

**The implementation of learner-centred teaching in
Mauritian state secondary schools: examining
teachers' beliefs and classroom practice**

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I am indebted to the thirty participants in this project who gave their time so generously. There would have been no thesis without their collaboration.

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Declaration and word length

I hereby declare that, except where explicit attribution is made, the work presented in this thesis is entirely my own.

I confirm that the following thesis does not exceed the word limit of 45,000 prescribed for the Doctor in Education Degree (exclusive of appendices, the list of references and bibliographies but including footnotes, endnotes, glossary, maps, diagrams and tables).

Signed:

Sabina Allybokus

Abstract

The Mauritian Education system is a highly elitist and examination-oriented system where teachers in state secondary schools enjoy complete autonomy in the selection of their teaching methods. Despite education policies recommending learner-centred teaching (LCT) for a more inclusive, integrated and holistic approach to education (NCF, 2009, p. 7), most secondary education teachers generally use teacher-centred teaching (TCT) methods even after having learned LCT in professional teaching courses.

In this study I examine how 30 professionally trained teachers from eight state secondary schools in Mauritius understand LCT and how they implement it in class. I also explore why those teachers choose this approach and which skills they think are necessary for effective LCT. This qualitative study uses a social-constructivist approach. It was carried out in two phases. In the first phase I looked into teachers' understandings of LCT and in the second phase I observed teachers enactment of LCT in their classrooms. Data gathering tools were questionnaires, semi-structured interviews, focus groups, class observations and debriefing sessions.

The findings point towards two perspectives of LCT: the first perspective is a cognitive perspective, which is more achievement-oriented, and the second one is an emancipatory perspective, which focuses on re-engaging learners with their studies. The study also shows that their work contexts, their beliefs and the pressure of an exams-oriented system shape teachers' understanding of LCT and in its actual form LCT in Mauritian schools is only partially learner-centred with a mix of LCT and TCT.

The main contribution of this thesis is the acknowledgment of the kind of LCT that teachers can achieve without any form of support and the potential of our teachers in transforming our classrooms with authentic and effective forms of LCT provided

continuing professional development and school support become regular features of our education system.

Contents	Page
Reflective statement.....	10
Summary of my learning experience.....	10
Overview of the programme and contribution to my professional knowledge and development.....	12
Comparative dimensions of the thesis.....	14
Chapter 1 Introduction.....	16
1. 1 A professional need	16
1. 2 Capitalising on human resource	16
1. 3 The Mauritian education system.....	19
1. 4 My interest in LCT	20
1. 5 Overview of the organisation of the thesis.....	24
Chapter 2 Literature Review	26
2. 1 Introduction.....	26
2. 2 Importance of teachers' beliefs	26
2. 2. 1 How beliefs shape practice.....	27
2. 2. 2 Teachers' educational beliefs in research.....	29
2. 2. 3 Factors promoting constructivist or LC teaching.....	30
2. 3 Theoretical foundations of teacher-centred and learner-centred instruction.....	31
2. 4 Behaviourist practices in Mauritian state schools.....	31
2. 4. 1 Implications for instruction	32
2. 4. 2 Critics of behaviourism.....	33
2. 5 LCT and Constructivism.....	34
2. 5. 1 Constructivist strategies and tools in LCT.....	35
2. 5. 2 Shifting the focus from teaching to learning.....	36
2. 5. 3 Critics of constructivist pedagogy	41
2. 6 Characteristics of LCT	42
2. 6. 1 A LCT philosophy resting on three essential behaviours	44
2. 6. 2 A LCT model based on Best Teaching Practice	45
2. 6. 3 Three core principles of LCT.....	46
2. 6. 4 A LCT experience based on five key changes	49
2. 6. 5 Tensions in LCT.....	55

2.7	The different perspectives of LCT	56
2.7.1	The cognitive perspective.....	56
2.7.2	The emancipatory perspective	57
2.7.3	The preparatory perspective.....	57
2.8	LCT in the developing world.....	58
2.8.1	Causes of failure of LCT.....	60
2.8.2	Compromise to LCT: adapting to contexts	61
2.9	Summary.....	62
Chapter 3	Research design and methodology	63
3.1	Introduction.....	63
3.2	A social-constructivist perspective.....	63
3.2.1	The role of the researcher.....	64
3.3	Design and conduct of the study.....	65
3.3.1	Selecting sample	65
3.3.2	Questionnaires	67
3.3.3	Semi-structured interviews	68
3.3.4	Focus groups.....	70
3.3.5	Class observations	71
3.3.6	My field diary	73
3.4	Data analysis.....	73
3.4.1	Data reduction.....	74
3.4.2	Data display.....	77
3.4.3	Conclusion drawing	78
3.5	Trustworthiness.....	79
3.6	Engaging in reflexivity	83
3.7	Ethical issues	84
3.8	Summary.....	86
Chapter 4	Teachers' understanding of LCT	87
4.1	Introduction.....	87
4.2	Understanding the significance of LCT from professional courses.....	88
4.3	Emergence of two perspectives of LCT: the cognitive and the emancipatory	89
4.4	Learner-centredness in LCT perspective	90
4.5	The cognitive perspective of LCT	97
4.6	Giving power to learners: the divide between cognitivist and emancipatory teachers.....	105
4.7	The emancipatory perspective of LCT.....	108

4.8 Summary.....	111
Chapter 5 Teachers' implementation of LCT.....	113
5.1 Introduction.....	113
5.2 Proposing constructivist strategies.....	113
5.3 Adopting multiple roles	122
5.4 Pragmatic reasons underpinning teachers' choice of LCT	132
5.5 Professional skills and soft skills for effective LCT	135
5.6 Summary.....	138
Chapter 6 Discussion.....	140
6.1 Introduction.....	140
6.2 Teachers' understanding of LCT from professional courses, classroom experiences and personal beliefs	140
6.3 A cognitivist perspective for examination-oriented teachers.....	142
6.4 An emancipatory perspective for teachers reconciling learners and learning	144
6.5 Teachers' choice of LCT driven by pragmatic reasons.....	145
6.6 Teachers consider professional skills and 'soft' skills vital for LCT	146
6.7 Gaps in LCT	147
6.8 Summary.....	149
Chapter 7 LCT: a powerful approach.....	151
7.1 Introduction.....	151
7.2 LCT: an approach initiated in professional training courses, shaped by teachers' beliefs and adapted to contexts	151
7.3 A cognitivist perspective for examination-oriented teachers.....	152
7.4 An emancipatory perspective for teachers working with disengaged students.....	153
7.5 Teacher professionalism involving cognitive and soft skills	153
7.6 The promise of LCT in Mauritian SSS.....	154
7.7 Limitations of the study	154
7.8 Implications for my professional role and the wider professional context	155
7.9 Final Thoughts	156
References.....	157
APPENDICES	179
Appendix 1.....	179
Appendix 2.....	180
Appendix 3.....	182
Appendix 4.....	183

Appendix 5.....	185
Appendix 6.....	187

List of tables and figures

Tables

Table 2.1 Learner-centred principles	41
Table 2.2 Teacher-centred as opposed to learner-centred practices	44
Table 3.1 Participants' profile	65

Figures

Figure 2.1 The Pyramid of Student Engagement.	46
Figure 3.1 Carney's (1990) framework	78

List of acronyms

AfL	Assessment for Learning
CIEP	Centre International d'Etudes Pédagogiques
CPE	Certificate of Primary Education
EFA	Education For All
HSC	Higher School Certificate
IFS	Institution Focused Study
LC	Learner-centred
LCT	Learner-centred teaching
MIE	Mauritius Institute of Education

MES	Mauritius Examination Syndicate
MOEHR	Ministry of Education and Human Resources
NCF	National Curriculum Framework
PCK	Pedagogical Content Knowledge
PGCE	Post Graduate Certificate in Education
SC	School Certificate
SSS	State Secondary School
TC	Teacher-centred
TCT	Teacher-centred teaching
UNESCO	United Nations Educational, Scientific and Cultural Organisation
USAID	United States Agency for International Development

Reflective statement

Summary of my learning experience

When I embarked on the EdD programme in 2009, I knew it would be both challenging and enriching. There were moments of success and frustration but they were all positive learning experiences.

When I joined IOE it was a time of turmoil and change in the Mauritian education system. Teachers who have always enjoyed freedom in their practice were being subjected to policies borrowed from the world of business. I was then a French Head of Department having taught for twenty-five years in different state secondary schools in Mauritius. All around me there were teachers' protests but no one sought the reasons behind the change. Why was a performance monitoring system being suddenly imposed on us? New conditions were linked to teachers' salary and teachers passively accepted them all. The situation had reached a point where I felt it indispensable to understand the complexity of the world of education in order to grasp the intricacies of our own system.

My first courses provided me with the lens to analyse a confused situation where new public management policies were being pasted on an archaic system. In fact Mauritius was simply following the policies in the wake of Education For All (EFA) (UNESCO, 2000) and striving to keep its place among the best performing countries. The country had to comply as it needed the political and financial support of international organisations for its development. In fact this situation was a classic case of poor management of educational reform where policy makers do not monitor the implementation of their policies (Verspoor, 1989, cited in O'Sullivan, 2002). In the process teachers were merely technicians of policies they could not understand.

In 2010 I was promoted to deputy principal and though my interests in teachers' knowledge and skills never wavered, I thought it was time for me to look into aspects of schools that were new to me. I thus chose to study the pre-vocational stream of my school, a category of students who had failed their primary education examinations

and had to learn vocational skills. I got a glimpse of the complexity and sometimes even the absurdity of learning for students who cannot relate with schools because of their cultural and linguistic difference.

Choosing the right paradigm seemed to me like asserting my identity. It started with a Participative Action Research (PAR), which appealed to me because of its emancipatory nature. PAR offered a means by which marginalised voices could be heard. I tried a case study because it was a pragmatic way to explore new themes and because I liked the idea of working on a study where the abundance of details has the potential of transforming it into an engaging piece of writing. However the most important part in that identity was that of the qualitative researcher. What I have found particularly relevant in all the studies I have worked on was the study of subjective meanings and everyday practices.

I came to consider qualitative studies to be adventures in the unknown. For others to be able to follow the researcher has to provide a road map with detailed itineraries and alternative routes ready in the event of road obstruction. The journey had to be exciting and the destination a promising one. The metaphor proved itself true for my Institution Focused Study (IFS). All the components of the design framework fell smoothly into place, probably because the purpose of the study was the culmination of a four-year journey of reflection on teacher professionalism and I had the privilege of working amidst a group of teachers who with time became co-constructors of knowledge.

By the time I was made principal of a school in 2012 I had gained sufficient experience to design and carry out a bigger piece of study. Indeed a number of difficulties cropped up in the research process for my thesis and I had to review my design constantly. Robson (2002, p. 80) says that it is easier to bring modification to original plans in small-scale projects where “the architect-designer and builder-enquirer” are the same person. Nonetheless I have noted that modifications sometimes can be complicated when there are multiple research settings, which was my case.

Thus during these past five years, IOE has helped me to develop the necessary skills to understand the complex world of education, to experiment with different theoretical

perspectives and to choose the appropriate research design for what I wanted to explore.

Overview of the programme and contribution to my professional knowledge and development

My studies at IOE had a dual purpose. On the one hand I had to acquire research skills and on the other hand I had to use the knowledge gained to enhance the teaching and learning in classrooms in my school. Thus understanding and using competently research designs, strategies and tools accompanied my study of teacher professionalism, teachers' professional knowledge, beliefs and practice. A summary of how the taught courses have helped me in this quest is outlined below.

The course on professionalism opened a window on a new world for me in terms of concepts and issues that were discussed. Concepts like professionalism and globalisation held different meanings but were viewed positively by all my EdD classmates. I was skeptical as what I had seen of the process of professionalisation of teachers in Mauritius were only tensions and conflicts. As for globalisation, French teachers like me nourished by readings from the leftist *Le Monde Diplomatique* would link it to American imperialism. I tried to understand those dissonances in my first assignment, which was on teacher professionalism. I delved into the concepts of "restricted" and "extended" forms of teacher professionalism (Hoyle, 1974) and studied the professionalism of our teachers according to this framework. I examined policy rhetoric and classroom realities. I reflected on weaknesses of policy makers who, in developing countries, leave the responsibility of policy implementation solely to agents, never returning for monitoring and feedback. However I had to be myself an agent of change, so I looked into possibilities of teacher development at school level for authentic change.

My responsibility of Head of Department and an increasing awareness that teachers suffered a kind of injustice because they were not given the opportunity to reflect on their status of "semi- professionals" (Etzioni, 1969) drove me to think of possible strategies to empower teachers as professionals. The criteria to be considered a

professional were skills based on theoretical knowledge, rigorous training, competence ensured by examination, high ethical conduct and a service orientation (Millerson 1964, cited in Whitty, 2008). The fact that teachers did not fit these criteria drove me to think of possible strategies to empower teachers as professionals. Consequently for “Methods of Enquiry 1” I designed a qualitative research study using reciprocal peer coaching and Participative Action Research. The idea of teachers coaching each other in their workplace was interesting as teachers taking the role of both coaches and coachees would be able to reflect on teachers’ teaching and teachers’ learning. I chose PAR to empower teachers in constructing their professional teaching with the hope that this will encourage them eventually to take responsibility for their own professional growth.

In the specialism course I chose to study the case of Creole learners in the secondary system officially oriented towards the pre-vocational stream but in reality marginalised from an elitist system. I looked into the history of the different ethnic communities in Mauritius and considered how both colonial history and the culture of the Creole group have impacted on the cultural capital Creole students bring to school (Bourdieu, 1986). I argued that the language policy inherited from colonial times and the government’s reluctance to democratise the language policy with the official inclusion of Creole in education was one major cause of failures of Creole students in schools. Since then Creole has been introduced as a subject and a teaching medium in primary schools.

The focus of “Methods of Enquiry 2” assignment was on teachers’ readiness to participate in a work-site continuing professional development project in my school. The assignment provided an opportunity to experiment with focus group discussions and this proved helpful in learning to manage teacher interactions. My beliefs in constructing knowledge with participants as co-researchers drove me towards the constructivist grounded theory of Charmaz (2003) to analyse my data. Findings revealed teachers’ unwillingness to participate in any kind of project that was not mandatory and their fear of class observation.

After the taught courses, I conducted a small-scale piece of research for my IFS. This was a qualitative case study where I explored how trained teachers understand, practice and sustain their professionalism in the school where I was working. I used

semi-structured interviews to explore teachers' understandings of professionalism. Teachers invited me for class observations and I was able to see how they enacted their understanding of professionalism in their classrooms. I argued that professionally trained teachers' understanding of professionalism was of a technician nature close to the concept of 'restricted' professionalism (Hoyle, 1974). Teachers' main concern was high-stakes examinations, and this guided their choice of TCT.

The IFS study confirmed a number of hunches I had on teachers' feelings and fears. It was clear now that because teachers' views had not been considered in any education policy, any form of top-down study would be resented. But if I wanted to help teachers help themselves I had to get into those classrooms where teachers used non-traditional teaching methods. My readings on learner-centered teaching (LCT) including my observations of a number of successful implementation of group work in the process of the IFS research directed me to research LCT for my thesis.

My study involved different settings and teachers I did not know. Though I used research tools and techniques that I mastered I was often overwhelmed by the demands of the study on my time and my energy. For instance managing the massive amount of data took twice more time than what I had expected.

Comparative dimensions of the thesis

Mauritius forms part of the African continent and takes pride in its achievement among African countries. For example, it is top-ranked in Africa for business (SADC, 2012). However in the educational field, The Seychelles will more likely achieve its EFA objectives ahead of Mauritius (UNESCO, 2015). The poor quality of our education has been acknowledged and there is now an urgent need to review the system to enhance teaching and learning (MOEHR, 2008).

Though teachers' practice in general and of LCT in particular has been documented in a number of African countries (Vavrus, Thomas and Bartlett, 2011), Mauritius has very scant studies on secondary teachers' classroom approach and none on LCT. Schweisfurth (2013) showed how LCT in African contexts has been mostly top-down decisions and resulted in failures. In contrast this study shows that Mauritian teachers use LCT and adapt it according to their beliefs, their school contexts and the kind of

learners in classrooms. Examinations-oriented teachers adopt a cognitivist perspective of LCT with high ability or mixed ability learners, both in regional and national schools. They sometimes use a hybrid form of LCT and sometimes they shift totally to TCT to prepare learners for high-stakes examinations. Teachers use an emancipatory perspective of LCT in challenging schools with the aim of reconciling learners with schools and studies. Those teachers also prepare students for examinations but they have to bring their learners to that level gradually, starting with basic stages of attendance, respect for learning space and participation in class before considering examination.

Compared to African experiences of LCT, Mauritian teachers select LCT out of their own free will and often for pragmatic reasons. They develop their own set of skills in a culture of teacher isolation. Teachers' commitment to LCT is evidenced. There is no doubt that through appropriate professional development, teachers would be motivated to address the challenges of an education system in need of revitalisation and transform classrooms into places where all students would engage in their learning.

Chapter 1

Introduction

1.1 A professional need

This study stems from an urgent need I felt as a school leader to address the problem of learner disengagement in my school and from my professional responsibility to encourage LCT in state secondary schools (SSS) as laid down in national policies (NCF, 2009). There is very scant literature on the choices teachers make in planning their practice and none on the choices specifically directed at implementing LCT in Mauritius. Thus, the focus of my research is to explore the beliefs and practice of teachers using LCT in SSS in Mauritius. The aim is to gain insight into how teachers understand LCT and how they implement it in class.

This chapter has four sections. The first section provides the necessary information to understand the focus of this study. The second section provides information on the specificity of education system in Mauritius. In the third section I explain my interest in this research and I identify the purpose of the study and the research questions. The last part presents an overview of the organisation of the thesis.

1.2 Capitalising on human resource

Globalisation has changed the way teachers teach in many parts of the world, moving away from traditional teacher-centred toward more learner-centred classrooms (UNESCO, 2007; Vavrus, Thomas and Bartlett, 2011). This trend has been encouraged by industry and the business world as job markets seek multi-skilled graduates capable of transferring book knowledge to real world functions, of adapting in a continuously evolving environment, of self-directed learning, of critical thinking, of working autonomously and as well as part of a team. These characteristics are deemed necessary in the 21st century economy (Ackerman, Gross and Perner, 2003; Boulton-Lewis *et al.*, 2001).

For the Mauritian government, human resource is one of the island's most important resources. Mauritius is a 2040 sq. km island with a population of 1.3 million, off the south- eastern coast of the African continent. The island has limited natural resources and relied on sugarcane in the 1960's before shifting from a monocrop industry to textile industries and tourism in the 1970's. Two new pillars have been added since the 1990s: a Financial Sector and an ICT Sector. Mauritius now aims to broaden the economic base with the inclusion of the Knowledge Economy (MOEHR, 2008). This government goal is set out in major documents. For example the government's human resources strategy plan states that it is critical for Mauritius to shore up its capacity first and foremost in education to construct this human capital (MOEHR, 2008).

The teachers' role in this endeavour has thus become crucial in building this competitive human resource base. The opening pages of the Ministry of Education's strategy plan for 2008-2020 spell out the ambition of the government, which is "to ensure learning opportunities accessible to all, provide learners with values and skills to further their personal growth, enhance their critical and exploratory thinking and encourage them to innovate and to adapt to changes in an increasingly globalised environment" (MOEHR, 2008, p.11).

Fostering these skills in a traditional teacher controlled classroom can be difficult and this is why another education policy, The National Curriculum Framework (NCF) (2009), stresses the need for "A Model for LCT" where teachers adopt constructivist curricular principles which incorporate "the concerns and needs of the learner, as well as present knowledge as an integrated whole (...). It is also important that all teachers be well tuned with the preferred approach for teaching in a meaningful manner" (NCF, 2009, p. 217).

Moreover among the overarching learning outcomes expected for secondary students, the above policy expects that

- Students recognise when and what information is needed, how to obtain it from a range of sources and how to use and share it.
- Students use logical and critical thinking skills to judge, assess and solve a broad range of both theoretical and real life problems.

- Students develop emotional, social and moral intelligence to achieve a sense of well-being.
- Students demonstrate self-management skills, positive self-esteem and confidence for active participation as citizens of the Republic and of the world (NCF, 2009, p. 17)

The learning outcomes are aligned with what is generally expected from effective teaching and learning, encompassing cognitive and affective aspects (James and Pollard, 2011).

There is thus a will on the government's part to see classroom instruction based on new psychological and instructional understandings that are moving from a knowledge-transmission model towards a knowledge-construction model with emphasis on developing such skills like goal setting, problem-solving, capacity to relate to others and learning to learn. This shift in learning requires that teachers change from being only a knowledge provider to becoming equally a guide in the teaching-learning process. However government policies do not impose any classroom strategy on teachers but recommend that "schools move towards this model, though a drastic change is not envisaged in the short run" (NCF, 2009, p. 217).

