not for this year

Charles: we'll do it later

R: later OK but still you would need to replace this 20% by something else to arm these students afterwards to sit for SC and HSC, so have you been thinking about the thinking skills that is you move

Roy: cognitive learning

Researcher: yes, applying, designing, creating and all that, so are you able, have you been planning for that so that teachers can move to the 6 levels of Bloom's taxonomy?

Roy: no

Researcher: no

Tony: no

Researcher: no, alright, so for you what is this, you have been talking about all these problems that you've been having but what is the greatest impediment for the success of mixed ability classroom? so maybe each one of you could tell what do you think is the greatest impediment?

Tony: I would mention first class size, I mean the number of students in the classroom, for the time being it's about, it amounts to 40

Charles: 40 students

Researcher: how many classes, you've got, 3 classes of 40

B, Roy: yes

Tony: I

Roy: and FII and FIII

Tony: my question is how can a teacher cater for all the needs of all students of various intelligences? will he be able to have what we call this personal life approach towards each one of them? will we be able to develop those thinking, those cognitive skills and other skills which will help him in 4 or 5 years later, this is a problem

Roy: and also you could add perhaps 40 students divided into groups of 5

Researcher: no space

Roy: you have 8 groups

Researcher: yes

Roy: of 5 students

Researcher: for one teacher

Roy: how do you manage, for one teacher, how do you manage?

Researcher: and how long is the period?

Roy: 40 minutes

Charles: 40, 45 minutes

Researcher: so do you have any problem of space?

Roy: yea

Researcher: not enough classrooms?

Charles: ... not only that you have 40 students but the size of the classroom is such that you hardly you can move between the desks

Researcher: yes, between the eight groups

Charles: between the eight groups

Researcher: you can hardly move

Charles: even if you, now actually you place them in rows and columns, you can't move like that, imagine you put them in circles or in any other display, it will be difficult to move around for us

Researcher: so does it mean that you don't have enough classrooms?

Roy: yes, space

Tony: space

Roy: in spite the fact that we have a big yard

Charles: we don't have enough space

Roy: and all the facilities for sports,

Charles: working space

Roy: the working space is limited

Charles: the working space is limited, this is one

Researcher: and for you G so what is the greatest impediment, so for you, sorry space

Charles: space, space, but over and above, the greatest impediment according to me is teacher's reluctance to change

Researcher: the attitude

Charles: attitude, changing attitude is not something easy and over days, it takes years, I don't know how long it will take but this is the greatest difficulty and over and above we don't have the proper pedagogical training to do

Researcher: the support

Charles: support

Roy: I think what my colleague means we recruit teachers and the teachers who are being recruited, they are not to be blamed, right they have finished their studies, be it Higher School Certificate or a Teacher's Diploma or

Researcher: a degree holder

Roy: a degree which is purely academic but taking somebody who has got a degree and just throwing that person in a classroom is something totally different

Researcher: and you as a Head of Department, do you have a mentoring program

Roy: no ... in this particular school no, we don't have a mentoring program, why, because first of all as I have said whenever a teacher is recruited how he is recruited or she is recruited, criteria and so on and so on we are not informed about it, we just have a person in the department but we discover teaching needs a lot of practice, needs a lot of knowledge and ... you can have a PHd but you can be a very bad teacher very often that's the case we have students or people who come from university but no experience at all and who are just in front of a situation where they will have to cope, the result is that I have been taught in a rigid academic way and I'll use the same because I succeeded, they will have to succeed, success is as far as this country, academic success as I mentioned before this is the most important thing in spite of the fact that we do devote some time and we do say we'll have to develop the other skills and abilities of a human being

Researcher: yes

Roy: all right

Charles: OK as far as mentoring is concerned we do it but we don't have that enough time to do it as Head of Department we do it in some unofficial way by sitting for lunch

Researcher: yes

Charles: we can talk to a colleague, guide him, talk about it

Researcher: to help

Charles: help but it is not something organized, official recognized by the administration that we have on our timetable or the board in such periods in such days we have to go there, it's not something like that, organized, it's time constraint

Roy: when a teacher, when a teacher who is Head of Department is working 28 to 29 periods per week

Researcher: per week and all the corrections and administrative work, form teacher

Charles: and on top of that you have to do replacement also

Researcher: yes

Charles: I myself I planned so many times, I told, even I told my junior colleagues I'm going to come to class, I've visited a few classes, I told them OK I'm going to come tomorrow so what unfortunately when I come next day

Researcher: you are on replacement

Charles: replacement, you have to cancel it, then all the planning goes you can't, you can't do it

Researcher: OK., now let's say that you've got your mixed ability classroom, that this is the new vision of Catholic schools, I don't think they will be stepping back on that, this is the new direction, the mixed ability is at its early stages and you as Head of Department, what do you think would be the features, can you identify the areas that you would say yes we need these features for this classroom to be an ideal mixed ability classroom, so what would you like, OK let's say we've got a model, we've got a framework, what do we need as features for it to be successful, what do you think?