Actually among all the teachers I have met the only ones who have read the curriculum framework are those who had to study it for their assignments at the local institute of education. The majority of our teachers are unaware of its content. It is also common knowledge that teachers working in Mauritian SSS have a high degree of freedom in making their arrangements and that they generally use traditional teaching strategies like lecturing, an emphasis on rote learning and working on drills (Payneandy, 2002). Nonetheless my working experience as rector in the various schools of the island since 2010 shows that there is a small proportion of teachers using LCT.

The teaching profession is rooted in isolation and our education system has no structure for developing a shared knowledge base about teaching. Undoubtedly many teachers gain expertise in their practice through trial and error but this collective expertise is lost from the teaching profession unless there are avenues to tap into it.

This research addresses this need. Hence the aim of this research is to understand why teachers choose LCT and how they implement it in their classrooms.

1.3 The Mauritian education system

Education in Mauritius is free for primary and secondary levels. With the Education Act of 2005, school has been made compulsory till the age of 16. Transport is free for all secondary students and needy students coming from socio-economically disadvantaged classes benefit from a free book scheme. There are 68 state secondary schools, 14 national and 54 regional, catering for approximately 43% of the secondary school population. The remaining 57% goes to private aided or non-aided schools. In 2012 gross enrolment rate in primary education reached 99% whilst secondary enrolment rate was 76% (Educational Statistics, 2012).

Contrary to what goes on in teacher recruitment in many countries, most Mauritian teachers entering the profession generally do so with a first degree. A professional certificate like a Postgraduate Certificate in Education (PGCE) is desirable but not compulsory. Once confirmed in their post, teachers are offered the possibility of following subsidised professional courses at the Mauritius Institute of Education (MIE). Many choose not to go for professional training at all.

The Education system in Mauritius is mostly based on the British model and like many sub-Saharan countries it still shows features of its colonial past. For example, there has been no notable change in assessments and examinations at the secondary level (Verspoor, 2008). It starts with a minimum of six years primary education leading to the Certificate of Primary Education (CPE), continues with five years lower secondary schooling sanctioned by the Cambridge School Certificate (O level examinations) and ends with two years upper secondary education after the Cambridge Higher School Certificate (A level examinations).

After passing the CPE pupils are admitted to a secondary school and passing the School Certificate allows students to follow classes leading to the Higher School Certificate (HSC). The HSC enables students to pursue university studies in Mauritius or abroad. The best-ranked candidates in HSC examinations are awarded laureateship

whereby the state pays for their undergraduate studies abroad. In fact fierce competition to secure a seat in one of the few elite schools and to become a laureate starts right from CPE.

CPE results determine children's admission to secondary schools. Out of the 20,717 students who sat for the CPE examinations in 2014 only the top-ranked 2003 candidates got a seat in the 14 existing national schools (MES, 2014). The rest was admitted to regional schools or to private schools. Hence academic segregation starts as early as from eleven years old. Students in national schools are generally referred to as 'high ability' students and those in regional schools as 'mixed ability' and sometimes as 'low ability' students. This is undoubtedly linked to a culture of academic excellence and laureateship in national schools. For example, after the HSC 2014 results, national schools reaped 38 out of 41 scholarships offered with the remaining 3 going to private schools (MES, 2015).

CPE ranking is perceived by some as a perversion of the role of schools which focuses on education as a product and neglects important aspects of the curriculum such as "physical development, aesthetic appreciation and creativity, and the importance of learning to live together in a multi-cultural society as responsible citizens" (Rughooputh, 2003, p. 4). Indeed LCT has the potential of achieving these goals (APA, 1997).

1.4 My interest in LCT

My interest in LCT stems from my professional life and my EdD studies. I was exposed to the theoretical aspects of LCT in the course of my professional studies at the MIE and to its practical aspects in workshops conducted by the Centre d'Etudes Pédagogiques (CIEP) in Reunion island rather late in my professional life. I implemented cooperative learning occasionally in classes, forming mixed ability groups and assigning roles and responsibilities to each member of the group. Students learned to plan group work, to listen to members, to take turn to speak, to manage their time and the noise level. For instance in grammar classes I used the inductive approach to get learners to find out grammar rules from a corpus of sentences. Students would make hypotheses, verify them and write down their grammar rule on kitchen paper. Groups then would paste their work on the walls after which they

would walk around and assess each finding. Finally the best answer would be adopted as the grammar rule of the lesson. These were dynamic classes as groups would compete to get the right answer but at the same time students enjoyed the process of working with friends. In my literature search for effective teaching at the IOE I came across different philosophies of learner-centred pedagogy. For instance Weimer (2013) detailed five important dimensions that had to be implemented to achieve LCT. These are the function of content, the role of the instructor, the responsibility for learning, the purposes and processes of assessment, and the balance of power. For other researchers in the APA Workgroup (1997) LCT catered for the cognitive, metacognitive, social and affective dimensions of teaching and learning. I realised with hindsight that my own implementation of LCT addressed only a few aspects of LCT: I was able to shift my role from transmitter to facilitator, my students were empowered as they constructed their learning and the process of peer assessment was embedded in the tasks, however I was the one who selected the content, the strategy and the timing of LCT. Nevertheless I was able to witness how LCT could positively transform both teachers' and learners' lives.

During my teaching years in elite schools, I have always seen students motivated to succeed. Though I varied my classroom strategies, I used mainly teacher-centred instruction. I was blissfully unaware of all the shortcomings of my teaching probably because students I taught were mostly middle-class students who, given their cultural capital (Bourdieu and Passeron, 1977), would have sailed through no matter who taught them. Bourdieu (1986) explained how schools perpetuate social classes through hereditary transmission of cultural capital. My students had English or French as their mother tongue, which were the two official languages used at school. They had the latest technological gadgets but most importantly they started their first year in secondary education with a range of skills (speaking, writing, debating or researching) which gave them an edge on other students in the race for laureateship.

When I assumed duty as deputy rector in a regional state secondary school in 2010 I was exposed to a school environment which was nothing less than a culture shock. The school was a bleak building still in construction with only basic facilities, no specialist rooms, no playground, no walls surrounding the school. Students would come to school late, follow morning classes and disappear during the day. Sometimes

policemen would collect some of them loitering in the vicinity and bring them back. Often I asked myself if the physical environment was the cause of student demotivation until I visited classes. I knew then that there were other causes. In most classes there were groups of students who did not or could not follow lessons. Teachers lectured whether learners understood or not as they were more concerned with curriculum coverage. In fact there was such student disengagement from their studies that student attainment (achieving at least 40 % marks in 5 subjects) for 'O' levels in that year for that school was 60 %, which was among one of the lowest of the island. Teachers transferred to this school were unhappy and tried to get posted elsewhere. However what I found terribly unfair to those students was first the school experience, then the classroom practice offered to them. Somehow those students had fewer chances of achieving valued learning outcomes because they did not or could not learn what the teachers taught (Tikly and Barrett, 2011). In the following year I motivated a few teachers to use more learner-centred practice and described some of these classes in my IFS. One important finding was the positive difference in learners' attitudes observed in those classes (Allybokus, 2012).

After this posting I became a roaming rector replacing for a short while colleagues gone on vacation. I had the opportunity of observing the teaching and learning process in six different SSS of the island. I equally witnessed an increasing trend in student misbehaviour often echoed in the media (Ramjanally, 2014). I often reflected that if classroom activities were more engaging, or more learner-centred, there would be fewer behaviour problems at school.

Teachers everywhere used the same didactic lecturing methods and shirking of classes was a serious problem in all boys' schools. There was one exception though. During a three-months stay in one small school I found out that most teaching and learning strategies were pair work or group work. Those teachers said they could not teach otherwise as this was the only way students could grasp concepts. This was one school where students did come late but where there was no shirking. The pass rate in Cambridge 'O' level results fluctuated between 65 to 70 %. There was a good probability that the strategy used in classrooms was in part responsible for student engagement with their learning and this reinforced my convictions that LCT could transform classrooms and schools.

Since 2012 I have been given the responsibility of a big regional school and I am confronted once again to students' indifference to their studies. This time the school has all the facilities but students would continue coming to school late, sometimes on purpose just not to go to morning classes. Shirking classes is common especially in the afternoon. Teachers use mainly lecture methods. Sometimes they have the attention of the whole class but in most classes there are groups of students who do not hesitate to demonstrate their boredom. They either systematically disrupt the lesson or they simply disappear from class. However what was bewildering for me in my first year there was the fact that pupils preferred to hide all day long in the toilets rather than go to class. This was the catalyst that drove the present study. It became a moral imperative for me to look for classroom instruction that would engage demotivated secondary students in their studies and in this regard LCT seemed promising.

Research in LCT in sub-Saharan countries is limited (Vavrus, Thomas and Bartlett, 2011). In the wake of the EFA as a global movement advocating "active learning techniques" in its list of conditions for quality education (UNESCO, 2000, paragraph 44), a number of countries embraced LCT. Botswana implemented LCT with the help of USAID (Tabulawa, 2003). Namibia tried LCT within its teacher education reform (Dahlstrom, 1999); Ghana put emphasis on teacher training in LCT (Akyeampong and Stephens, 2000); Tanzania strongly recommended LCT to improve educational quality (Vavrus, 2009); South Africa's Outcomes Based Education reform promoted LCT approaches (Chisholm and Leyendecker, 2008) and Mozambique's new curriculum for basic education endorsed LCT (Guro and Weber, 2010). Research on teaching in secondary schools in Mauritius is scarce. Though there are some studies on teaching practice like the use of technological tools in classes (Motah, 2007), the impact of PGCE on Teachers' practice (Payneandy, 2002) and the quality of service offered in secondary schools (Ramseook- Munhurrun, Naidoo and Nundlall, 2010), the practice of LCT in secondary schools has not been documented to date.

The present study addresses this gap and examines the views and classroom practice of teachers using LCT in Mauritian State Secondary Schools. Questions guiding the study are:

- How do teachers understand LCT?
- How do they implement it in class?
- Why do they choose LCT?
- What skills, according to them, are required for effective LCT?

The purpose of the study is to gain insight into what prompts teachers to adopt LCT and how they implement their understanding of LCT in class. It equally aims at providing a representative description of the forms that LCT takes when teachers adapt it to their context. This study can constitute a starting point in providing baseline data to policymakers to guide decisions on the general approaches that could be used to enhance LCT in Mauritian schools and in other developing countries. Reform policies that match the knowledge and beliefs of teachers to some extent stand more chances of being adopted and implemented by teachers (Datnow and Castellano, 2000). The research will certainly be of interest to school leaders who want to support LCT in their schools and it is equally my hope that the findings reported in this research motivate teachers who want to shift from TCT to LCT.

1.5 Overview of the organisation of the thesis

Chapter 2 of this thesis examines in some detail how teachers' beliefs are formed and how these impact on their practice. I review the major theories of learning relevant to Mauritian classroom and analyse the concept of LCT. The chapter ends with an overview of the implementation of LCT in developing countries.

Chapter 3 presents the research methodology I have chosen for my study, the social-constructivist approach, and outlines the research design. According to social constructivism, knowledge, truth, experiences and individuals are the product of social processes and this is acknowledged in the study. I describe the various phases of the study, how I selected my participants, conducted interviews, shifted to focus groups and observed teachers in their classrooms. Ethical issues and the importance of reflexivity end the chapter.

Chapter 4 and 5 tell the research story. These two chapters present the findings from the data gathered in the research process from interviews and class observations. Chapter 4 looks into teachers' understandings of LCT and chapter 5 focuses on

teachers' practice. They present the different emerging themes and the interpretation that I make of the research findings within a social constructivist paradigm.

Chapter 6 presents a synthesis of the research findings in relation to the research questions. I discuss the various factors that shape teachers' beliefs and how teachers create their LCT according to those beliefs, their knowledge and school contexts. This chapter equally identifies the skills teachers consider to be important for successful LCT.

Chapter 7, the final chapter summarises the research journey, points out the weaknesses and limitations of the study, makes some recommendations for policy and practice and ends with some suggestions for further research.

Chapter 2

Literature Review

2.1 Introduction

As I argued in Chapter one this study arises out of a professional need to gain knowledge on the status of LCT in Mauritian SSS. Since there is no imposition but recommendation of approaches to be used in SSS, it was important to explore how teachers construct their understanding of LCT and how they translate this understanding of the approach in their classrooms.

Thus this chapter starts by examining in some detail what constitute teachers' beliefs and how they shape their practice. The major theories of learning that underpin classroom practice are then discussed. The main elements of behaviourism and constructivism as they impact on practice are also examined. The concept of LCT as identified by various authors is then described and analysed. The chapter concludes by an overview of the implementation of LCT in the developing world and of its challenges.

2.2 Importance of teachers' beliefs

The focus of my research is how teachers understand LCT and how they implement it in class; consequently I will first look into what constitute teachers' beliefs and how these impact on the choice of teaching strategies in general and LCT in particular.

Educational research has documented the influence of teacher beliefs on teacher instructional practice for almost two decades (Clark and Peterson, 1986; Fang, 1996), indicating that personal belief systems strongly impact on teachers' curricular decision-making and teaching practices. Beliefs are personal constructs generated from personal experiences that can provide a lens for understanding a teacher's instructional decisions. Teaching is a highly personal endeavour and the way an individual teaches is a reflection of who that person is, and how his / her beliefs have been shaped about teaching, learning, and students (Nespor, 1987; Pajares, 1992;

Richardson, 1996; Meirink, Meijer, Verloop and Bergen, 2009).

In fact Nespor (1987, p. 311) found that “beliefs are far more influential than knowledge in determining how individuals organise and define tasks and problems and are stronger predictors of behaviour”. She asserts that beliefs are generated from previous episodes or events and that one’s teaching practices are strongly influenced by these detailed, episodic memories and experiences as a student. These experiences have been referred to as 'apprenticeships' to teaching (Lortie, 1975; Korthagen and Kessel, 1999). Teachers who when young have been socialised into an understanding of what constitutes good teaching tend to replicate the same behaviour in their own practice.

Teachers’ family upbringing, their own experiences, as students, during formal teacher training and later through teaching experience give authority and legitimacy to the way they continue to frame their understanding of classroom events (Goddard and Foster, 2001; van Driel, Beijaard, and Verloop, 2001). It has also been evidenced that their beliefs and images of appropriate teacher behaviour are seldom changed by pre-service experiences (Cole and Knowles, 1993; Knowles, 1994). Besides experiences, teacher beliefs have been found to include feelings, intentions, expectations and attitudes (Meirink, Meijer, Verloop and Bergen, 2009).

2. 2. 1 How beliefs shape practice

Teachers are the most critical element in leading educational change (Fullan, 2001). Changing teachers’ decision-making and instructional practice depends heavily on changes in teachers’ beliefs (Nespor, 1987; Pajares, 1992; Richardson, 1996; Beck, Czerniak, and Lumpe, 2000; Minor, Onwuegbuzie, Witcher and James, 2002). It is believed that teachers who have been moulded by traditional beliefs are more likely to use didactic instructional practices where teaching involves a predominance of lecture to transmit information (Lortie, 1975), while teachers with constructivist beliefs see knowledge as created rather than received, explored and developed rather than remembered (Holt-Reynolds, 2000). These teachers are more likely to try learner-centred practices.

In general changes in classroom practice have been linked to teachers’ prior

knowledge and beliefs (Hashweh, 2003). Guskey (2002) confirmed this statement when he observed that it is essential for teachers to be convinced of the effectiveness of a new strategy for them to make a shift. A study he carried out in 1986 with 52 teachers in a professional development program revealed that change in teachers' beliefs "is likely to take place only after changes in student learning outcomes are evidenced" (Guskey, 2002, p. 7).

Another study however contradicted Guskey's findings: change in beliefs preceded change in professional practice (Richardson, Anders, Tidwell, and Lloyd, 1991). Interestingly other pieces of research (Fullan, 2001; Richardson, 1996) consider that teachers' beliefs are not stagnant, they impact on their practice as much as practice impacts on beliefs. Though beliefs are thought to drive actions, the impact of experiences and reflection on action may lead to changes in beliefs or may add new knowledge to existing beliefs (Richardson, 1996).

The literature on teacher beliefs, teaching and change gives ample evidence of how teachers transform their practice according to their new beliefs (Woolfolk, Hoy, Davis and Pape, 2006; van Driel, Beijaard, and Verloop, 2001; Yerrick, Parke, and Nugent, 1997; Cuban, 1993). No matter how restrictive the teaching and learning context is, teachers manage to implement the kind of curriculum dictated by their values influenced by their identity, their experiences, their professional training and other biographical factors (Osborn *et al.*, 1997). Thus if teacher beliefs are in contradiction with the goals of educational innovation, teacher resistance is likely to occur (Burkhardt, Fraser and Ridgeway, 1990; Prawat, 1990).

One piece of research however showed the contrary. Wallace and Priestley (2011) who studied teachers' belief system through classroom observations and interviews found that even in the case of a top-down reform policy, teacher beliefs were transformed after a professional course. These teachers supported change in classroom practice and promoted reform-based change. Other researchers who studied the idiosyncratic nature of teacher professional growth found teacher change to be also the result of their learning process in the enactment of and reflection on their individual theories of practice (Clarke and Hollingsworth, 2002).

2. 2. 2 Teachers' educational beliefs in research

The process of measuring teachers' thought is a difficult one (Fang, 1996). Self-report procedures, repertory grid techniques or process tracing techniques for capturing data do not satisfactorily reveal the intricate process of beliefs and practices. Nevertheless there is evidence that shows correspondence between measures of teachers' beliefs and their instructional practice in the field of Literacy and Reading (Cummins, Cheek and Lidsey, 2004; Fang, 1996), Mathematics (Kupari, 2003; Stipek, Givvin, Salmon and MacGyvers, 2001) and Science (Deboer, 2002).

Pajares (1992, p. 314) argues that "beliefs cannot be directly observed or measured but must be inferred from what people say, intend, and do" but he acknowledges that still researchers can base themselves on a number of fundamental assumptions that may reasonably be held when studying teachers' beliefs.

These assumptions are linked to the notion that

- Beliefs are formed early and are resistant to change even if proved wrong by schooling or experience.
- Individuals develop a belief system transmitted to them culturally.
- Beliefs are key in determining tasks and selecting the cognitive tools with which to plan, implement and assess such tasks.
- Beliefs affect attitudes and behaviour.
- Beliefs and knowledge are interwoven.

A number of these assumptions have been eventually confirmed in other studies (Goddard and Foster, 2001; van Driel, Beijaard, and Verloop, 2001; Meirink, Meijer, Verloop and Bergen, 2009). An interesting framework to study teachers' beliefs has been developed by Koballa, Graber, Coleman and Kemp (2000). Though this framework concerned science teachers, it could equally fit other subjects. The framework contains three categories with their corresponding descriptors. These categories are 'traditional', 'process', and 'constructivist'. The traditional category views teaching as transferring knowledge and the descriptors to analyse beliefs are for example: giving and expecting precise answers, definitions or explanations.

The process category views teaching as a problem-solving activity and descriptors include teaching the scientific method, exposing learners to the processes of discovery and that of verification.

The constructivist category views teaching as helping learners construct knowledge. The descriptors for this category are encouraging learners to make interpretations, planning authentic experiences and cooperative learning, addressing students' needs, interacting with students and constructing on students' prior knowledge.

Trumbull and Slack (1991) observed that teachers who have not developed constructivist-oriented ideas were those who have all experienced success in the traditional educational environments. For those who want to change from a behaviourist approach to a constructivist teaching, the process seems a difficult and complicated one (Flores, Lopez, Gallegos and Barojas, 2000).

2. 2. 3 Factors promoting constructivist or LC teaching

An important element of discussion in educational literature concerns the relation between teacher-centred and learner-centred beliefs, whether they stand at two extremes of a continuum or whether they have intermediate approaches in-between (Samuelowicz and Bain, 1992).

A study in The Netherlands showed that many teachers combined both teacher-centred and learner-oriented beliefs. Van Driel and Verloop (2002) studied teachers with different belief structures who opted for specific teaching strategies according to the quality of learners they had to teach. They reserved teacher-directed activities for low ability learners and more autonomous activities for high ability learners.

Other studies show that a range of factors influences teachers' beliefs. For example in a survey that concerned 2200 teachers, Ravitz and Snow (1998) found that teachers teaching in elementary schools were more constructivist than teachers in secondary schools. They also noted that teachers' constructivist practice depended on the subject they taught and their own academic background. This concurs with Nespor's (1987) findings that showed that teachers' conceptions of their subject matter influenced the way they taught the content. Some History teachers, for example, chose not to focus on teaching historical facts and details which were according to them, short-term

memory knowledge. They developed more constructivist goals which they believed could have long-lasting impact on students; these were general learning skills such as organising key ideas.

2.3 Theoretical foundations of teacher-centred and learner-centred instruction

In this section I look into two main instruction methods: teacher-centred method and learner-centred method. This theoretical framework provides a deeper insight of both teachers' beliefs and teachers' practice. Reviewing the different components that constitute teacher-centred and learner-centred approaches helped me to gauge the extent to which our teachers use learner-centred strategies. The advantages and constraints linked to learner- or teacher- centred approaches shed light on the reasons why teachers choose learner-centred rather than teacher-centred approach.

The educational systems of many developing countries are teacher-centred, syllabus-driven, textbook-centred and examination-oriented. TCT is often aligned with 'transmission' or behavioural models of teaching. Though behavioural theories are outdated in many parts of the world nowadays, they still influence our classroom practice. The majority of teachers in our state secondary system use transmissive teaching methods even after having followed a PGCE course (Payneandy, 2002).

2.4 Behaviourist practices in Mauritian state schools

Behaviourism is a theory in psychology developed in the 1920's and 1930's by psychologists (Pavlov, 1927; Skinner, 1938). Behaviourist principles are associated with transmission-based teaching that improves stimulus–response connections (Reeves, 1992). The behaviourist approach to learning considers that complex tasks have to be broken down into smaller routine tasks that need to be mastered sequentially. In contrast the constructivist teacher uses learners' preexisting conceptions, active techniques and constant feedback to help learners construct new knowledge (Weimer, 2013).

Teaching practices in Mauritian state schools are still heavily influenced by behaviourist principles (MOEHR, 2008). Classrooms teachers use rewards as "positive reinforcers" to strengthen behaviours. This can take the form of teacher

praise, free time, privileges or excellent grades but Schunk (2008) contends that it cannot be ascertained whether a consequence is reinforcing until it is presented after a response and behaviour change is observed. “Negative reinforcers” such as punishments are used in the same way to discourage unwanted behaviour. These can be being deprived of games, of free time or staying in class after school hours to complete work. Thus punishments can suppress a response but do not necessarily eliminate it just as the removal of the threat of punishment can cause the response to return.

2. 4. 1 Implications for instruction

Mauritian teachers use both the LC and the behavioural approach and decide when to use one or another. In the behavioural approach teachers decide what knowledge or skills students should acquire and then form the curriculum that will contribute to the realisation of set objectives. Teachers design the instructional environment to teach students directly and systematically those prerequisite skills in different subject-matter domains deemed necessary to ensure their academic achievement. In this approach teachers divide a topic in small sections, teach them sequentially starting with the easiest part and gradually moving to more complex ones. The material is presented to learners in stages. Teachers ensure that students learn all the important concepts through classwork, homework and written assessments. Tasks given to students train them to answer questions correctly in examinations. For our teachers this approach is a time tested one that has worked for generations of Mauritian students.

Teacher-centred classrooms are characterised by more teacher talk than student talk, whole class instruction, over reliance on textbooks and recall of factual information (Cuban, 1983). All students are given the same tasks at the same time under the explicit directions given by the teacher (Daniels, Kalkman, and McCombs, 2001).

Teacher-centred classrooms are far from standardised in actual practice. Classroom practices can vary dramatically between classrooms. Content coverage, classroom activities and teachers’ delivery styles can vary. This is because teachers generally will use only knowledge and strategies they feel they master and have proved successful in their own learning experiences (Glasgow, 1997).

2. 4. 2 Critics of behaviourism

Behaviourism as a theory of learning has been criticised as too limited to capture the complexity of human learning and behaviours. Moreover there is a general and very strong feeling among parents and teachers that teaching should not be only about forming good test-takers in the three R's, teaching should be also about fostering socialisation, developing communication and cooperation skills, self-regulation and critical thinking (Cornelius-White and Harbaugh, 2010). To succeed in ever-changing world learners need to be rational, creative, emotional, independent and interpersonal (McCombs and Miller, 2007). In contrast to the traditional idea of teaching, other models have emerged as having the potential for comprehensive student success.

2. 4. 3 The Process Model

One such model is the Process Model (Stenhouse, 1975). This model focuses on the benefits of the process of learning itself rather than the anticipated outcomes of that process. It caters for the diverse abilities and interests in learners and for their different pace of development.

Teachers using this model have to devise their own curricula and prepare powerful materials ensuring that each learner understands the content. Stenhouse (1975) recommended that content should be selected for its intrinsic worth and that each part of it should enrich other areas of a student's life.

The role of teachers in the model is that of senior learners studying along with their students. The teachers' maturity and knowledge enable them to help their fellow learners by using their own structured understanding of the subject they are teaching. Their philosophical understanding of the subject helps in developing the value stances of students.

The Process Model makes no provision for assessment of students' work. All evaluation is part of the learning experience with teachers assessing critically but without any grading. Hence the model develops the students' capacity to review their own work. Assessment is here the teaching of self-assessment. The success of the

Process Model rests on the quality of teachers. Consequently the model is committed to teacher professional growth.

2.5 LCT and Constructivism

LCT is based on constructivist teaching methods where the student has an active role and is at the centre of the learning process (Elen, Clarebout, Leonard, and Lowyck, 2007; Loyens and Rikers, 2011). Constructivism emerged from an irrevocable break with Western intellectual thought: it was the idea that knowledge does not and cannot have the purpose of producing representations of an independent reality as advocated by behaviourists. Constructivists argue that there are multiple realities constructed by individuals.

There are several types of constructivism, among which are the cognitive, critical, radical, and social constructivism. However they all have in common the idea that learners actively construct their own knowledge in a learning process where they try to find meaning in their experiences (Sener, 1997).

Constructivist theorists argue that knowledge cannot be imposed from others, it has to be formed inside learners. This is because individuals construct knowledge based on their beliefs, their experiences and according to situations in which they find themselves. Thus the thinking subject has no choice but to construct what he or she knows on the basis of his or her own experience (Von Glasersfeld, 2005). What an individual constructs as knowledge is true to that individual only and not necessarily to someone else. As such all knowledge is subjective and personal (Simpson, 2002). Within the constructivist paradigm, context and social interactions are seen as decisive for how the individual learns and develops.

A review of the literature on constructivist teaching strategies reveals some common principles underpinning constructivist teaching (Adams, 2006). There is a focus on learning rather than performance; a consideration of learners as unique individuals and active co-constructors of knowledge, assessments used as acknowledging shared understanding and a teacher-learners relationship based on guidance rather than instruction. Some of the fundamental strategies used in constructivist teaching are detailed below.

2. 5. 1 Constructivist strategies and tools in LCT

Constructivist teaching and learning has heavily influenced learner-centred practices (Schweisfurth, 2011). Constructivism views learning as “an interpretive, recursive, nonlinear building process by active learners interacting with their surround, the physical and social world” (Fosnot, 2005, p. 34). According to this definition, learning is interpreted by the learner’s senses; it is moulded by how the learners shed old beliefs and adopts new ones, by how learners construct their own understanding of the world by reflecting on their experiences. Learning is built by prior knowledge and there is ownership of learning when learners act on the information received (Von Glasersfeld, 2005). This means that the teacher needs to help learners construct their own meaning rather than look for the “right” answer as is practiced in traditional classrooms.

Constructivist learning thus requires teachers to adopt the view that each learner will construct knowledge differently and that these differences arise from the various ways that individuals acquire, select and interpret information (Adams, 2006). Constructivist teaching and learning differ from traditional ones in the way they ascribe construction of knowledge to social interactions with teachers, peers and parents. For the constructivist teacher learning does not occur in a vacuum but within a social context.

Sociocultural constructivist perspectives in education have been largely inspired by the work of Vygotsky (1978) who emphasised the importance of the social as instrumental in the construction and appropriation of knowledge. Vygotsky thought that social environment was critical for learning and that social interaction transformed learning experiences. The social environment influences learning through its tools, its language and social institutions where language remains the most critical tool. This is particularly true in the Mauritian education system where learners who do not master English language, the medium of instruction, are rejected by the system.

The constructivist teacher in our classroom generally starts the lesson with what learners know of a topic. This takes the form of teacher-learners interaction or whole class brainstorming. The teacher then helps construct new learning with strategies like

cooperative learning. For example in a French literature class with twenty five students, each group of five students is given the task of preparing and presenting the main features of the key characters in a chapter. The group leader assigns a role to each member and the teacher monitors each group's progress. All the findings are collated and made available to the whole class for revision purposes.

2. 5. 2 Shifting the focus from teaching to learning

In contrast to a traditional classroom, a learner-centred approach suggests shifting the focus to student learning rather than teaching in order to improve students' experiences (Huba and Freed, 2000). McCombs and Whistler (1997, p. 9) underline the necessity for teachers to know their learners as much as the most appropriate learning strategy for them. They define a learner-centred model of education as:

the perspective that couples a focus on individual learners (their heredity, experiences, perspectives, backgrounds, talents, interests, capacities, and needs) with a focus on learning (the best available knowledge about learning and how it occurs and about teaching practices that are most effective in promoting the highest levels of motivation, learning, and achievement for all learners). This dual focus, then, informs and drives educational decision-making.

In contrast to traditional teaching paradigm where students' learning is part of the reproduction and perpetuation process of the existing knowledge, the LCT paradigm promotes individualised programs to meet the different needs of learners. Personal characteristics are considered. But what seems to me to be the most appealing aspect of LCT for my study is its potential of transforming classrooms by making learning enjoyable and self-rewarding (Mok and Cheng, 2001). The focus of learning is on learning how to learn, think and develop. Some fundamental concepts of constructivist learning are discussed below.

Zone of proximal development (ZPD)

A key concept in Vygotsky's theory, which has been developed into teaching strategy, is the zone of proximal development (ZPD). This is defined as the distance between the actual development level as determined through problem solving under adult guidance or in collaboration with more capable peers (Vygotsky, 1978). It is the belief that learners can improve significantly through scaffolding, in the ZPD: the distance between the lower level where the learner can work independently and the upper level where the learner completes the task with the help of more knowledgeable others. The concept of "instructional scaffolding" is one way of helping learners acquire cognitive mediators through the social environment (Bruning, Schraw, Norby and Ronning, 2004). It is therefore recommended to construct the learning situation socially in the form of group discussions, group work and other collaborative learning projects.

Cognitive change occurs in the ZPD when all actors of the learning community share cultural tools (e.g. language, art, literature, history) and when this culturally mediated interaction is internalised in the learner. However this does not seem as easy as it sounds. Tudge and Scrimsher (2003) think that the concept itself has too often been viewed in a limited way that downplays the individual and the cultural-historical aspects for the interpersonal. The ZPD has been too often translated as merely "scaffolding" with emphasis on the role of more competent others, specially that of the teacher who has restricted his/her role to help learners develop their thinking. Vygotsky (1978) postulated that one's interactions with the environment, the experiences learners bring with them to the learning context greatly influence the outcome. Hence the concept has lost much of its complexity because it has neither considered the learners' input into interaction nor the cultural and historical setting in which the interaction takes place.

Social interaction of learners has the benefit of encouraging the negotiation of shared meaning which often creates a source of cognitive dissonance, important for students to restructure their concepts (Fosnot and Perry, 2005). Thus learners learn to manage and to construct new knowledge with the help of peers.

Hands-on activities

Another tenet of constructivism that has impacted on LCT is that teachers should empower learners by allowing them to discover and reflect on their experiences. Teachers should thus structure situations in a way that learners become actively engaged with the lesson through manipulation of materials in conjunction with social interaction. It is felt that hands-on activities and real life materials can be more effective than textbooks in this context. Instruction also often takes place outside classes on site visits. Constructivists believe that this kind of strategy leads to much more meaningful learning compared to surface memorisation in transmissive approaches (Von Glasersfeld, 1995).

Reciprocal teaching

Reciprocal teaching is another idea that has lent itself to educational applications. Reciprocal teaching is a learning activity where a teacher and a group of learners are engaged in interactive dialogue. Initially the teacher models the planned activity and eventually each member takes turn being the teacher. Reciprocal teaching could be restricted to part of a lesson whereby students enact teaching activities or could cover a whole lesson including questioning, explaining, discussing and implementing classwork. The idea is to help learners acquire effective general and specific skills in different domains.

Assessment for learning (AfL)

There is evidence that the integration of Assessment for Learning (AfL) in classrooms leads to significant learning gains (Black and William, 2013). AfL also called 'formative assessment' is assessment carried out during the instructional process for the purpose of improving teaching or learning (Shepard, Hammerness, Darling-Hammond and Rust, 2005). Black and William (1998b) mention four important strategies in AfL. These are questioning, feedback, sharing criteria and self-assessment.

Questioning allows the teacher to develop both lower-order and higher-order thinking. Providing adequate 'wait time' is also important to enhance the quality of student responses.

In AfL feedback is considered as a dialogue between teacher and learners. The teacher focuses on the student's work whilst in the process of production itself, appraises the current progress, provides personalised and supportive recommendations to improve the work and seeks to positively impact on future student achievement. Students learn to judge the quality of their work and to regulate what they are doing during the process. Teachers also use feedback to make decisions for selecting and adjusting teaching and learning approaches and for remediation.

Sharing criteria enables learners to hold a concept of quality close to that of the teacher. Learners learn how to set and measure success criteria in different kinds of assessments (Black and Wiliam, 1998a, 2009; Nicol, 2010). This develops learners' skill in understanding what a good-quality piece of work involves.

Self- and peer assessment train learners for autonomy. Peer-assessment refers to assessment practices in which students learn to assess the achievements, learning outcomes or performances of their friends (Boud, 1995; Sebba *et al.*, 2008). Self-assessment involves learners reviewing their own work against standards in order to identify gaps and to select strategies to close these gaps.

Thus AfL is advocated for students to develop skills in evaluating the quality of their work and to self-regulate their progress.

Self-regulation

The ultimate aim of LCT is perhaps to transform students into self-regulated learners. Self-regulation requires metacognitive mediators. To this end constructivist teachers train their students to set their learning goals and to monitor and evaluate their progress. Teachers assist students by breaking a task into sub tasks within short-term goals. This support is accompanied by regular teacher feedback (Hattie and Timperley, 2007). Consequently educational implications focus on activities that enable learners

to internalise skills and strategies so that they construct their own autonomy. Self-regulation also involves encouraging learners to go beyond basic study requirements and explore their own interests (Bruning, Schraw, Norby and Ronning, 2004).

Metacognition

Metacognition is the deliberate and conscious control of cognitive activity (Flavell, 1992). In other words metacognitive activities are concerned with “learning about learning”. Metacognition covers two sets of skills. First learners have to understand what skills, strategies and resources are needed for a given task. This involves skills like understanding main ideas and structures, organising material, taking notes, and using memory techniques. The second set of skills demand that the learner knows how and when these skills should be used to ensure successful task completion. Kuhn (1999) claimed that metacognitive skills are essential for the development of critical thinking.

Teachers help in developing metacognitive skills in learners by exposing them to a variety of tasks. For example to help learners improve listening skills, teachers could make students read text of different genres (e.g. narrative, argumentative, prescriptive) and then ask them what they picked up from each text and how. From there the teacher could propose strategies like retelling the story in their own words, highlighting main ideas, visualizing or creating concept maps. Eventually teacher and learners could discuss the advantages of various techniques in any given situation (Weimer, 2013).

Metacognitive skills however do not develop at the same pace and with the same success in all individuals. Students need to have basic declarative and procedural knowledge before learning metacognitive skills. Then it will make sense for them to control what they learn by the strategies they use (Flavell and Wellman, 1977).

2. 5. 3 Critics of constructivist pedagogy

Constructivist learning is not always successful. One explanation provided by Macbeth (2000) is that constructivist principles do not work out as expected when students lack maturity. They cannot discover things for which they are not conceptually prepared. Other studies underlined the epistemological flaw in constructivism for example in the teaching of scientific concepts. Notions of objectivity and the rationality of science are simply brushed away (Osborne, 1996).

Research has also shown that LCT is sometimes implemented at a surface level. Teachers may believe they are using LCT just because they have students work in groups. This may not necessarily be the case. For instance, rather than empowering learners to take their own decisions teachers have been seen to direct learners' decisions even in collaborative activities (Chisholm *et al.*, 2000).

Still other researchers claim that active knowledge construction is not restricted to constructivist instruction, it can take place regardless of the teaching method used, even while attending a lecture (Renkl, 2008; Schelfhout *et al.*, 2006). One must be also cautious when observing classes as superficial observations may not reveal the complexity of classroom interactions. Teacher-centred classes could look like whole class teaching when in fact it is focused on learners' needs just as learner-centred classrooms could be learner-centred in the form, not in substance (Schuh, 2004).

Finally though it is a challenging task, successful constructivist pedagogy is possible provided teachers understand its principles and are supported in their efforts (Vavrus, Thomas, and Bartlett, 2011).

My own experience of constructivist teaching was positive because I had the opportunity of regularly observing the practice of colleagues in workshops at *L'Alliance Francaise* and discussing the activities I attempted in class. I knew that constructivist strategies demanded careful preparation like setting clear objectives, proposing appropriate scaffoldings, constantly monitoring the teaching and learning process and providing constant feedback.

2.6 Characteristics of LCT

LCT moves the focus from the teacher and instruction to the learner and learning. It is a philosophical paradigm shift about how teachers teach based on constructivist theories of learning (Alexander and Murphy 1998; Lambert and McCombs 1998; Weimer, 2013).

LCT is an approach characterised by teaching strategies that empower learners to become more actively engaged in their studies. Learner-centred practice provides learners opportunities to draw on their experiences to construct learning and to take greater responsibility for their learning. McCombs and Whistler (1997) believe that teaching practices based on these principles have no prescribed format except that the principles are typically in contrast to teacher-centred instruction (Wagner and McCombs, 1995). Cuban (1983) identifies observable measures characteristic of LCT. These are more or equal student voice and questions than teacher talk, more individual and moderately sized group instruction, a variety of instructional materials, the right of students to choose learning content and classroom rules, and a physical arrangement of the classroom that allows for working together.

One seminal study, led by Barbara McCombs, which has heavily influenced learner-centred instruction, is *Learner-centred Psychological Principles* (APA Task Force, 1993; APA Workgroup 1997). The learner-centred principles (LCPs) address four general areas: cognitive and metacognitive; motivational and affective; developmental and social; and finally individual differences. The LCPs form a collection of evidence-based principles that guide the active, relational, psychosocial and constructivist aspect of learning (Cornelius-White and Harbaugh, 2010).

The table 2.1 below shows how some of the LCPs are categorised and how they can inform learner-centred practices.

Table 2.1 Learner-Centred Principles.

Influences on learning	Actions of successful learners that may be promoted by teachers.
Cognitive and metacognitive	1. Actively make meaning and self-regulate.
	2. Seek personally meaningful goals.
	3. Link past, present and future learning.
	4. Think critically and creatively.
	5. Direct, monitor and improve their thinking.
	6. Co-regulate learning with the environment.
Motivational and affective	7. Use motivation to learn.
	8. Stimulate internal goals and interests.
	9. Exert effort to sustain and enhance motivation.
Developmental, social and individual	10. Engage developmentally appropriate tasks
	11. Interact and collaborate to learn.
	12. Accept and adapt to their differences.
	13. Take cultural background into account.
	14. Have high goals and seek ongoing feedback.

Source: Cornelius-White and Harbaugh (2010, p. 13).

From the LCPs emerged a theory of education known as the learner-centred model first developed by McCombs and Whistler (1997) and later by McCombs and Miller (2007). The learner-centred model (see p. 35) has a dual purpose: the learner and the learning process. This means that the teacher needs to consider the personal

characteristics of the learner and select the most appropriate teaching strategy for optimal learning.

Moreover learner-centred teachers acknowledge that each learner brings different perspectives to school. They need to understand learners' world and build on existing capacities to reach desired learning outcomes. Learning goals, processes and evaluation are not unidirectional. They are achieved by active collaboration between the teacher and learners who together determine what should be the instructional aims, how to achieve them and how it can be enhanced within each individual (McCombs and Whistler, 1997). This approach regards learning as a life-long process and teachers aim at exposing learners to activities that have the potential of building learners' autonomy extending well beyond the four walls of the classroom (Lambert and McCombs, 1998).

LCT is viewed as a difficult endeavor for practitioners because it is felt that learner-centred practices are not very familiar (Blumberg and Pontiggia, 2011). Still, the literature on LCT documents a number of studies that shed light on its different aspects. As such these studies can be used as a kind of yardstick to assess the extent to which classroom teaching is learner-centred.