Roy: having an idea or going on a project, everybody has the vision, once you get that vision, I have to ask myself, do I have the means to realize that vision, the policy as far as I'm concerned is putting the ox behind the cart, this is in fact suddenly OK mixed ability, what does it imply? what will it involve? what should we give our teachers? what are the facilities we should give to our schools? how are we going to implement? what is required? has there been a proper study, a proper evaluation of all those things? I don't

know, we have asked to implement the mixed ability with the meager means we have and we are struggling

Reseracher: so for you financial constraints, money, so you need means, you need money

Roy: just to give you an example, to morrow, let's say we succeed in having a class of 22 students, does that mean that I'll be able to implement a mixed ability teaching, not necessarily

Tony: it's still the first step

Researcher: OK so one feature for you which is important is the number of students in the classroom

Tony: the number of students

Roy: do we have a resource center

Researcher: OK so now we are moving to resources

Roy: yea, do we have a resource center, where do we pick up our resources, we could come with resources, do we have the back up, the administrative back up, I need photocopies, I have to wait one week and I have to explain why I need these photocopies, I need material, very often you go and buy your material, it's your subject, you teach the subject, you buy it, you know the salary of a Mauritian teacher, so you understand what I mean, all right even then if we are to implement what are the features of this mixed ability is to give the chance for every student whatever is the ability of that student to grow together, to learn from each other, so you have to create the set up, to create the atmosphere, one person conducting the class will not be enough, you'll then be able to give me an assistance, what are they giving us? nothing, all we have is an idea

Tony: support, support teachers

Roy: there is no support, no back up, no resources, nothing, so we have to create miracles, out of nothing, out of the blue we have to produce results and one more the other, the teacher is condemned, mixed ability does not work, it's your fault, you are to be blamed, nobody will take the blame, parents will come, you did not do your work, my student hasn't got his certificate, so whatever you do, you are in the middle and you are squeezed, we have to change that mentality, it's good to come with vision, all right, tomorrow I'll like to be the king of Mauritius, but will I be? that's another question, how will I be? that's something else ...

Tony: so my colleague is saying that if we have the means, the financial means, the administrative support, this project can become more successful

Researcher: so we are talking about

Tony: the means

Researcher: let's recap

Tony: means

Researcher: the number of students, the resource center, the means

Tony: the administrative means as well

Researcher: yes

Tony: now apart from these I'm going to add that there is a need to set up a structure that we have everybody

Researcher: what type of structure?

Tony: I'm talking about training, training structuring, everybody must be able to be held by that administrative structure to grow up better professionally, this is one point, there should be, another feature of this model there should be the setting up of a team, of a team that will monitor closely the program, right we are facing a lot of difficulties, these need to be addressed, to be supported in one way or another, we are all struggling, I will add we are all suffering from this, it's painful to us, it's painful to everybody, we need to continue, give us the means to go ahead

Researcher: yes, all right

Charles: I will like to add over and above that we would like to see a situation where we can observe and recommend our staff, we can observe the classes of our staff and then make proper recommendation as far as the pedagogical means are concerned and for this to be possible we need a very flexible timetable and our workload is so heavy that we hardly have time to give others, do monitoring is very good but how, when to monitor, how to monitor

Researcher: so time is

Charles: there is a time constraint

Researcher: an important feature

Tony: we need to develop this mentoring program for many reasons, mixed ability ... one there are other topics, right this is going to be very important

Roy: I would like just to add that we do understand perfectly well because we are talking from the side as teachers but if I put myself in the seat of an administrator, I do

understand very well what's happening, I need to have so many students because if not my project will run at a loss, I need to get that amount of money, I need to be, I'm fully aware of that which means that saying giving us the means is perhaps essential but when we take into consideration those people who are running the school or all the schools, their priority is totally different, it's totally different, it's something which is not in line with in fact what they want to do

Researcher: yes, unfortunately

Roy: this is my conclusion to the whole story, we want to do something it's good, we want to come with new ideas, it's good, but I have this, I have my responsibilities, I have financial problem, I have commitments, I have bank loans, I have to develop school, I have to develop structures, so at the end of the day, the whole story is just like a dog running after its own tail

Researcher: OK anything you would like to add?