2. 6. 1 A LCT philosophy resting on three essential behaviours

For Mostrom and Blumberg (2012) LCT must develop three fundamental behaviours in learners. The first is learners' responsibility: a shift in responsibility for learning from teacher to learner. The second is learners' engagement: teachers have to devise strategies for more active learners' engagement with learning content. The third is learners' use of feedback: learners have to learn to make the optimum use of formative assessments to improve their performance. The authors claim that when learners are given formative feedback, they feel that teachers care about them and about their performance and this motivates learning. It might not be very easy for our teachers used to giving their feedback in marks and grades to change their practice. Providing qualitative instead of quantitative feedback necessitates specific skills that are developed through coaching and practice.

2. 6. 2 A LCT model based on Best Teaching Practice

Cornelius-White (2007) revisited the LCT of APA Task Force (1993) and proposed a LCT model underpinned by what he found to be the most effective teaching practice. He carried out a meta-analysis of some 119 studies conducted in the United States, the Philippines, Brasil, Germany, Austria, UK and Canada investigating the efficacy of learner-centred instruction from preschool to graduate school (Cornelius-White, 2007). The study showed that learner-centred instruction was a key factor in student success. In order to make their meanings clear of what they mean by LCT, Cornelius-White and Harbaugh (2010) distinguish some learner-centred practices from traditional practices in education.

These are presented in the table 2.2.

Table 2. 2 Teacher-centred as opposed to learner-centred practices.

Learner-centred approaches	Traditional approaches
Person centred	Curriculum centred
Self-directed	Teacher directed
Democratic	Hierarchical
Child centred	Teacher centred
Process (how)	Content (what)
Constructing understanding	Covering subject matter
Inquiry based	Knowledge based
Thinking	Memorising
Relationship	Instruction

Experiential methods	Lecture
Cooperation	Competition or individualism
Active	Passive
Learning	Teaching
Criterion referencing	Norm referencing
Showing	Telling
Facilitating	Professing
Libratory pedagogy	Banking model

Source: Cornelius-White and Harbaugh (2010, p. xxiv).

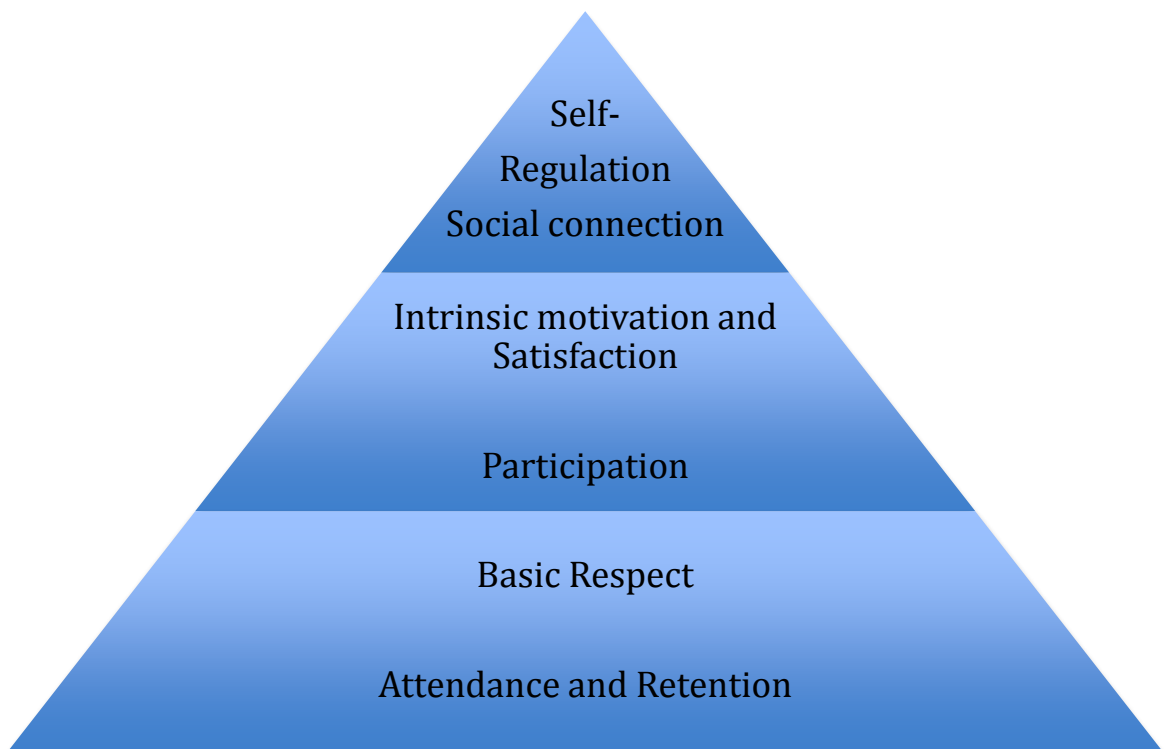
The left column presents learner-centred aspects while the right column presents traditional aspects of instruction. The authors caution that though pedagogical practices may look like opposites they can in fact share many similarities and are often combined by teachers for effective classroom practices. Teachers need to move away from conventional dichotomies of learner-centred versus teacher-centred practices. Cornelius-White and Harbaugh (2010) further add that sometimes LCT suggests some kinds of very flexible or nondirective instructional structure but this can only be offered when learners have gained adequate skills for autonomous learning. They believe that LCT may include various elements seen in traditional teaching when they help the teacher to focus on the central role of learners and learning. The learner-centred model they advocate has been extensively researched (APA Task force, 1993; APA Work Group, 1997; McCombs and Whistler, 1997; McCombs and Miller, 2007) and involves three core principles: encouragement of meaningful learning, challenging higher-order thinking and attention to individual and cultural differences.

2. 6. 3 Three core principles of LCT

The first principle in Cornelius-White and Harbaugh's model (2010) is associated with student engagement, participation and deep learning. The authors define

engagement as “learners’ need, desire and commitment to attend to, participate in, cooperate with, and self-regulate their learning” (Cornelius-White and Harbaugh, 2010, p. 51). The two authors propose a Pyramid of Student Engagement (Figure 2.1 below) categorising six dimensions of engagement characteristics.

Figure 2.1 The Pyramid of Student Engagement.



Source: (Cornelius-White and Harbaugh, 2010, p. 53)

The foundational layers of the pyramid are attendance, staying in class and showing respect for teachers and the learning environment. Participation comes next. It means listening, asking questions, discussing and finding one’s voice for communicating ideas. Participation leads to intrinsic motivation to learn. The highest goals of engagement are building learners’ skills for social connections and self-regulation. Cacioppo, Hawkey, Rickett and Masi (2005) argue that social connections are more important indicators of cognition than the three R’s. When implementing LCT, teachers need to know who their learners are, where they come from and what they bring with them in order to support already existing capacities.

This pyramid in fact seems to fit the situation prevailing in many of our schools. As student absenteeism, shirking of classes and misbehaviour are chronic problems; the fundamental condition for learning would be attendance. Participation and motivation could be constructed with strategies adapted to the needs and interests of learners and finally a coherent programme of LCT could transform students into autonomous learners.

As for the second principle, which is higher-order thinking, teachers can challenge students to think as authorities for themselves, create opportunities where students practice problem solving as the core activity rather than rote learning what others profess. Bloom (1956) proposed six cognitive levels of thinking ranging from remembering, understanding, applying to analyzing, synthesizing and evaluating. The authors remind that though ‘remembering’ is an important cognitive function, it does not lead to deep learning. Understanding and applying information motivate and engage students in their learning. Those two cognitive levels can lead to more complex thinking like analyzing, synthesising and evaluating. In fact higher order thinking, which challenges students to think critically, seems to account for some of the international differences in student achievement (Yoshida, Fernandez and Stigler, 1993). Discussing and listening to divergent views equally help the quality of thought processes and improve them (Bohart, 2004).

The third principle mentioned is attention to individual and cultural differences. Because each school, each learner, each teacher and each context is different, instruction will involve taking into account this unique set of factors (Tomlinson, 2001, 2004; McCombs and Miller, 2007). Ralph (2005) claims that effective teachers acknowledge the uniqueness of each student and incorporate their specific needs into their instruction and differentiate their teaching practices to respond to those needs. Opdenakker and Van Damme (2006) equally concur that successful learning is linked with teachers who undertake differentiation activities, have differentiation material and try to find solutions to students’ problems through discussions with colleagues. However even with the best of intentions and planning, teachers who do not feel comfortable with flexible classroom management will not be able to translate ideas into differentiated instruction (Brighton *et al.*, 2005).

To achieve the third principle teachers and learners collaborate to determine what

learning means, how to motivate students to invest in their own learning and how best to enhance it given each learner's own unique talents, capacities, and experiences (McCombs and Whistler, 1997; Tomlinson and Imbeau, 2010).

2. 6. 4 A LCT experience based on five key changes

Weimer (2013) successfully devised a model of LCT based on five components. Though Weimer's experience is in higher studies, her choice of key concepts in LCT and in the transformation from teacher-centred to LCT is useful in understanding the practice of LCT.

The author grouped her implementation of LCT into five key instructional practice areas that are

- (a) The role of the teacher
- (b) The balance of power
- (c) The function of content
- (d) The responsibility for learning and
- (e) The purpose and processes of evaluation.

(a) The role of the teacher

Weimer (2013, p. 10) considers that successful teaching and learning is not "teaching that endlessly tells students what they should do and what they should know". The teacher should not demonstrate pedagogical showmanship but facilitate learning. It is up to the learners themselves to do knowledge building. So the role of the teacher is fundamental in that it has to change for other aspects of learning to change.

The author claims that in a traditional classroom the role of the teacher has always been to deliver content, to initiate discussions, to choose and review materials for lessons. The learners are there but in this situation they passively observe what the teacher is doing. In LCT teachers work as hard but what is crucial for them is the planning stage where they have to ensure that students are engaged in learning. However critics argue that teachers and learners can take on new roles only when they

have learned how to do it and have gained adequate skills in the process (Chisholm *et al.*, 2000; Macbeth, 2000). Unfortunately our ministry has no policy on teachers' continuing professional development and this has significant impact on classroom practice.

Learner-centred teachers consider their principal role to be that of facilitating the learning of students. Weimer (2013) lists a number of metaphors that have been used to convey the essential characteristics of this approach. Fox (1983) used the metaphor of the gardener who like the teacher creates the conditions that will cultivate growth but it is the students' responsibility to master the content and develop learning skills.

The role of the LC teacher has equally been compared to that of a guide. Guides show the way; likewise teachers inform, advise, warn of danger, support but those who follow the guide have to walk on their own and in LCT classrooms the learner's task is to do the learning.

The concept of "coach" is also used when referring to the facilitative role of a LC teacher. The coach instructs players, designs practices and participates as a co-player. Knowing each player's limits and capacities is essential for the success of a game. Spence (2010) believes that classes should be spaces like playgrounds where learners can try, fail and be coached.

The metaphorical insights of teachers as facilitators, gardeners and coaches focus on what learners do rather than what teachers do. Throughout the process of learning teachers are attentive to how learners react to content and activities. Teachers use this input to adjust the teaching and learning process for successful learning.

Weimer (2013) is describing experiences of schooling where learners are used to LCT. The reality of the Mauritian context where learners are shaped by traditional pedagogies in primary education (Payneandy, 2002) will probably necessitate a different approach to LCT.

(b) The balance of power

Weimer (2013) states that traditional classroom allows for almost complete teacher authority. It is so taken for granted that teachers are often not aware of the power they

have on the learning processes of students. Teachers decide on the content of learning, choose instructional activities, set the pace of learning, determine the conditions for learning and decides on what and how to assess learning (Bunce, 2009). The only thing and the most important one teachers cannot control is whether learners will learn or not.

Nonetheless teachers have the capacity of positively influencing the learning process when they give some control to students. The challenge for learner-centred teachers is to gauge their students' needs and competences and to propose appropriate flexibility and autonomy in the teaching and learning relationship.

Traditional teaching can lead to students' passivity (Palme, 1999). For many students school experience is a tedious and unpleasant one (World Bank, 2006). Teachers in our local classrooms systematically complain of learners' laziness, lack of self-discipline and lack of interest in lessons. Weimer (2013, p. 89) thinks that in front of students' complacency teachers need to reflect on the reasons behind learners' attitudes "Could it be the consequence of the way teachers teach that make learners dependent?" Mallinger (1998) also states that teacher-directed instruction is often justified on the assumptions that learners are not capable of making the right decisions. The author feels that unless teachers take the risk of trying learner-centred approaches, learners may not learn to decide for themselves.

Learner-centred instruction aims at developing autonomous learners but the process of becoming that learner is a gradual one and that process is taught by learner-centred teachers. Carefully planned strategies that train students to set targets, make choices and take responsibilities construct learners' self-regulating skills. In fact in learner-centred classrooms, students become learning partners. They decide on the topics or the modes of assignments they will work on or the topics that will be covered first or even the type of activities that will be implemented. Learner empowerment creates positive classroom atmosphere. Students do not feel the need to challenge authority. There is a stronger sense of belonging to the class and more motivation to work (Pintrich, 2003).

Learners' voice is also sought in collecting students' perspectives on classroom-based problems and decisions and to discuss on how professional practice needs to change

for successful and inclusive learning (Cook-Sather, 2001). Valuing learners' perspectives can be an empowering act, driving learners' sense of engagement in school and instilling democratic principles in learners. Rudduck (1991) who worked extensively in the field of learners' voice believed that student-teacher relationships should be given the same importance as performance. Rudduck and her colleagues argued that students had a key role to play to "construct a new status and a new order of experience for students in schools" (Rudduck, Demetriou and Pedder, 2003, p. 285). Effective learners' voice should include individual learners' identity and the recognition of that identity by teachers. It is in this kind of collaboration that learning is viewed in a broader and more holistic perspective going beyond narrow performance targets (Rudduck and Flutter, 2004).

(c) The function of content

Weimer (2013) believes the function of content to be perhaps the most important barrier to LCT. She explains that whenever the content to be learned is new and complex, it demands so much time that it does not leave much time for other aspects of learning. In learner-centred classrooms where the focus is on how learners will "own" the content, will see how it makes sense and realise its usefulness in the world teachers have to implement activities where the learner will understand and think about the content rather than cover the content (Erickson, 2006; Wiggins and McTighe, 2005; Schaefer and Zygmunt, 2003).

Thus it becomes necessary to change the way teachers think of content. For Wiggins and McTighe (2005) covering refers to a superficial treatment of information. Content coverage is the responsibility of the teacher but this does not guarantee that learners will understand what has been covered (Tomlinson and Imbeau, 2010). In this situation teachers generally feel they have respected their share of the teaching contract and it is up to learners to learn.

In planning their classes teachers must create situations where learners can link new information and experiences with existing knowledge. Teachers must also challenge students' thinking, allow them to ask questions, make hypotheses and test their validity (Fosnot, 2005).

The teaching of new knowledge has to be done in meaningful ways so that it promotes

lasting learning. First it has to be assimilated to the learners' prior knowledge so that the learner can use it effectively in new tasks and transfer it to new situations. In fact teaching and learning opportunities as well as the transformation that follows should correspond adequately to reality (Piaget, 1990). Teachers can help learners integrate new information by a number of strategies like concept mapping and thematic organisation. Encouraging learners to verbalise what the new information means to them and in what ways these can be linked to their interests is another way of making sense of new information (McCombs and Miller, 2007).

The essence of LCT is about using content to develop students' skills for a lifetime of learning. So what is equally important is how to use content to develop specific and generic learning skills (Weimer, 2013). LC teachers aim at developing the sophisticated skills inherent to a discipline and other skills characteristic of self-regulated learners. For example, the amount of knowledge available to everyone today means that teachers need to teach students how to develop information management skills, to identify credible information and to integrate it.

It is common knowledge in Mauritian schools that educators will not take the risk of not covering the entire content in order to give learners the possibility of answering all the questions that come out in examinations. Consequently making time for any type of active learning together with content coverage would probably demand some kind of prowess that will colour LCT differently.

(d) The responsibility for learning

In learner-centred classrooms the responsibility for learning is shifted from the teacher to the learner. Weimer (2013) observed that it was important to start with identifying those teaching practices that tend to make learners dependent and those practices that develop autonomous learners.

Positive classroom learning atmosphere depends on class interactions, comfort, order and respect and this impacts on learners' willingness to assume responsibility (McCombs and Whistler, 1997; Greene *et al.*, 2004). When there is too much control exerted on the learning environment, learners retaliate by misbehaving and it is an endless vicious circle. Weimer (2013) reflected that it was important not to abandon policies and rules straight away but to look for alternatives like interesting assignment,

individual and timely feedback and positive learning relationships. Teachers provide differential treatment to students according to their individual needs. This mode of learning requires that the teacher plans and implements explicit learning skills instruction (Tomlinson, 2004).

One interesting feature to motivating learners to take responsibility for their learning is to expose them to the significance of their actions. Even if this includes learners taking the wrong decisions or no decision about learning it is important for learners to experience the consequences of laziness or lack of discipline. LCT cannot be fostered if teachers make allowances for students coming late to class or coming unprepared. Responsible learners can only be developed by consistency of teacher behaviour, high expectations and high but attainable standards. This teacher behaviour should be uncompromising where learning is concerned.

Weimer's (2013) description of teachers' laissez-faire class policies is a fitting description of teachers' attitudes in a number of our state schools. Indeed many teachers have given up on learners' lateness, absences or laziness. Creating positive classroom atmosphere within a learner-centred philosophy is undoubtedly a real challenge in such schools.

(e) The purposes and processes of evaluation

Evaluation of learning in teacher-centred classrooms has conventionally been for certification, selection or promotion purposes. Though certifying mastery of content is still obligatory, teachers in learner-centred classroom interweave evaluation in the learning process (McCombs and Miller, 2007). The way teachers design their assessments influence the way students learn and the skills they develop. Unfortunately learners are generally interested in their grades not the learning experience. Hence to develop skills that empower learners to regulate their studying and reflect on their results and practice it is fundamental for teachers to involve learners in the process of evaluation (Cowie and Bell, 1999).

LC principles consider learning to be an activity that is co-regulated and peer assessment as an integral part of LCT (APA, 1997). LC teachers provide learners with answers of different quality levels to assess enabling them to understand what is excellent and what is poor work. Despite the difficulty for learners to be objective in

assessing peers' works, this practice helps learners in self-assessing their own work, skills or knowledge and in correcting their mistakes. Both self- and peer- assessments are thus considered learning tools, because they promote skills required for learner responsibility, judgment and autonomy.

Undoubtedly it takes time for teachers to implement evaluation embedded in learning and researchers report that teachers see such approaches as problematic because of the necessity of preparing students for examinations (Cooper and Cowie, 2010). The same comment can be applied to the Mauritian context as all learning focuses around high-stakes examinations and school leaders are equally judged on the performance of their school. Nevertheless LCT can make learning meaningful whilst preparing learners for examinations (Blumberg, 2009).

2. 6. 5 Tensions in LCT

The models reviewed above have all in common the dual focus of LCT which is making learners the main architects of their learning and selecting the best learning strategy for it. Weimer's (2013) model puts the onus on the teacher as agent of change in a learning environment where learners are exposed and responsive to LCT. Teachers' tasks will definitely be harder in the Mauritian system with learners trained in traditional classrooms.

Undoubtedly LCT emphasises a more positive, more democratic and more equitable learner-centred classroom environment (Weimer, 2013; Mostrom and Blumberg, 2012; Cornelius-White and Harbaugh, 2010; McCombs and Miller, 2007). However developing LCT in our context would involve a number of tensions like how to reconcile the role of teacher facilitator versus that of teacher evaluator, expertise in subject matter versus expertise in pedagogy; leading whole class learning versus giving individual attention to learners. But there is hope as researchers have found that grappling with those conflicts tend to challenge teachers to become more creative and innovative with their role as facilitator (Weimer, 2013; Vega and Tayler, 2005; Robertson, 2003).

2. 7 The different perspectives of LCT

LCT has sometimes been described more as a philosophy than a teaching methodology (Brooke, 1982). Some researchers have questioned the actual definition of what learner-centred means. They argue that in its “pure” form learner-centred approach does not consider specific practices found in the global South where classroom interactions look teacher-centred on the surface when actually these are variations of learner-centred adapted to contexts and resource constraints (Croft, 2002; O’Sullivan, 2004). These commentators call for a more subtle approach both to learner- and teacher-centred practices, to their implementation and to the analysis of that implementation. They advocate pedagogy centred on “learning” where teachers implement strategies to help students learn rather than centred on “learner”. In the same vein Blumberg and Pontiggia (2011), reflecting on teaching practices which incorporate both LC and TC elements, suggest analysing teaching practices in stages: teacher-centred, transitioning to learner-centred and eventually learner-centred. This ‘hybrid practice’ has the advantage of breaking the rigidity of purely transmissive teaching.

Other perspectives on LCT have been proposed. Three broad categories that encompass key claims of LCT are the cognitive, the emancipatory and the preparation perspectives. Though advocates of LCT may claim their adherence to one of these perspectives, there can be substantial overlapping between them (Schweisfurth, 2013).

2. 7. 1 The cognitive perspective

The cognitive perspective of LCT is underpinned by theories from psychology, and more specifically by constructivism. It centers on issues like teaching and learning effectiveness, the socially and culturally situated nature of learners, the role and responsibility of teachers and learners in the learning process and the most effective strategies for developing active learners.

2. 7. 2 The emancipatory perspective

The proponents of the emancipatory frame are more concerned with how models of pedagogy advance or undermine the freedoms of learners and develop appropriate knowledge, skills and attitudes for democratic citizenship. The learning process prepares learners for citizenship by constructing their critical thinking, their skills for research and debate, the capacity for empathy, and for upholding responsibility (Davies, 2004).

This narrative is underpinned by theories that consider some forms of schooling as perpetuating class inequalities like Bourdieu's (1986) theory of cultural reproduction. Thus teachers' role is fundamental in providing quality education with justice and equity in the learning process (Giroux, 2012). Schweisfurth (2013) however reminds of teachers' struggle in striking a balance between learners' freedom and curriculum coverage when time and energy go into negotiating classroom boundaries.

2. 7. 3 The preparatory perspective

Teachers in the preparatory perspective have the same concerns as those in the emancipatory perspective except that their goals are primarily to prepare learners to compete in a global market. Consequently they try to include in the teaching and learning process provision for the development of creativity and innovation (Sahlberg and Oldroyd, 2010). In this context ICT is a privileged tool as it allows learners to work at their own pace, in their own time according to their targets, interests and needs and to create their own palette of resources from the Net. This perspective of education has been criticised by one of the founding philosophers of LCT, Dewey, who as early as 1897 declared that education should be considered as a process of living and not a preparation for future living. This preparatory perspective of education that reflects the philosophy of our schools seems today inadequate as a good proportion of our students choose to remain in school yards but out of classes. A humanistic rather than an economic perspective could be more relevant in some of our schools.

2. 8 LCT in the developing world.

Though there are a number of successful learner-centred projects in science classrooms in Africa (Adesoji, 1995; Agbayewa, 1996; Akinbobola, 2004), these are too few compared to the magnitude of the failures of the approach in developing countries. In a number of these countries attempts at transforming traditional classrooms into learner-centred classrooms have failed. Schweisfurth (2011, p. 425) evaluated some 72 research studies over three decades and found that “the history of the implementation of learner-centred education in different contexts is riddled with stories of failures grand and small”. Some have even described learner-centred instruction as “tissue rejection” (Harley *et al.*, 2000). Teachers were unable to make the “paradigm shift” for a myriad of reasons that are detailed later in the chapter.

The case of South Africa is interesting because it is one of the rare African countries where LCT is officially promoted and supported. Nonetheless even in this context LCT is unable to dislodge teacher-centred practices (Chisholm *et al.*, 2000; Jansen, 1999; Taylor and Vinjevold, 1999). In a qualitative study involving eighteen participants from nine schools over a three-year period, Brodie, Lelliott and Davis (2002) conducted class observations with teachers implementing learner-centred activities. They explored whether teachers adopted the form rather than the substance of learner-centred practices and to do this they developed the concepts of forms that were categories like groupings, tasks, and activities. Substance included ways teachers elicited, constructed and developed understanding; ways learners asked questions and how teachers responded to help them develop their thinking. For instance they observed activities like group works, but save for the physical classroom arrangement, it was noticed that teaching remained very directive and focused on content. Teachers did not allow opportunities for the facilitation of their students’ construction of knowledge. They did not take into account students’ interests, prior knowledge, experiences and aptitude (APA, 1997). The conclusion they drew was that teachers predominantly embraced the form rather than the philosophy of the learner-centred approach.

In Malawi also LCT has not taken root. Though teachers are trained to use learner-centred approach in classrooms in order to align with international policy imperatives

(Malawi Government, 2000), there is evidence that learner-centred education has not been implemented in classrooms (Moloi, Morobe, Urwick, 2008; O'Sullivan, 2004; Taylor and Vinjevold, 1999; Vavrus, 2009). Research in classroom instruction shows persistence of teacher-centred practices (Hardman, Abd-Kadir and Smith, 2008). Mtika (2008) carried out a qualitative study involving four trainee teachers in their second year of teacher training practice, and their supervisor. The researcher conducted interviews, class observations and studied the novices' critical incident logs related to LCT. The researcher equally found that LC teaching was not implemented in classrooms. In their interviews research participants ascribed their varying degrees of application of learner-centred education to the teacher education system, the student teacher's personal stance, the school culture, and the National Curriculum. Trainee teachers declared that they were taught to use learner-centred approach but their own lecturers used the transmissive approach and they lacked practice in learner-centred activities. Furthermore the school culture where they were placed was teacher-oriented and trainees had to fit in and adopt the dominant practices for peer acceptance. The secondary school curriculum was congested and examination-oriented and both novices and trained teachers had to face the challenge of implementing learner-centred approach in an educational system based largely on rote learning.

Those teachers equally encountered resistance from learners not used to learner-centred approach. Since supervisors remained only temporarily with novices, learner-centred values and beliefs acquired on teacher education gradually disintegrated and disappeared as student teachers became teachers. Though there is need to be cautious about findings on a study with four novice teachers, these findings resonate with the discourse that certain pedagogical and theoretical concepts promoted in teacher education are not appropriated by trainees or else are not fitted to the system (Zeichner and Tabachnik, 1981).

Likewise LCT was unsuccessful in Lesotho. Moloi, Morobe and Urwick (2008) suggest that the student teachers' professional training may not have prepared them to deal with problems likely to emerge when teachers use LCT in contexts moulded by teacher-centred culture. The researchers evoke the possibility that teachers may not have put in enough effort or else have underestimated the value of group work, altogether a consequence of being under-prepared for LCT.

In a phenomenological study, Mohammed and Harlech-Jones (2008) reported that professionally trained teachers in Pakistan were not able to apply LCT they learned because of the reality of schools. Teachers claimed they got no support from school managers who did not encourage thinking of intellectual quality, who demanded that teachers follow directives, cover the syllabus, use tasks in textbooks and produce results. The researchers believe that reforms in developing countries fail because reformers do not understand the realities of the lives and professional environments of the implementers.

2. 8. 1 Causes of failure of LCT

What is consistent in studies where learner-centred instruction has failed is the range of material constraints identified. First these are limited resources at both school and national level. To some researchers learner-centred approaches presuppose availability of a specially designed environment with space and resources (O'Donoghue, 1994). All schools are not equally endowed and lack of facilities can be a strong inhibitor. These can be infrastructure, class size or teaching materials (Mohammed and Harlech-Jones, 2008; Urwick and Junaidu, 1991). Consequently failure to take the realities of education systems at classroom level into account is often cited as an explanation (Schweisfurth, 2011). O'Sullivan (2002) showed how a learner-centred curriculum project in Namibia failed because policy documents did not take the realities of the teachers' workplace into account and because the model was a top-down decision.

Poor teacher training is another hurdle. Expecting teachers to create a learner-centred environment when they have not been exposed to a learner-centred pedagogical method may be unrealistic (Brodie, Lelliott and Davis 2002; O'Sullivan, 2004). Research in teacher training in six sub-Saharan countries shows replication of didactic teaching and learning patterns from tutor to teacher trainee to pupil (Akyeampong, Lussier, Pryor, and Westbrook, 2013). The multiplier effect works where tutors with little or no school experience transmit content knowledge to very large classes of teacher trainees who in turn repeat the pedagogical pattern as teachers in schools to their pupils. Some studies point to reflective practice as the mediating tool for teachers in the transition, but this in itself is for some a new way of working that must be learnt (Kanu, 1996).

The repercussion effect of high-stakes examinations is equally seen as one major obstacle (Kok-Aun Toh *et al.*, 2003; George and Lubben, 2002). When students' life chances depend on examinations that test students' ability to reproduce fixed body of knowledge, then classrooms become teacher-centred. However this argument is contested by other researchers who claim that in learner-centred classrooms students achieve the learning outcomes more frequently and to a higher standard than those in teacher-centred courses (Fink, 2003; Nelson, 2010; Blumberg, 2009).

SSS in Mauritius have the material facilities expected of a secondary school and teachers have complete autonomy in their classrooms. One common feature with sub-Saharan countries would probably be the absence of in-service training.

2. 8. 2 Compromise to LCT: adapting to contexts

Studies of classroom reform in the global South highlight the need for a more contextualised base for change (Nakabugo and Sieborger, 2001; Sriprakash, 2010; Croft, 2002; Thomson, 2013). For example studies in South Africa show that western models of change founded on conditions of teacher agency do not work (Johnson, Monk and Hodges, 2000). What the researchers suggest is attempting small steps at a time and recognizing the "adjustments teachers can make within the systems in which they find themselves, whilst not denying the need for wider change" (Johnson, Monk, and Hodges, 2000, p. 190).

Similarly a study on LCT in Tanzania (Vavrus, 2009) shows that despite their training teachers face much difficulty in implementing constructivist teaching and learning in their classrooms. The researcher's conclusion as a participant observer is that it might have been more effective to find ways to improve the quality of teacher-centred pedagogy rather than trying to replace it. She adds that a more contingent constructivism, adapted to the material conditions, local traditions and cultural politics of teaching in Africa could be more helpful. Thomson (2013, p. 49) who conducted a small research project in Nigeria on LCT practice also comes to the conclusion that "cultural translation" is important when school contexts are different. He proposes a model where LCT is introduced on a small scale, is adapted to the culture of new audiences and is communicated in a dialogue that respects their conception of the world.

2.9 Summary

The above review shows that while LCT is a strong concept, it can hold different meanings for different people depending on their beliefs and their experiences. LCT is unquestionably a western product. The models described are successful evidence of its implementation in developed countries. The different interpretations of LCT show the potentials of the approach in providing avenues to counteract oppressive education structures. The reasons underlying the failure of LCT in developing countries have been detailed but researchers are suggesting that it has to be adapted to the setting to be effective. The key principle of LCT in the developing world would thus be one of appropriateness.

Though different from other developing countries, the situation of Mauritius is nonetheless complex. On the one hand we have an elitist education system with high-stakes examinations and a rat race towards laureateship in elite schools and on the other hand we have a gradually increasing proportion of disengaged learners in regional schools who come to school but do not learn. There is thus an urgent need today to address the problem of demotivated students and in this regard it is important to explore teachers' understanding of LCT, how they enact it in their classrooms and how they perceive its effectiveness.

Chapter 3

Research design and methodology

3.1 Introduction

As I described in chapters one and two, the main purpose of this research is to understand how teachers view LCT and how they implement it in their classroom. The research questions are:

1. How do teachers understand LCT?
2. How do they implement LCT in class?
3. Why do they choose LCT?
4. What skills, according to them, are required for effective LCT?

Questions 1, 3 and 4 were explored primarily in interviews and focus groups and question 2 during class observations and debriefing sessions. But in general all the research tools complemented each other in providing valuable data to all the research questions.

In this chapter I discuss how I carried out my research into teachers' understandings and practice of LCT. I begin by studying the implications of a social-constructivist approach for the research. This is followed by a description of the design, tools and procedures of the study. Finally I explain how I interpreted the data and addressed issues of reflexivity.

3.2 A social-constructivist perspective

The perspective I adopt for my research is that of social constructivism. Constructivists view knowledge and truth as created not discovered by the mind (Schwandt 2003) and social constructivists argue that the world we experience and the individuals we find ourselves to be are first and foremost the product of social processes (Cromby and Nightingale, 1999). It is my belief that there are multiple

realities as each of us construct our own reality and that there can be multiple interpretations of those realities.

The social constructivist paradigm was appropriate for my research project as it advocates that knowledge and activity are intimately related (Berger and Luckmann, 1991). This directly relates to my overall research that explores first how teachers' understandings of LCT are linked to their beliefs and how these beliefs eventually shape their practice. The social constructivist paradigm equally "assumes a relativist ontology (there are multiple realities), a subjectivist epistemology (knower and respondent co-create understandings), and a naturalistic (in the natural world) set of methodological procedures" (Denzin and Lincoln, 2005, p. 24).

My study aimed at listening to the different ways teachers viewed LCT, observing how they practiced LCT and co-constructing meanings with them. I chose teachers as the focus of my study because implementation of any change in classroom depends "on those who work on a daily basis with pupils taking ownership of new ideas and practice" (James and Pollard, 2011, p. 66). Teachers thus can be powerful agents of change (McKinsey, 2007).

3. 2. 1 The role of the researcher

Creswell (2003) states that researchers choose their research paradigm according to their philosophical assumptions. These assumptions are based on the individual's beliefs about the nature of reality, the position of the researcher and those being researched, the role of values in research and the process of research. Thus background information on the researcher is important to understand how the process of research is construed, rapport with participants shaped and data analysed.

I am an Asian female researcher having worked for twenty-five years as a French teacher in a number of state schools in Mauritius. I am also an examiner of the *Diplome Approfondi de Langue Française* (DALF), an examination selecting students wishing to pursue undergraduate studies in French universities. I am currently a rector in a SSS for boys, one of those schools categorised as challenging by the Ministry and where teachers fear to work.

As a school leader I have moved from “teaching” to “controlling teachers”. I am aware of the rigid hierarchical power position of our system and have always maintained cordial relationships with teachers. My knowledge of Mauritian teachers and classrooms in state schools, of the historical, cultural and professional contexts of my research sites provides me with a unique position to understand data and co-construct meanings brought by teachers. I acknowledge that my “reality” could affect the research process and that how I understand this reality could be distinct from that of the researched. Therefore I systematically verified my own interpretations with those of my participants.

3.3 Design and conduct of the study

The essence of a good qualitative research design involves a rigorous but flexible set of procedures appropriate for the complexity of the social setting to be studied (Flick, 2006). In my context where researchers are perceived as intruders I ensured the smoothness of my study by a careful planning of the different stages of the research process. I negotiated access for my research from different gatekeepers ranging from Ministry (See Appendix 1) to Heads of schools close to my work place. Unfortunately a few rectors chose to ignore my request and one flatly refused access to his school. This forced me to look for research sites further from the geographical zone I had initially selected.

3.3.1 Selecting sample

Qualitative inquiry usually focuses in depth on relatively small samples, selected purposefully. The power of this sampling is that participants are selected on the basis of the quality or the richness of information they bring to the research (Patton, 2002). I chose eight schools that represented the categories of schools we have in Mauritius. There were four girls’ schools, three were regional ones and one was national. There were three boys’ schools, one of which was national and the two others regional. The last one was the only mixed state secondary school existing on the island. National schools have elite students and regional schools cater for mixed ability students. Teachers working in state schools are normally transferred from one school to another after they had taught there for some five or six years.

I opted for a purposive sample tied to my objectives. I needed teachers using LCT and having developed some kind of expertise in their practice. This would help me understand teachers' perspectives and open new doors to this field. I chose my participants from a number of teachers willing to participate in my research. I originally selected twenty-five professionally trained teachers teaching a variety of subjects but in some schools, more participants than expected turned up for interviews. For instance I had six participants teaching French when I should have had only three. As it would have been rude for me to refuse those volunteers, my sample finally reached thirty. I ensured that I had teachers in the core subjects taught in our schools. In all there were twenty-two female teachers and only eight male teachers volunteered as participants. Though female teachers outnumber male teachers in secondary schools, the proportion here does not reflect our reality, which was 3,287 male teachers for 4,727 female teachers in 2012 (Educational Statistics, 2012). Teaching experience ranged from 5 months to 20 years and teachers' age ranged from 26 to 44. To protect teachers' identity codes have been used and the name of schools have been changed. The profile of participants is represented in the table 3.1.

Table 3.1 Participants' profile.

No.	Participant Code	Gender M- male F- female	Age	Name and Category of School type Regional(R) National (N)	Teaching experience in years	Subject taught
1	MG1	M	42	La Tourelle(R)	9	Design &Technology
2	FG1	F	33	La Tourelle (R)	8	French
3	FG2	F	29	La Tourelle (R)	3	Sociology
4	FG3	F	32	La Tourelle (R)	6	Business Studies
5	FV4	F	30	Varangue (R)	9	Computer Studies
6	MV2	M	35	Varangue (R)	9	Chemistry
7	MV3	M	35	Varangue (R)	10	Mathematics
8	MVF4	M	40	Fleurville(R)	15	French
9	FB5	F	35	Fay de Baissac (N)	10	French
10	FB6	F	29	Fay de Baissac (N)	4	Biology
11	FB7	F	43	Fay de Baissac (N)	20	Mathematics
12	FB 8	F	33	Fay de Baissac (N)	8	Chemistry
13	MB5	M	31	Fay de Baissac (N)	6	Physics
14	FD9	F	38	Dupreville (R)	12	English

15	FD10	F	44	Dupreville(R)	20	Accounts
16	FD11	F	33	Dupreville (R)	6	Biology
17	FD12	F	29	Dupreville (R)	3	French
18	FD13	F	36	Dupreville (R)	10	Mathematics
19	FQ14	F	36	Quintal (R)	13	Sociology
20	MQ6	M	26	Quintal (R)	5 months	Travel and Tourism
21	FQ15	F	37	Quintal (R)	11	Business Studies
22	FQ16	F	40	Quintal (R)	17	French
23	MB7	M	39	Bagnol (R)	14	Computer studies
24	FB17	F	32	Bagnol (R)	8	Home Economics
25	FB18	F	26	Bagnol (R)	2	Home Economics
26	FB19	F	32	Bagnol (R)	8	Hinduism
27	FB20	F	32	Bagnol (R)	8	Economics
28	MR8	M	34	Reeds (N)	8	Sociology
29	FR21	F	34	Reeds (N)	3	French
30	FR22	F	40	Reeds (N)	6	English

Teachers' time in state schools is regulated. They may have one or two free periods of thirty-five minutes per day. Consequently I had to plan carefully the day and the time of my visits so that I could meet a maximum of participants for interviews and do not disrupt classes.

The first phase of the project having been more problematic than I expected, I decided to increase my chances of meeting all the potential participants to the study by getting one member of staff to act as facilitator. In fact most of the senior educators posted in secondary schools had been colleagues at one time or another and were helpful. They not only contacted me with a list of teachers interested in the study but they actually made arrangements like choosing days where teachers were more or less free so that I had sufficient time to conduct my interviews.

3.3.2 Questionnaires

I started my research process with the design, development and validation of my first research tool, a questionnaire that would enable me to identify those teachers using some kinds of LCT. Although questionnaires can be very complex, they are perhaps the most frequently used descriptive method in educational research (Cohen, Manion

and Morrison, 2002). When they are well designed, questionnaires provide specific information rapidly. It is an inexpensive method of gathering data, especially for small-scale research undertaken by one person (Bell, 1999).

I designed this questionnaire on concepts fundamental to learner-centred practice. These were teachers' beliefs, teachers' role, learner empowerment, the selection of teaching strategies to construct knowledge according to learners' needs, and the use of formative assessment in classroom activities (Weimer, 2013; Blumberg and Pontiggia, 2011; McCombs and Miller, 2007). The questionnaire explored how teachers planned their classroom activities, who decided on the content and methods to be used in class, what were those strategies mostly used, if knowledge was mostly constructed or transmitted, the place of formative assessments, provision for differentiated learning in lessons and the role of the teacher. My research concepts and questions exploring these concepts are presented in Appendix 2.

One key disadvantage of questionnaires concerns potentially low response rates. (Oppenheim, 1992). To reduce this possibility I chose straightforward and simple questions presented in a logical order. I planned closed questions and included only one open question at the end. Moreover I ensured that it did not require more than ten minutes to fill it in. A 'pilot test' is vital to the questionnaire's success and reliability (Cohen, Manion, and Morrison, 2002). I piloted the questionnaires in my own school, checked and corrected ambiguous questions or misunderstandings that could arise before sending them to schools. Questionnaires with a covering letter were then sent to selected schools for participants.

3.3.3 Semi-structured interviews


Semi-structured interviews are widely used in flexible designs (Robson, 2006) as they allow "a certain degree of standardisation of interview questions, and a certain degree of openness of response by the interviewer" (Wengraf, 2004, p. 62). The semi-structured interviews keep the interview focused on specific issues and give to interviewees the latitude to talk freely of their perspectives and experiences (Freebody, 2003; Patton, 2002). I had some experience with semi-structured interviews with my IFS the previous year but I knew I needed to hone my skills, as the study was more

complex. I piloted my interview questions with ex-colleagues. The responses I got allowed me to review and fine-tune questions for my interviews. The pilot interview proved good training in conducting interviews, transcribing and analysing data.

My interviews covered a period of 12 weeks, from May to July 2013. Prior to the start of the interview, participants were asked to sign a consent form (Appendix 3). I was able to create a good rapport with my participants from our first meeting as I shared with them episodes of my teaching experience (Brinkmann and Kvale, 2005). Explaining my interest in LCT after that was natural.