Roy: I think we've done quite a lot

Researcher: yes

Tony: we know, we are aware of the fact that we are working in a Catholic school, I hope everybody knows what's the mission of a Catholic school, right? we want, I personally, I want this project to succeed, we know that there is a need to cater for, the Catholic church in Mauritius wants to make it a success but we should be provided with means, right?

Researcher: so these are your expectations

Tony: all the means, give us the appropriate tools

Researcher: yes but from whom do you expect these means, is it from the Rector? is it from the BEC because St. Mary's is a BEC school, so from whom do you expect this?

Roy: education is a link, you have got several links, all right we are linked one way or the other, now the money is public money, it's public funds, the Minister is accountable, the money is given to such organisation, such organisation, BEC and so on, BEC is going to be accountable, all right and we in fact we are the smallest link in that whole story, we are not policy makers, decision makers

Researcher: yea, yea

Roy: all right, we have no, not all the elements to be able to judge and decide, decision has been taken, all right, if the decision has been taken, implement that decision and come with the means to do it, if we can't have it, *on ne peut pas etre plus royaliste que le roi!*

Charles: it must come from the administration, tomorrow the Rector decides that we are going to have a monitoring unit in the school under his chairmanship, there is leadership, so he is going to see that the monitoring team is doing the work, so he is going to set, we can't set the monitoring team, we might be part of the monitoring team ...

Roy: there is perhaps also another suggestion, the Bureau de L'Education Catholique is an authority, why don't they decide at a certain time to say OK our requirements for next 5 years will be let us say 50 teachers, why not start a program where those teachers are going to be put in a situation where they come out with a professional qualification even if the Catholic church is investing in a specialised school, start with the teachers so that when they come to school there is no problem of monitoring, they can stand on their own legs and take the responsibility because they have got that professional qualification, you go to France if you don't have a professional qualification, you can't teach, you go to Australia

Researcher: same

Roy: you go to U.K.

Researcher: same, Canada, same

Roy: why should Mauritius be different? Somewhere, somehow, let us say the government with the Teacher's College, the training should start with primary level, secondary level and so on, I think it's high time to think about a clear policy of that if we really want to teach

Researcher: yes, all right

Tony: so setting up the real professional development program

Roy: yes

Researcher: thank you

Tony: you're welcome

Appendix 29

PMI: A Teacher's Response

MKPI

A reflective response on the 'mixed ability' teaching program in Catholic Secondary schools in Mauritius.

In January 2004, in the context of reforms in the education system in Mauritius and to be consistent with the values of Catholic education in Mauritius, the Catholic Education Bureau (BEC) changed the criteria for admission to secondary schools and opted for a new teaching program in Catholic secondary schools. This program which was named 'mixed ability', aims at inclusiveness in all Catholic secondary schools. It draws from an understanding of best practice supported by a broad global consensus for key directions for education in the twenty-first century. The 'mixed ability' program which is still at its early stages, coupled with the identification of an holistic and human-centred education are the foundation for a new direction for schooling at the middle school level from Form I to Form III.

Please use the P M I tool provided to record your individual response on the 'mixed ability' teaching program.

P Plus = positives, success, new learnings, what works	M Minus = what has not worked, barriers to implementation	I Interesting = what are some suggestions/recommendations
<ul style="list-style-type: none"> → individual attention to students' needs → reshuffling of teachers → teaching students how to study e.g. preparing a time-table for revision purposes → formative assessment followed by immediate remedial work. 	<ul style="list-style-type: none"> - Teacher pupil ratio. - Time table - lack of Additional classrooms for pooling & remedial work. - language barrier (English is really a foreign language - not a second language) - lack of materials books, photocopies, computer network for teachers, resource materials 	<ul style="list-style-type: none"> → the needs of students performing at high levels need should be met - need for 'enrichment' programs → more remedial classes. → interdepartmental sharing → interdisciplinary approach → involvement of parents → a better framework for the implementation of mixed-ability teaching. → need for 'reading programs' & 'writing program' for language classes

		<ul style="list-style-type: none">→ More time to meet & discuss problems & solutions→ what is the objective of BEC as far as the schooling career of 'low performers' is concerned i.e. will they be expected to sit for same academic exams (S.C, H.S.C) or different assessment / exams for them?→ Continuous Professional Development→ Use of ICT.
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