To prepare my interview guide, I broke down my research questions into mini research questions linked to key concepts of LCT I wanted to explore. Those key concepts were teachers' beliefs, teachers' competencies, learners' responsibilities, the way teachers approached content and the kinds of assessments they proposed. Thus the interview guide provided the topics to be discussed, questions I had to put to all participants and optional ones depending on contexts. This procedure allowed me to probe and prompt thus allowing for the participants' perspectives to unfold as they reflected on the given topic (Mason, 2002).

Below is an example of how I worked out the first part of my interview guide:

<p>Research question</p> <p>How do teachers understand LCT?</p> <p></p> <p>Mini research questions</p> <p><i>Beliefs</i></p> <p>What do you think of LCT?</p> <p>What is your philosophy/ definition of LCT?</p> <p>Do you think there is only one way or various ways of using LCT?</p> <p>Can you give me an example of how you use LCT?</p> <p><i>Knowledge</i></p> <p>Did you learn LCT? How?</p> <p><i>Experience</i></p> <p>Tell me the way you used to teach and the way you do it now.</p> <p>What has been the cause of the change?</p> <p>What, according to you, are the fundamental components of LCT?</p>

The framework used in the semi-structured interviews is found in Appendix 4

The first interviews I conducted took more time than initially planned. Though I had piloted my interviews I had not anticipated interruptions and the noise of lunch breaks. I was fortunate to be allowed extra time to finish my interviews. I was aware of the privilege given to me but I knew I had to respect the time allocated to me. I thus decided to use focus groups around the same questions instead of individual interviews for my following school visits.

3.3.4 Focus groups

Today group interviews are referred to as focus groups (Fontana and Frey, 2008). Notwithstanding the courtesy expected of any researcher for respecting their time schedule, there are two main reasons why I opted for focus groups: first, it allowed me to get to access a greater number of participants within the time that was allocated to me and second, I sometimes found myself with more participants than expected when I reached my setting as mentioned earlier. The skills needed for a focus group were not very different from those for an individual interview except that, as Morgan (2002) recommends, I used a systematic round-table approach getting each participant to respond to one topic. However, sometimes I had to take the role of a moderator trying to stop one or two persons from dominating the discussion and ensuring that each participant had the opportunity of responding to the topics.

Focus group interviewing had its advantage and disadvantage. For example one recurring disadvantage was when some teachers would tend to form their answer on that of their colleagues. Though I felt that in some cases teachers were influenced by colleagues I also was painfully aware that this kind of situations took up precious time and did not bring any new information to my data. I therefore tactfully explained how new comments or examples from practice would enrich the data and this solved the problem considerably.

One interesting aspect of group interview is that it allowed me a deeper insight in the way teachers perceived a topic. For instance in one school I saw teachers strongly disagreeing on the purpose of classroom assessment. One participant was cynical of

internal assessments and stated that learners tended to disregard assessments meant only for formative purposes. He asked his colleagues if there should not be a review of the whole system for its effective use. His colleagues thought differently. I equally watched teachers expressing wonder listening to how one of their colleagues developed her own educational software to engage her students in their studies. In fact the focus group brought together isolated teachers and enabled participants to focus on others rather than the researcher (Kitzinger 1994). Wengraf (2004, p. 205) reminds interviewers to “ensure that the interview ends well”. So at the end of each focus group I said my appreciation of my participants’ generosity. I proposed to email them a transcript of the interview and invited them to send me their written comments.

3.3.5 Class observations

Observation is at the heart of qualitative research. Classroom observations data complemented my interview responses and helped me gain a better understanding of teachers’ beliefs and practice of LCT. Ideas of how and what to observe emerged from literature on class observation (Evertson and Holley 1981; Delamont and Hamilton, 1984) and from my theoretical framework (Weimer, 2013; Blumberg, 2009; McCombs and Whistler 1997; Mostrom and Blumberg, 2012).

Evertson and Holley (1981, p. 90) state that “classroom observation gives us a view of the climate, rapport, interaction and functioning of the classroom available from no other source”. The authors however advise observers to explain to teachers the purpose of their observations beforehand. Thus to alleviate the anxiety and stress I have myself experienced when I had an observer in class, I always arrived early on my research site and had a casual conversation with my participants to reassure them that my research aimed at understanding the way they implemented LCT.

The literature on LCT states that there is no prescribed format for LCT practices and that it can take any form (McCombs and Whistler, 1997; Croft, 2002; O’Sullivan, 2004). Consequently I opted for a holistic framework without any pre specified observation schedule. Teachers’ practice of LCT varied. In one setting the teacher would focus on one learner-centred activity, in another the focus would be on teacher-learners relationships and in another it would be the way the teacher used content. I wrote down a kind of narrative of the teaching and learning process during my

observations. These remained relatively unstructured and I kept an open mind for unexpected events.

After observations I had small debriefing sessions with teachers where I sought clarifications of classroom events I had observed but where my understanding was limited. For example I observed a teacher working on essay writing with 'A' level students where the main teaching and learning tools were toys. The teacher herself came to class with a shiny plastic sword that glowed in the dark. The teacher eventually explained that though the learners would soon go for HSC examinations, they had difficulty understanding abstract themes like war, arms, and violence and could not express their ideas in their essays. In her view, getting the learners to talk about toys they used to play with when they were children or to talk about those of their young siblings they have brought to class was one method that has worked in a "low-performing" school where she had worked. The toys, she said, were used as catalysts. They triggered off childhood memories and helped the natural flow of narratives. The teacher could then use their reality to construct more abstract concepts they needed to be familiar with for their essays. The teacher equally believed that the concrete object helped students to stay focused on their tasks.

Nonetheless I knew that in watching teachers conducting lessons my own observations and interpretations would be influenced by my past experiences and I would use my own teaching approach as a gauge (Sheal, 1989). I thus decided to be as rigorous as possible in checking and reflecting on the interpretations I made of my observations.

I was a participant observer, which fitted my research paradigm, as it was an appropriate technique that allowed the researcher to become to some extent a member of the observed group and to gain entry into the participants' social world. Immersion in the setting allowed me to hear, see and experience reality as the participants did. There were shared meaning and understanding with the participants when it came to interpreting this social world and its subjective meanings and experiences (Marshall and Rossman, 2011; Robson, 2002; Berger and Luckmann, 1991).

3.3.6 My field diary

Writing field notes is important in qualitative inquiry (Patton, 2002; Wolcott, 2001). My diary was a powerful sense-making tool in the process of my study. It contained descriptive and reflective notes. On one side there was the description of what I observed during my numerous visits to schools and the other side I jotted down my reflections on the experience. Writing events after each stage of work was a way of synthesising what I have understood and directing attention to what must be investigated. As Wolcott (2001, p.22) reflects: “Writing is not only a great way to discover what we are thinking, it is also a way to answer lacunae in our thinking”.

Patton (2002) believes that the observer’s own experience is a crucial part of the data so I equally wrote down whatever I thought would help me gain a better understanding of the context, the people and the activities in the setting. Thus I recorded my feelings, reactions, hunches and ideas. I also added emerging interpretations and hypotheses throughout the process.

3.4 Data analysis

My study focused on teachers’ perspectives of LCT, on teachers’ conceptions of learner-centred practice and how they implemented it in class. Thus my study dealt with understanding rather than facts, interpretations rather than measurements, values as much as information (Watling and James, 2007). Though it is acknowledged that qualitative analysis can be highly creative depending on the conceptual capabilities of the analyst, it also requires rigorous, explicit and systematic analysis (Denzin and Lincoln, 2005). The qualitative researcher must imperatively provide sufficient details of the different stages of analysis to allow others to judge the quality of the study.

To guide me in this process I used Miles and Huberman’s (1994) analysis method which consists of three concurrent flows of activity: data reduction, data display, conclusion drawing.

3.4.1 Data reduction

Data analysis and data collection were two concurrent processes in my research. Most qualitative researchers start forming opinions and judgments during the data collection process. For instance after my semi-structured interview with a group of teachers in one school, I wrote what I observed, what I felt and what I inferred in my field note:

FIELD NOTE SRG 7.5.13

Teachers looked very relaxed, smiling. I know some of them as I once replaced the rector there for two months. Teachers' opinion of LCT is interesting; they see it as focusing on the learner rather than the teacher, on learner's prior knowledge, learner's objectives and what the learner really wants. *(This is interesting because I am aware of how much pressure there is for teachers to 'show' improvement in school's performance but here teachers did not talk about exigencies of examinations.)*

Teachers choose LCT for various reasons: conviction that this is the best way to master concepts; learning is more effective when there is group sharing, a significant proportion of learners' input must be present in the lesson for successful learning. *(Conviction linked to outcomes observed in LCT in specific contexts)*

Teachers use a variety of strategies, they put emphasis on hands-on activities, fieldwork, learning to observe, inductive learning. They believe learners get to discover and understand what skills are required for the different tasks they have to perform. Through these methods, students learn to understand where their strengths and weaknesses are. Teachers say they make use of a range of skills: from cognitive to affective... *(It seems this goes further and include also metacognitive skills).*

Implementing LCT takes different routes for different teachers. Activities are group work, personalised work, project work, For one teacher prior knowledge in her context has a special meaning, she has to 'create' the prior knowledge so she gives simple directives on how learners should gather the basic information for her to conduct her class; for another it is TCT first to expose learners to concepts or theories then switch to LCT. Sometimes it is TCT then LCT and coming back to TCT. *(Why back to TCT? Complexity of topic/ students do not understand lesson).* For a sociology teacher linking lesson with learners' reality is sometimes a delicate matter. Discussing

topics like single mother family is a sensitive issue as there are many students from single parent family and this is generally lived as a shame in some cultures.

Teachers assess formally and informally. They assess understanding through listening to members' interactions in groups, through observing how learners manage progress from one stage to another or through written formative assessments. They say classroom atmosphere and body language are important criteria. Interestingly assessments included affective aspect of learning. Teachers take into account learners' likes and dislikes with aspects of the lesson. There is a strong belief that learning will follow enjoyment. (*LCT should be fun- FG1*)

To do LCT teachers select a number of topics according to level of students, they do not cover everything in the syllabus. (*More person- than curriculum- oriented*). Learning pace is very slow. Learning process has to be constantly monitored. (*LCT: constraints or freedom?*)

LCT is possible in La Tourelle because of the reality of the school; some classes have only 10 to 15 students and not more than 3 or 5 in specialist subjects like French literature or Business studies. (*LCT linked to class size*)

There is an emphasis on cooperative learning. Learner power in general is restricted to a few mature and responsible students. (*LCT adapted to context*)

Though teachers do not complain they emphasised how hard it is to plan LCT, the time it requires, the energy they have to put in teaching learners to learn the LCT way. (*Autonomy is relative*). Students choose what and when to learn but teachers feel that their job is to systematically ensure learners understand their targets, that they stay on tasks and that they are monitored. "The learners have to be accompanied throughout the learning process, else they disconnect" (MG1). Teachers believe learners do not become independent because of long years of passive learning in primary and lower forms in secondary. Critical thinking is a problem because of this lack of independent work. (*LCT ensuring basic understanding? What are the necessary conditions for LCT to go one level higher?*)

The field note allowed me to make sense of my interview and to reflect on the focus of my study. Did it answer my research questions, and to what extent? I reread both my research questions and examined my notes to uncover missing or incomplete data.

My first interview did not contain much data on the skills needed by teachers for effective LCT. I was able to review my interview schedule and include questions that I missed in subsequent interviews. I equally managed to fill in missing information when I revisited my participants for class observations.

In the course of the interview itself, theories started to form and as soon as the first data were collected, ideas about possible analysis emerged. Those hunches, emerging hypotheses were noted down in brackets in my field notes. Watling and James (2007) suggest that these may be discarded later or may become key elements of the final analysis.

Data reduction is a “sequential and continuous procedure” (Walliman, 2001, p. 262) of selecting, focusing, simplifying, abstracting and transforming data into a conceptual framework. I made a first list of codes according to the themes I studied in my literature review, my conceptual framework, research questions and hypotheses. I read through all the interview transcripts, class observations and field notes. I identified segments of data, which seemed meaningful in some way and attached codes and memos in the margin. Codes are related to research questions, concepts and themes (Robson, 2002) and memos could contain summaries, hypotheses, and questions. During this process of first-level coding (Miles and Huberman, 1994) codes were applied to my first transcripts and studied for its appropriateness. Some codes worked some were changed. A revised list including more ‘emic’ level codes, closer to participants’ responses was drawn for early analysis. (See example in Appendix 5).

I then reviewed my data for recurring regularities and patterns, coded segments according to their ‘convergence’ and grouped them in categories. Coding categories “are a means of sorting the descriptive data you have collected...so that the material bearing on a given topic can be physically separated from other data” (Bogdan and Biklen, 2003, p. 161). Categories were then compared within them and between them. This second-level coding grouped the initial coded segments into a smaller number of themes.

For example, to study how teachers viewed LCT, a sample of responses was selected for coding. In my first interviews LCT was viewed as a process where:

- learners are at the centre of the teaching and learning process (5) (a)
- learners' voice is heard in lessons(2) (a)
- learning is activity-based (4) (d)
- learning is personalised (3) (c)
- learning is collaborative (4) (c)
- learning is authentic (2) (e)
- teacher is the guide (8) (b)
- teacher's role is to develop understanding (3) (d)
- teacher role is to develop independence (1) (e)
- teacher takes into account learners' environment (2) (c)
- teacher takes into account learners' likes and dislikes (1) (e)
- TCT is essential to lead to LCT (2) (f)

Similar ideas were grouped together and tallied. The numbers of responses for each idea are in brackets. This first set of data could be collapsed into 5 main categories:

- Learners construct their own learning (a)
- Teachers are facilitators (b)
- Learning process has a social and cultural dimension (c)
- Learning process has a cognitive and metacognitive dimension (d)
- Learning process has an affective and emotional dimension (e)
- Hybrid teaching and learning (f)

Ideas were then linked to the categories. For example the first two groups of ideas went into category (a). Thus this phase of data reduction in the process of analysis enabled me to reduce the huge amount of data collected and laid down the foundation for further analysis.

3.4.2 Data display

The visual format of data displays presents information in a systematic way and helped me to draw valid conclusions through comparisons, contrasts, patterns, trends or intensity. The major themes that emerged from my data and the relationships existing between them were structured. This was a first step towards conclusion drawing while achieving data reduction. Data displays enabled me to view data selected from all sources coherently, then to focus on a full data set, which is linked to

research questions. Hence the use of matrices was one way of achieving data reduction, of organising and displaying “what the data are telling you” (Robson, 2002, p. 476). One of my first conceptual matrices where I grouped specific data to general concepts is showed in Appendix 6.

3.4.3 Conclusion drawing

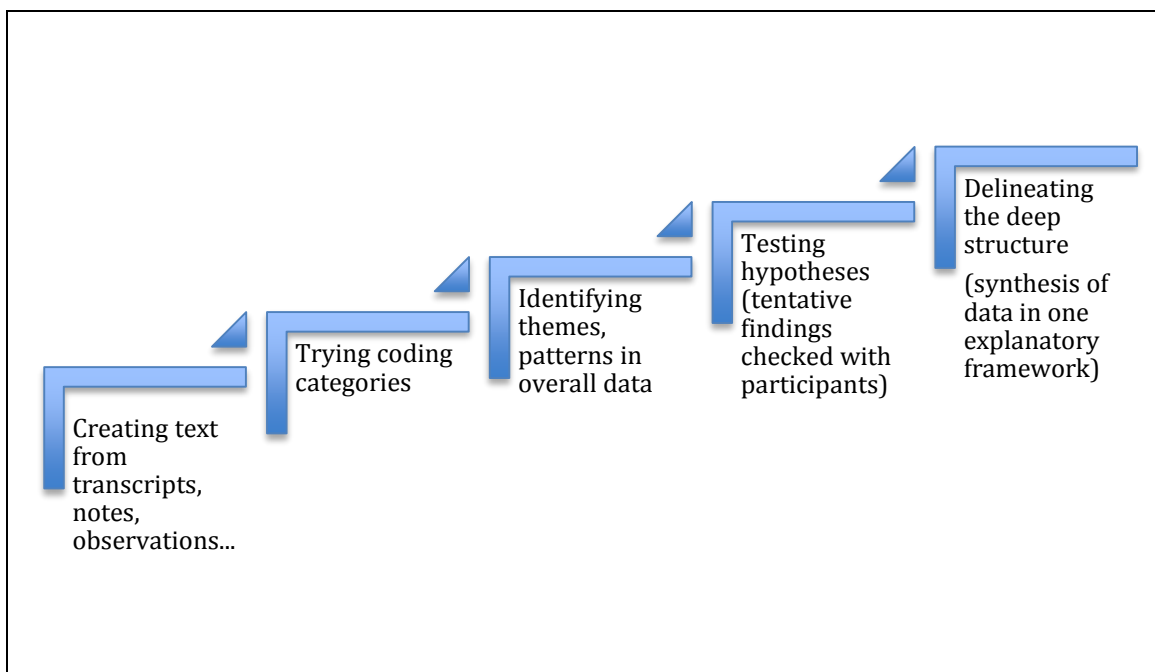
Generating meaning from data went from a descriptive to an explanatory analysis, from concrete to abstract. It started with the simple coding, pattern finding, to conceptual clustering and budding conclusions. The next step moved the analysis to a more abstract level. It involved subsuming particulars into the general, linking interpretations to broader constructs and to theories. I considered the different data tool I had used and the particularity of each. For instance I was aware that I had to weigh the influence of forceful participants’ data when data from focus group were analysed. I often followed my intuitions when making conclusions but I crosschecked them with colleagues and participants. While taking a step back to get a more holistic perspective of my findings I noticed the different forms teachers gave to LCT in state schools. I found the idea of using metaphors appealing and useful as a way of making sense of participants’ experience in LCT. For instance one interesting participant, one of the “outliers” (Miles and Huberman, 1994, p. 269) constantly referred to his classes at the beginning of the academic year as an hostile environment, students would not respect their “contract”, he had to look for that “margin of classroom freedom” which would allow him to “negotiate” with students for “piecemeal” objectives. He would meet students’ “demands” on certain “conditions”. This was not the usual response I received on LCT. So I thought of using the metaphor ‘the Negotiator’ for this new breed of LC teachers and placing him at one extreme of a continuum with more “conventional” types on the other side.

The example given above was one piece of data that conflicted with my readings and vision of LCT but the teacher explained his philosophy of LCT during one class observation. To any conservative inspector the teacher would have appeared ineffective as the class which he was supposed to prepare for the forthcoming “O’ level examinations had sub groups doing different tasks at a very slow pace. A couple of students at the back gave the impression they were working but in reality their

copybooks were blank. In the debriefing session afterwards, the teacher explained that learners must be first “prepared to learn”, that he had to give time to some students to reflect on what they really wanted to achieve and until that time comes he preferred to have them in front of him this way rather than shirking class. He was confident he would eventually “gain” them.

I looked for a model that would help me in the analysis process and as Carney’s (1990) model (figure 3.) seemed appropriate, I adapted it for my own study.

Figure 3.1- Carney’s (1990) model of data analysis (adapted)



The model allowed me to move step by step to analytical abstraction. The process of coding, categorising texts, studying trends and patterns and testing findings was clear and useful. Integrating the data into an explanatory framework became less daunting.

3.5 Trustworthiness

Trustworthiness is the concept used in qualitative research to translate the idea of soundness or “validity” of research (Marshall and Rossman, 2011). The concepts of

“validity” as well as that of “reliability, objectivity and generalizability”, borrowed from quantitative approaches have been challenged as inappropriate for qualitative research (Guba and Lincoln, 1985). Qualitative studies put emphasis on qualities of entities and on processes and meanings that are not experimentally examined or measured (Denzin and Lincoln, 2005). As such qualitative researchers feel that the traditional criteria of quantitative research cannot be used to assess the socially constructed nature of reality, the relationship between the researcher and the phenomena or the influence of the setting on the inquiry.

Consequently I adopted Guba and Lincoln’s (1985) alternative concepts of

- (a) Credibility (in preference to internal validity)
 - (b) Transferability (in preference to external validity/generalisability)
 - (c) Dependability (in preference to reliability)
 - (d) Confirmability (in preference to objectivity)
- which seemed more appropriate to judge the soundness of a qualitative study.

(a) Credibility

Credibility is the power to elicit belief (O’Leary, 2004). Ensuring credibility is one of most important factors in establishing trustworthiness (Guba and Lincoln, 1985). One way to address the criteria of credibility is to employ specific procedures such as the data gathering sessions and the methods of data analysis that have proved successful in previous similar studies. De Kock, Slegers, and Voetend (2004) used interviews and observations to conduct a comparable study in 2004 in The Netherlands, Sriprakash (2010) used observations to study teachers’ practice in rural India; Branda and Moore (2011) equally used similar strategies to explore teachers’ constructivist philosophy and practice in the US. As for me I have tried to achieve credibility by designing and presenting a disciplined and rigorous approach. I ensured that my selected methods were used in a systematic way so that findings were as consistent as possible.

(b) Transferability

The concept of 'transferability' is more appropriate for small-scale qualitative studies. Though the findings from the study do not lend itself to generalisability, they could be relevant to similar settings. I have provided detailed description of my research contexts for readers to decide whether the findings would be beneficial in other contexts.

(c) Dependability

Dependability shows the quality of the study through the methodological protocols followed and the system designed to account for research subjectivities. My subjectivities were made transparent in field notes, examined and managed through member checks and peer-debriefing sessions.

(d) Confirmability

Confirmability is the process through which the researcher demonstrates how findings emerged from the data. I have indicated from the very beginning my beliefs concerning my research paradigm, the techniques I found appropriate for the study, the different stages of the research process from the selection of data collection instruments, the different levels of analysis to the interpretation of findings. I equally acknowledged my own subjectivity as researcher and how I tried to manage it.

Specific strategies can also be used to increase the worth of qualitative studies (Miles and Huberman, 1994). I interweaved the following principles in my research:

(e) Prolonged engagement in the research setting

Prolonged engagement is believed to be important in order to get a deep understanding of the setting and to establish the necessary relationship between parties (Guba and Lincoln, 1985). In fact I made several visits to schools before starting to collect data. This allowed me to get a glimpse of the culture of the school, have informal chat with the staff and establish a relationship of trust between us. However this kind of situation can be sometimes uneasy when visits are too repetitive as I

mentioned earlier. I feel researchers need to know when to leave the setting in order not to be perceived as an intruder.

(f) Triangulation

Triangulation is the process of verifying the credibility of data. Generally the researcher tries to confirm findings by comparing data from different data sources, methods and researchers (Denzin, 1978). I demonstrated the trustworthiness of my research through the use of different data-gathering methods. Data collection used in my study went from semi-structured interviews to class observation and back again to informal interviews. It allowed me to look for missing information as much as verifying and understanding what was heard in interviews or what was seen in class observations. This process of moving to and fro the different sources of data is a strategy that helped me show the credibility of data interpretations. Thus conclusions extracted from interviews were studied in relation to those of classroom observations. This eventually led to the process of triangulation whereby data from different sources were cross-examined in a systematic way.

(g) Developing an 'audit trail'

An audit trail is important because it allows readers to trace the course of the research and to determine the value and trustworthiness of the research and the findings. One of the aims of the detailed methodological descriptions in my report in the various stages of the research is to make clear how decisions were taken and procedures followed.

(h) Member checking

Member checking is one way of verifying with those involved in the research whether the researcher is on the right track. I systematically approached my participants with the transcripts and the first analysis of my interviews when I went back to them for class observations. I managed to get to school early and to have a discussion with those who had no classes. Feeding feedbacks to participants, discussing meanings or clarifying understandings with them is an important aspect of qualitative research

(Marshall and Rossman, 2011) and an essential one in the social constructivist approach. This checkout process was a really delicate issue as I was apprehensive of teachers' attitudes in the beginning and I was worried lest they would be angry or offended by my interpretations. Fortunately teachers welcomed this dialogue that became moments of shared reflection. This process transformed my participants into co-constructors of meanings and often provided further data to my study.

(i) Peer debriefing

Peer debriefing is generally helpful in refining methods, strengthening analysis and interpretation. I regularly discussed my project with a group of colleagues equally working on their thesis. Discussions on research paradigms, choice of data gathering tools and the analysis process helped me to clarify my own understandings. Getting peers to audit my field notes, to check if my coding was coherent with my research questions and concepts or to discuss my interpretations gave me a kind of reassurance that I was on the right track. Reviewing ethical issues together enhanced my confidence in decisions I took.

3.6 Engaging in reflexivity

Reflexivity in research refers to the ability of the researcher to critically reflect on the research process. The aim is to enhance the credibility and rigour of the research process by being open and honest about the researcher, the researched and the process (DeSouza, 2004).

Qualitative researchers have to acknowledge that the researcher is the major instrument for data collection and analysis. Aware of the pre-conceived ideas as well as the assumptions I bring to the analysis process (Mauthner and Doucet, 2003; Alvesson and Sköldbberg, 2000) I embarked on my reflexive journey with a reflection on who I am and how I stand in relation to my research. I am a woman, the rector of a state secondary school, conscious of the power differentials in our education system. Sharing teaching experiences with my participants was an important part of the process of securing their trust.

My long teaching experience, the workshops I have followed at the CIEP as a teacher

and in London as a doctoral student together with my readings have shaped my personal value system. Though I acknowledged that schools were no longer what they used to be and teachers had to adapt to a new generation of learners, I knew that my values would influence my interpretation of data.

Hence writing down my reflections in my field diary throughout the data collection and analysis process and reading them afterwards helped me to monitor the way I constructed understandings, to check and acknowledge my own subjectivities.

3.7 Ethical issues

The power to produce knowledge makes the researchers unconditionally responsible for the integrity of the research process and for the protection of participants (O’Leary, 2004). This means getting ethics approval, ensuring responsibility for the researched, addressing subjectivities, rendering accurate research accounts and developing necessary expertise.

I was responsible for participants’ rights, their informed consent and their physical and intellectual protection. Being researched can create anxiety or worsen it (Hammersley and Atkinson, 1995), the more so in a culture where teaching practices are not observed. So, from the outset I decided to provide detailed information on myself and my studies to gain the trust of teachers. This trust was a privilege and a burden at the same time. For instance, I recorded in the course of interviews how some teachers took risks in the way they led their classes. At best this knowledge was problematic and at worst detrimental to the reputations of teachers, rectors, schools and the Ministry. While looking for ways to address this kind of ethical dilemma I knew I had to ensure that participants as well as settings were protected through anonymity and that I did not jeopardise subsequent research projects (Simons and Usher, 2000).

Throughout the data gathering process I showed participants how I translated and interpreted their opinions and classroom practices, verifying with them whether the interpretations were correct or needed modifications. Teachers were equally aware they could discontinue with the research at any time and whatever they said or did

would not be used unless they gave their permission.

However I sometimes felt that I was the only one benefiting from what the participants offered in terms of information and time. It is true that often after the focus group participants expressed their satisfaction of the opportunity of sharing their views with their colleagues and me. Still when I went to one setting for the third or fourth time I was nervous. Was I not exploiting teachers? I may gain prestige and status with that study but what about my anonymous participants? Punch (1986) advises to resolve all moral and ethical dilemmas in the field. Discussions first with participants and later with doctoral classmates on the necessity of conducting research to advance knowledge helped me get over this uneasy period.

Producing an ethically responsible research starts with the formulation of the research questions and as Mason (2002) suggests, clarifying intentions behind the purpose of the research, examining implications of the study and thinking of who might be interested or affected by the study is a first step of the way. The data collection process and the analysis stage need to be coherent and transparent. Ethical issues remain after the study is completed as for example, participants have to agree with interpretations and other details. In fact ethical considerations permeate everyday interaction with research participants and with data.

A note on referencing data sources

With a view of facilitating the reading of data presentation taken from different sources, codes have been developed to indicate the type of data being sourced and the category of participants to whom they belong. I have referenced different types of data excerpts as follows:

Ex: (EI-FG2)

E Participant in the emancipatory perspective of LCT

I Excerpt from interview

FG2 Participant's code

Ex: (CF- MB7)

C Participant in the cognitivist perspective of LCT

F Excerpt from focus group

MB7 Participant's code

Ex: (CD- FD10)

D Excerpt from debriefing session

Ex: Reflection - Class observation 11

Classroom observations are referenced as 'class observation' followed by a serial number for its entry in my field diary.

3.8 Summary

This chapter identified the research methodology adopted for this particular study. It examined the significance of the social constructivist paradigm for my research. It was important for me to construct understandings of a phenomena occurring in the social world, with participants and using qualitative methods to describe, decode and translate meanings. I described and analysed the various stages of my research process, the selection of my data gathering tools, my research sample and the negotiation of access to research sites.

I demonstrated how I planned and carried out my interviews, addressed issues that cropped up during the process and looked for alternative data collection instrument. I explained how I carried out classroom observations systematically spending time on the setting before observation and making time for debriefing sessions after observation. I detailed my data analysis process that comprised of data reduction, data display and conclusion drawing. In the end of the chapter I considered the trustworthiness aspect of my research, my engagement in reflexivity and my commitment to ethical standards.

Chapter 4

Teachers' understanding of LCT

4.1 Introduction

This chapter presents the findings to the first research question. The research questions central to the present study are:

1. How do teachers understand LCT?
2. How do they implement LCT in class?
3. Why do they choose LCT?
4. What skills, according to them, are required for effective LCT?

I developed a number of questions (see Appendix 4) to answer the above research questions. I collected data through interviews, focus groups, class observations and debriefing sessions. I also included reflections from my diary after class observations. A number of themes emerged from my findings. The main ones are: professional courses, cognitive and emancipatory perspectives, learner empowerment, constructivist strategies, and teachers' multiple roles. The themes sometimes provide insight into only one question and sometimes they overlap pointing to relationships with other questions.

My first research question was: "How do teachers understand LCT?" and the following themes that informed teachers' understanding of LCT will now be considered:

- Understanding the significance of LCT from professional courses
- Emergence of two perspectives of LCT: the cognitive and the emancipatory
- Learner-centredness in LCT perspectives
- The cognitive perspective of LCT

- Giving power to learners: the divide between cognitivist and emancipatory teachers
- The emancipatory perspective of LCT

4.2 Understanding the significance of LCT from professional courses

For quite a number of teachers it was their professional training courses that exposed them to LCT and convinced them of its value:

I am a new teacher. I had no experience before. I spent a full year at the MIE learning all about LCT. During that time you construct your beliefs on how teaching should be. Then I entered the profession with that philosophy that my class needed to be LCT. This is what I have learned, what I have found in my studies to be best. (EF-FB18)

Teachers learned why teaching and learning revolved around learners:

The courses I followed taught me what teaching was really all about. It was about students, the way they understand, their learning styles, their problems. It was only then that I came to understand why I had to make the learner the centre of teaching and learning. (CF-FB5)

They stated that their exposure to LCT was purely theoretical:

We have been learning theory which we have tried to some extent to use in class. (CF-FR22)

Nevertheless teachers understood how with LCT they could “make a difference in learners’ lives” (EF- FQ16) by shifting “the focus from teaching to learning” (EI-FG1) and by developing relevant skills that would empower learners for challenges inside and outside classrooms. FD10 explained her concept of LCT:

LCT also concerns life skills... most of the time we deal with solving problems, finding solutions... ..but at the end we make sure that the child is able to develop analytical skills, to see alternatives that can come to them in real life... lots of learner-centred strategy are real life skills. (CF-FD10)

Some teachers read that LCT catered for all kind of learners and espoused its philosophy of “equity, trust and power sharing” (EI-MVF4). Teachers saw that it provided deeper insight in “the art of teaching” (CF-FB5). They believed LCT to be an effective approach as it considered learners as distinct individuals having a specific history and it provided a whole range of strategies that could be “adapted to learners’ needs”. (CF-FB6)

A number of teachers used LCT to meet learners’ expectations. They disregarded the democratic principles of LCT to help potential laureates:

They have questions they will not put in front of their friends they would come to you as discretely as possible then ask you to discuss their questions alone with them not in front of others... What they want to know is what can they do more to make that small difference to become a laureate. (CF- FR22)

Thus besides their professional training, it seems that teachers’ personal beliefs equally impacted on their understanding of LCT.

As the study progressed, teachers’ responses showed two conceptions of LCT according to two different perspectives. The majority of teachers viewed LCT in a cognitivist perspective. They saw LCT as an approach where learners constructed and used knowledge more effectively than with lectures. A few teachers viewed LCT in an emancipatory perspective. They felt that LCT could reconcile demotivated or alienated learners with schooling and focused on helping those students to reconstruct themselves as learners according to their wants and needs.

4. 3 Emergence of two perspectives of LCT: the cognitive and the emancipatory

For teachers in the cognitive perspective, the philosophy was achievement-oriented. Whether they worked in national schools with high-ability learners or in regional schools with average-ability students their aim remained the same. They wanted to improve their students’ learning in order to enhance learning outcomes. A teacher from a national school declared:

LCT as a mode of teaching and learning has to be geared towards students' improvement in examinations. (CF-FR22)

This is echoed by a teacher in a regional school:

When I do LC, I do that with result-oriented at the same time. I am not just going with nice theories I also ensure that when planning my work, I make provision for consolidation of knowledge at exams time. (CF-FQ15)

Teachers in the emancipatory perspective worked towards re-engaging learners with schooling and studies. It was more a process of recuperation of a small proportion of learners in a school or of a whole class of repeaters who had given up on learning. Teachers in this study have identified these students as those who at some time or other have not been able to keep up with the demand of the system. One of these teachers stated:

Teachers must be aware that students in this specific school are different. This is how I start the year: I expect that students will neither do their classwork nor their homework, that they will be rowdy in class. I equally know that many are not interested in coming to school to learn and that others are in a school they do not like, in classes they do not like and forced to study subjects they are not interested in. Teachers have to be prepared for a hard time but should not loose faith. (EI- MVF4)

Whether in the cognitive or the emancipatory perspective all teachers first defined their understanding of LCT in terms of learner-centredness.

4. 4 Learner-centredness in LCT perspective

Both cognitive and emancipatory perspectives however consider the learner as the focus of teaching and learning and teachers explained what it meant to them to place the learner at centre stage. For them this included

- (a) Shifting from teaching to learning
- (b) Knowing who the learner is

(c) Encouraging learners' views

(a) Shifting from teaching to learning

All teachers using LCT believed it was fundamental to understand their learners. FG1 declared that she had to know what her learner wanted to do, what she wanted to learn and to achieve in order to help her reach her objectives. For those teachers the first condition of LCT was that learners should

- ...be at the centre of the teaching-learning process. (EF-FQ16)
- ...be the main actor. (EI-FG1)
- ...have the key role. (CF-FF6)

Concurrently the focus should shift from teaching to learning. FG1 teaches French in La Tourelle, a small regional school and she defined LCT as an approach where “all strategies are geared towards learning rather than teaching process”. For her colleague teaching sociology LCT meant giving individualised attention to learners. She declared:

There is more attention, more correction of work, more of explaining things individually. (EI-FG2)

Teachers equally said that the role of the teacher in LCT becomes a subsidiary one in the process. The learner goes front stage and the teacher “comes second”. FQ14 teaches sociology in Quintal, a regional school for girls and she declared that in her class, decisions on what to teach and how to teach do not rest solely on the teacher as in traditional classes. Teacher and learners discuss selection of content and mode of instruction.

Teachers said that LCT values what students bring as knowledge to school. FB18 teaches fashion and fabrics in Bagnol, another regional school for girls. She told of how she instilled a spirit of sharing in her class:

In a class of embroidery, I asked students to come with different stitches, as I do not master them all. There were stitches I didn't know of and I learned from them... they looked a bit puzzled that I did not know of what they knew. I told them I did not know everything but they reacted very positively and all wanted

to teach me... you should put the needle here, take it out here. At the end of the class I made it a point to thank them for sharing what they knew with me. And I encouraged them to come forward if they wanted to share knowledge. (CF-FB18)

Compared to traditional teaching methods, which is a one-way communication, LCT involves both teacher and learners. FR21 a French teacher in Reeds, a national school for boys, sees learning as a “two way traffic”. She said she had as much to learn from her students than they from her. Very often in the course of discussions or simply brainstorming she has been able to enrich her own notes with interesting arguments brought in by her learners.

Thus classroom instruction is no longer the banking concept of education where the teacher plays the expert (Freire, 1970). Teachers interviewed above claimed that they generally planned lessons according to what learners bring as knowledge to the classroom. In their philosophy of LCT teachers placed learners at the heart of the teaching and learning process, focusing on the thoughts, activities and capabilities of learners rather than what teachers would be doing. They said they involved learners in decision-taking and created opportunities for learning and sharing experiences. The process also showed how teachers and learners could be co-participants in learning. However for learning activities to be relevant teachers thought it fundamental to know who the learner was.

(b) Knowing the learner

Most teachers agreed that knowing their learners was essential but they did not all agree on which aspects of the learners’ identity were relevant to teaching and learning and consequently should be known to teachers. For some teachers knowledge of learners should include knowing the first name of students, their family environment, their likes and dislikes.

FD10 teaches accounts in Dupreville, a large urban regional school for girls. She firmly believes that teachers need to know as much as possible on learners’

background to understand them and that teachers should call learners by their first name. She has a strategy for when there are too many students:

Even if you do not recall all the names just asking the student to remind you of his or her name then using that first name...the child feels important... it is his individual identity. You are treating him or her personally, individually. (CF-FD10)

FD12 who teaches French concurred with her colleague:

I have seen that when you call a student by his name, he is more motivated, he feels important, and he is more engaged in class. He comes out of the anonymous mass. (CF- FD12)

FD13, a mathematics teacher, explained how knowing where her students came from and how they have been brought up helped her understand problems encountered in class:

Knowing the background of the learner is important, knowing the culture is also important. For instance I worked in a rural area...I noticed that the way learners are brought up and the environment of the learner both have an impact on them. In the school where I used to teach, learners were not able to express themselves. At first I could not understand why they would not answer any of my questions...they looked frightened, introverted. It was much after that I came to know that these girls have been brought up this way, not to speak, not to express themselves. Language and specially the use of English or French only exacerbated the problem. (CF- FD13)

Knowledge of the learner for some teachers involved creating a trusting relationship between all the members of the classroom community. FB19 declared that it was essential for her to create that bond the more so because of the specificity of her subject, which is Hinduism:

It is important to create a kind of bonding with students and having their trust... because whether you are a Christian, a Hindu or a Muslim student

there are topics which may lead to misunderstandings. So the trust between my students and I is paramount. (CF- FB19)

FD12 also declared that she had to gain the trust of her learners in order to select her teaching approach. She said she starts the year by establishing dialogue and probing learners' interests and needs. She described this phase:

I need to find out where my students have problems for me to select the right strategy and this takes time. We have in general mixed ability students and finding what will really engage them in class is a painstaking process, it requires patience, else I could have used TCT and this is straightforward and simple. (CF- FD12)

For FQ16 studying the profile of her students is vital. She explained how she does it:

By going into the children's file. By looking at the parents' occupation. I use this information. I have been here the last six years and I know them all. (EF- FQ16)

For teachers in Fay de Baissac national school for girls, knowing the learner means knowing where the learner is in her knowledge construction. Teachers use simple strategies that provide them with immediate information. One mathematics teacher said:

We keep on questioning or sending them to the blackboard...we know then where they are in their understanding. In that way we cater for all levels of pupils. (CF-FB7)

Two teachers (FR22 and MR7) working in Reeds had different opinions concerning knowledge of learners. They thought that though teachers should know who their learners were, they should not be overly concerned with learners' history. FR22 stated:

Sometimes yes, it's good to know because students come along with their background to school, it is not something you can dissociate from the child. And he is going to transfer his experiences in the way he speaks, the way and the content he discusses, how he learns. But sometimes the background is not

important to the process of learning and I do not think that as teachers we should indulge too much in the history of students. (CF- FR22)

Indeed it may not be relevant in this national school to have much background information on students as those admitted there is the academic elite of the country. The determination to excel in order to win a scholarship is probably sufficient enough to transform the majority of students in those schools into ambitious learners. Nevertheless knowing who the learner is in order to select the most appropriate learning strategy is a fundamental principle in LCT (McCombs and Whistler, 1997). Research also shows that learning is more effective when learners are taught in culturally appropriate approaches (Schweisfurth, 2013; Thomson, 2013).

(c) Encouraging learners' views

Teachers established classroom dialogue as an important feature of LCT. Teachers said they had to create opportunities for students to express themselves and to make informed decisions for classroom instruction and their own learning objectives. It appears that some subjects intrinsically promote learners' views. FB19 who teaches Hinduism in Bagnol stated:

I use LCT as my subject deals with philosophy where we need to know the point of view of students. LCT is about giving the chance to learners to use their language, to choose the mode of teaching and learning...like my students opted for multi media. (CF-FB19)

However after a moment of reflection the same teacher nuanced her response:

I have to get the views of students but this has to be in the philosophy of the subject, it cannot be the learners' views [...] there cannot be too individualistic or too modern views. These can be presented but the philosophy of the sacred books must be respected...I have to convince them that the traditional view is the better one. Why? Because the knowledge of the text is more important for exams. (CF-FB19)

The situation of FB19 is interesting as she uses the inherent techniques of LCT but not its philosophy. She declared that she believes in the power of LCT yet she has to

convince learners of the superiority of religious writings over their opinions because only the authoritative knowledge of the books will carry marks. This contradicts LC principles that affirm that the content and methods used are both important to engage learners in democratic processes (Vavrus, 2009).

Teachers encouraged reflection through talk. One computer-studies teacher explained why he does it at the start of his lesson:

It is to allow students to express themselves...giving feedback on lesson, creating peer interaction with explanations among students on what has been covered in class first, then teacher moves to what is planned for the day's lesson. (CF-MB7)

Later the same teacher added that classroom dialogue built learners' confidence. He declared:

What I have been observing is that in LCT you give students the opportunity to talk. This helps overcome their timidity; they will not then hesitate to ask you any question. (CF-MB7)

A second teacher added that learners' talk meant that learners were active in their learning:

LCT means it is not only me talking but also my students who are involved in the class. (CF-FB18)

Those two teachers encouraged talk and interaction to promote learner confidence, reflection and motivation in learning.

A young recruit teaching a new subject "Travel and Tourism" in Quintal, a regional girls' school, stated that classroom communication becomes genuine when the teacher understands the psychology of learners and is able to adapt lessons to their level using metaphors and words they understand. He was teaching new concepts and had to engage students' attention as well as facilitate learning. He was very unsure of himself but he thought his message got through for the following reason:

I always place myself in the shoes of the learner. (EF-MQ6)

FV4, an equally young but more experienced teacher in Varangue, a difficult boys' school, had the same response:

I will put myself in their shoes and try to think like them and see the concept through their eyes. I have tried this a few times and I must say it flows magnificently. (CF- FV4)

The two teachers had just finished their Post Graduate Certificate in Education. FV4 who had difficulties managing unruly students before her course said she was amazed at the difference it made to use concepts familiar and adapted to learners' level.

LCT requires that teachers construct learning situations that allow learners to express their interests, views, experiences or needs (McCombs and Whistler, 1997; Rudduck, 1991). Strangely it seems that LCT can be used essentially for its form and not for its substance (Brodie, Lelliott and Davis, 2002). Here its underpinning philosophy is sometimes discarded for examination purposes. Still teachers encouraged learners' views to engage them actively in lessons. Nevertheless learners' voice here was quite subdued. It never questioned the role and responsibilities of teachers, the rights and duties of learners, or the equity of our education system. This was hardly surprising, as teachers themselves never questioned the system.

4. 5 The cognitive perspective of LCT

As mentioned earlier the majority of teachers looked at LCT in a cognitive perspective. This view of LCT varied from a focus on learning and assessment to the necessity of blending LCT and TCT where due consideration is given not only to the process of learning but equally to the product of learning. Researchers have found it challenging for teachers to use LCT in countries with fixed and prescriptive curriculum and an examination-oriented system (Pike, 2011; Schweisfurth, 2013). Those teachers who took a cognitive view of LCT sometimes tried to respond to demands of highly competitive learners in elite schools, sometimes to the learning "disabilities" of less-able learners whilst developing learning and examination skills. The resulting tensions made them sway on a continuum between LCT and TCT. Themes that informed this aspect of LCT were:

- (a) Focusing on assessment of learning rather than assessment for learning

- (b) Using LCT for summative assessments
- (c) LCT on a continuum from more LCT to less LCT

(a) Focusing on assessment of learning rather than assessment for learning

Teachers declared they used assessment for learning and they varied their mode of assessments. A minimum of three assessments is required each term from all teachers in state schools. Teachers are generally free to choose the kind of assessments they want for their classes. In this study they said they used paper and pencil tests, quizzes and projects assessments. Some of them occasionally started the academic year with diagnostic assessments. During classes teachers said they used informal assessments like questioning, observing learners working, discussing and regular brainstorming. As a teacher put it:

Brainstorming allows the teacher to see how much learners know on a subject.
(CF-FD9)

MR8 and FR22 have developed the habit of closely observing the face and general attitude of their students to assess their understanding:

I am the first to decipher question marks on their faces. (CF-MR8)

FR22 assesses whole class atmosphere, individual facial expressions and relevance of students' comments:

If a class is responsive you know that they have understood. When they do not understand their faces will be haggard, some will be dreaming, you know those face expressions. Sometimes they ask questions which have no relevance to the topic at all. (CF-FR22)

In contrast FB6 states her preference for formal testing. She believes in teaching to the test for all her students specially those preparing for their 'O' and 'A' levels:

In upper forms it is going to be written tests. We try to give a variety of assessment items just like Cambridge does, multiple choice, essay type... But I lay down assessment criteria. (CF-FB6)

Only one teacher mentioned peer assessment. FD9 talked of her experience of peer assessment in the previous school she worked, which was a national school. She still recalled the conflicts between students as some resented being graded by classmates. She said she was not ready yet for such an experience.

Teachers' response to their use of formative assessment was not very detailed except for informal observations. Assessments described here do not seem to wholly correspond to AfL or to the philosophy of LCT; for instance assessments were used to train learners for examinations, learners were not empowered to self-assess their work or to correct their mistakes, they were not made aware of assessment criteria (Sebba *et al.*, 2008). Teachers were reticent to take risks in implementing types of assessments that failed. Planning how and what to assess were clearly teachers' decisions.

After discussing assessment, teachers broached the subject of feedback. Teacher feedback provides specific suggestions on how learners can improve their work. Teachers in the study have developed their own methods of delivering feedback. FD12 the French teacher gives individual feedback after tests but has whole class discussion on what she expected in her assessments. In the same school FD10 shares her beliefs:

I think it has to be positive. This is the first rule for the learner to heed the teacher. Written feedback is important as much as oral feedback. (CF-FD10)

But personal attention like informal talk is equally important. FD10 details one case of how she provides feedback with counseling:

It was a girl of Form Five; she was working well, suddenly her grades started falling. I called her and asked her what was happening, telling her she was brilliant and she could do better. Then she told me her parents got separated, they were in a divorce process...I tried to give her special attention so that her grades would not go down. I even tried some moral talks about life, its difficulties like ... for your studies, you need to put on a shield... the moment you step in a class your studies should be foremost in your mind... I thought that maybe this kind of approach could help those students who bring in their problems to class. I tell them ...do you want to be in the same shoes as your

parents? I make them reflect. There is a lot of personal that goes in my kind of feedback. (CF-FD10)

In general learners look for their grades after an assessment and LC teachers have to find ways to get learners interested in comments. MB7 divides his class into groups and ask the students to read their feedback on their assessment sheets. He gives grades on a later day. This is one way he has found effective to train students to pay attention to teachers' comments.

Teachers' response to their use of feedback was rather slim. In general teachers linked feedback to formal assessments. Even the counseling session of one teacher showed the preeminence of examinations in the teacher's mind. Though feedback here was linked to moral and psychological support, there was no mention of how teachers' feedback allowed learners to improve learning. I did not probe this aspect as I felt that teachers would have volunteered the information if they had the habit of providing formative feedback.

(b) Using LCT for summative assessments

Some teachers chose LCT to improve performance in examinations. They believed it was more appropriate for learners in regional schools than in national schools. FD13 declared:

I changed to LCT when I looked at exams results and the levels of students. In national schools things are different. Students are different; they grasp concepts quickly. (CF-FD13)

FB19 found LCT useful during revision periods:

The shift came when I did revision for exams. Students started asking me a lot of questions I did not expect ... things were not clear in their mind. So this gave me the idea of using LCT ... It is an opportunity for students to get better results... I can plan revision for two chapters, I divide the class into groups they will come forward with power point presentations and explain topic I, part a, b, c, d... and the class will interact. I can do very quick revision using LCT. (CF-FB19)

Teachers used LCT to help learners construct knowledge whilst maintaining the focus on learners' performance in examinations. In one regional school the teacher declared:

Things are different. Not all students have the same exams skills to tackle questions... so I need to make time for practice, for exams questions in class. Memory is a problem here; attention span is another problem. We are in a school where we constantly must come back to what we have done before... revising the same topic over and over again so that they have some grasp of it. Even if they have done it well, it does not mean that for exams it will be the same thing. We have a lot of learning abilities and a lot of learning disabilities at play over here. What we do is this if we see that a student has scored a grade 8, we aim at helping her achieve grade 6. This is our aim... in spite of a class of 40 students; we make sure that we cater for each individual student. (CF-FQ15)

In this regional school the teacher used LCT to help learners acquire sufficient marks to pass their examinations.

Teachers' response showed the supremacy of examinations throughout the system. LCT provided teachers with appropriate strategies to construct the learning of mixed ability learners, to enhance examination grades through group work and to regularly consolidate learning in preparation for exams.

(c) LCT on a continuum from a more LC to a less LC practice.

Teachers commented on the use of LCT in our heavily examination-oriented system. Some teachers thought that there was no contradiction between LCT and examinations. FB19 firmly believes in the benefits of LCT as she used LCT throughout the revision period. FD10 also said she has been using LCT to prepare her learners for exams. She put heavy emphasis on why she used LCT:

For exams but not only for exams... for life skills. (CF- FD10)

In contrast other teachers had recourse to TCT to prepare learners for examinations, as this was what learners demand. FD9 confided:

In national schools they expect much more from you the teacher. If you go in for a group work or pair work for them it is a waste of their time... this is what I got when I used group work in upper classes in national schools. They do not like to share, because everyone is competing for a scholarship, they will not share what they know. (CF-FD9)

Her colleague, FD10, argued:

I did not get this problem. I was working at X national School and in my upper 6 and lower 6 classes we used to do lot of LCT. They were ready to cooperate. (CF- FD10)

FD9 had an explanation for the difference:

Maybe I should add ... you mentioned X school, which is a boys' school. Gender could be what makes the difference. Mentality is different. (CF-FD9)

However three teachers in a national boys' school also said many of their students preferred TCT. MR8 reflected on how students reacted to group work:

Some of them think that we are wasting time; they would have preferred that we dictate and they take notes. This is according to them what a good teacher should do. It is the system that makes them rely on teachers. (CF- MR8)

The teacher was rather cynical in his analysis of the school's learning culture:

For students in general, learning is not about knowledge it is about certification at the end of the programme. It is not a question of 'how smart I am' but more of 'do I have my 5A's'? (CF- MR8)

He said he has to alternate between LCT and TCT:

In our system even if you are having a group discussion learners wait for notes from the teacher. They are relying on you to give all the information. (CF-MR8)

Another one, FR22, said that understanding content was important but believed it more important to respond to learners' expectations:

The system is too much examination oriented. Students do not want to learn for the sake of learning, they want learning as a passport to a better life, to promotion, to scholarships. (CF- FR22)

Her colleague FR21 also thought that learners' performance in examinations was their first priority:

Students' performance is the indicator, the grades the student gets in exams show if we have chosen the right method. (CF- FR21)

FR22 laughingly gave an example of how competitive students in that elite school were:

Students put emphasis on marks and ranks... they all want to be first. A student scoring 99 asks for explanation why he did not get 100. (CF- FR22)

The body language of the teacher clearly showed her satisfaction of working with elite students. She espoused the culture of the school where students ambioned to be the best and she chose the strategies that would optimise marks. She believes that LCT has to be complemented with TCT:

The academic level is important; you will not be able to implement LC if students are not autonomous, where the discussion could be diverted from the right track. It depends also on topics, not all topics can be LCT. Sometimes you need expository also ...for example if you need to confirm what the students have said ... you need as the teacher to consolidate ...not all the discussions will be relevant ...so you need that TC part. (CF- FR22)

Another teacher was more forceful in his convictions of the role and responsibility of teachers in effective teaching. MV2, from Varangue thought it risky to focus disproportionately on 'learning' in the teaching-learning relationship. He explained his views:

... for some with LCT it is only learning... and whether there is understanding or not , this is not taken into account... I think for me learning should integrate both learner- and teacher-centered teaching. (CF- MV2)

In fact these two teachers, FR22 and MV2, are reiterating what researchers have found in some LCT studies. Bartlett (2009), Barrett and Tikly, (2010) and Nykiel-Herbert (2004) for example said that placing learners at the centre of the learning process does not necessarily mean that all their views and answers are valid.

However in the context where FR22 works, where each student wants to be a laureate and where parents check what their sons have covered in class, teachers have to match the pace of the high flyers. Parents in this particular school put a lot of pressure on teachers for students' copybooks to be filled with notes. MR8 recalled one parent's threat:

I knew a parent who told me that each day he was going to verify for each subject what the teachers have done and if the teacher has erred that person would have to answer to him. (CF- MR8)

FD11 who was educated in a private faith school and is now teaching in a regional state school had to adjust to this new system:

In this system, grades are all that count. If students come to know that a task will not count for the end of term assessment, they will not do the task. This is what I have observed. One concrete example: I need to prepare an exhibition for the World Environment Day, therefore I have delegated work to students of Form 4... some of them are coming to me and are asking me what they are going to gain out of it, are they going to get certificates or are they losing their time. (CF- FD11)

School culture in private school is in contrast with that of state schools. There is as much pressure for private schools to be among the best performing schools but in parallel there is a strong emphasis on the holistic development of learners through sports and arts. Hence teachers have to adjust to a more competitive exam-oriented school culture if they are new to the state school system.

Though a few teachers declared that they believed in the efficacy of LCT for both classroom instruction and examination purposes, most of them had more faith in a blend of LCT and TCT. In very competitive schools teachers, learners and occasionally parents themselves felt more secured with TCT. In such situations approaches to learning are liable to be shaped by the exigencies of the system (Schweisfurth, 2013).

4. 6 Giving power to learners: the divide between cognitivist and emancipatory teachers

There was a consensus among the majority of teachers that students should be given restricted power. FD10 became the mouthpiece of all the teachers in Dupreville. She reacted strongly to the idea of giving power to students. She disputed:

What type of power? Students are getting power through all kinds of ways, through the ministry, through politicians. For example, a student does not do your work. What alternatives do we have as educator? We write it in their journal. What does the parent do? Just sign journal and nothing happens. (CF-FD10)

The teacher however had her own idea of what kind of power would benefit her students:

It means for me giving power to do the work they have been asked to do. They have to do their research when required, their homework, and giving power also means knowing what they are going to achieve eventually at the end of their study. (CF- FD10)

Teachers from other schools concurred with FD10:

I give them power as long as they know how to respect the power. For example If I give a task and then I see them doing other things, digressing, then I put them back on track. In LCT the students have the possibility of saying anything. But you as the teacher you need to draw the line of what

needs to be achieved. You need to give power of course but you need to monitor how power is being used by the students. (CF- FR22)

Teachers talked of how learners are protected by law: systematically shirking classes, coming late to class, disrupting classes or being aggressive to teachers are not considered serious enough to warrant a learner's transfer or expulsion. They cannot be expelled from schools except in exceptional circumstances. Most of the teachers thought that power could not be considered for students at this point because parents did not uphold their responsibilities:

The parents are very much absent in their role... Parents think we are going to be the father, the mother, the teacher, and the psychologist. (CF- FD10)

As for MR7, he defined power as a "controlled freedom of expression". MG1 went a bit further in asserting the following:

Some students do not have the maturity to use power in the right way... If you put power in the wrong hands it can be lethal. (CI- MG1)

One small group of teachers thought differently. They said that giving power was important because it was that power that was going to transform learners marginalised by the system into responsible learners before becoming responsible citizens. FQ16 believes that constant dialogue and mutual understanding are essential when learners are given power. For example her Form six students did not want the routine way they had been preparing essay writing. They said they needed more time for one theme set by Cambridge for their essay paper. The theme was "leisure time". The teacher recalled the discussion:

Learners wanted to go on Internet and Facebook. They exposed their reasons... I said I wanted something proactive... try starting something in class first like scrap booking... they were not convinced and I explained how to go about it. They will fill their logbook for 2 weeks, not very long, writing each day whenever they have extra time what they have done. After a fortnight they will come forward and make an expose on it. (ED- FQ16)

Empowering learners was twofold. First learners got the extra time they wanted, second they were guided into working autonomously and taking responsibility for individual exposes.

FQ16 showed how power given at the right moment could transform learners:

I have been here for 6 years and recently I had a student, she was in Form Four and she was such a nuisance it was very difficult to teach her literature ...but now that she is in Form Six, one day she told me she wanted to organise an outing to 'Water Parks'... I encouraged her ...she did everything, planning, phoning and using very good French ...she finalised things, she phoned everywhere ...for buses and tickets.... So I said to myself when I teach that the results is not for today but for later...in a few years' time...when you see those students in lower classes, of course there are drop outs, but for some luckily we are able to make a difference. (EF-FQ16)

MQ5 said he gives his learners power to choose their mode of assessment. For him it is one way that allows them to reconstruct themselves. He declared:

Our students come from a social background where they have lots of problems, we cannot add pressure on them...any kind of project work or group work they know they are in control of some parts of their life. (EF- MQ6)

LCT is premised on more egalitarian relationships between teachers and learners so that learners are entrusted in making decisions for their learning (Weimer, 2013). However in the local context many teachers felt that learners already had too much power in the system and that it would benefit them more if this power was restricted to learning responsibilities. The reason perhaps is because under Mauritian law it is very difficult to transfer or to expel a student from schools even if that student systematically misbehaves. Teachers who were more flexible viewed their learners and the use of power differently. Empowering learners meant giving them the time and the tools they needed to succeed. Consequently teachers had to learn to identify those learners who should be helped rather than disciplined.

4. 7 The emancipatory perspective of LCT

Those few teachers who viewed LCT more in an emancipatory perspective all teach in regional schools. They looked for information on their learners, their problems and discussed possible solutions with colleagues before the start of the academic year. The two main themes informing this view of LCT are presented below:

- (a) Reaching for learner engagement
- (b) Building relationships based on respect and trust

(a) Reaching for learner engagement

Teachers said they always take on different roles and try different strategies in order to get learners' interest and engagement. Teachers in schools where students showed disruptive behaviour argued that the most problematic part for them was "getting the students involved in their learning in the first place" (FQ15). However MVF4 who has been working for six years in Fleurville, a notoriously difficult boys' school known for its aggressive students, high level of students shirking classes and vandalism, had a different discourse. He declared that LCT was the appropriate approach to reconcile disengaged students with learning. He explained how:

LCT means ensuring that learners are given all the chances to succeed. I have the responsibility of identifying what my students need not only for learning but to be comfortable in class, with others, with me as teacher, with content and then to create the proper setting for that learning to take place. (EI- MVF4)

MVF4 who teaches French said that knowing the learner is important but not enough to secure his engagement. Even knowing the school culture does not help much if there is no will to change "the way things are done" at school. Teachers tend to give up on learners who do not want to study. But knowledge of learners and of their disruptive power prepares MVF4 to devise strategies that will help him optimise teaching time. He gave an example:

C... has the power to destabilize the class at any time so much so that it is essential for me to have a privileged relationship with him to gain his trust and achieve what I want for the students. If I do not do that I alienate one student

who poisons the whole class. Punishments will only worsen the situation. Peace must be guaranteed at all times. I allow those who want to eat to do so. Discretely... I try to understand why so and so refuses to work...students here make their own decisions, choose their behaviour, ...they do not have parents who monitor their behaviour, but for Mauritian parents, studies are vital. However learning as I see it is too theoretical. There is a human dimension missing in this learning. So I make my own arrangements, I try to make their time in school worthwhile. (EI- MVF4)

Earlier, MVF4 declared that LCT could make a difference in his classes just by allowing those students at risk of dropping from school the flexibility and the time they needed to adapt to their learning environment. This confirmed Macbeth's (2000) finding that LCT does not necessarily work with immature learners. However MVF4 believed that all students were capable learners and this pushed him to look for ways to reach them (McCombs and Miller, 2007). He learned the rules of negotiation to reach an agreement with those who could create havoc in class. This clearly involved risks as he delicately maneuvered between what is authorised and forbidden, like not teaching tasks learners have to master for exams but instead involving students into discussing themes they are passionate about and which he thinks are worthwhile.

For a couple of teachers working with low ability students, making lessons enjoyable is what makes their lessons effective. FG1 has been teaching for four years in La Tourelle. The school that has had very low pass rates for years is slowly showing an improvement in learners' performance in 'O' levels examinations. FG1 explained what works with her students:

Making the lesson enjoyable is essential. Then they will be motivated to use what they have liked in their tasks. But if they do not like the lessons they will not even recall what there was in that lesson. (EI- FG1)

FG1 is passionate about LCT. She talked of how she guides learners on how to construct prior knowledge essential for effective LCT:

For example before working a comprehension, I would first verify that the content of the comprehension is close to their cultural context, that students have prior knowledge of the theme in the comprehension. If they don't I will

ask them to go and conduct ... not research... this is too big a word for them, they do not have facilities, so I will just ask them to go and ask people around them simple questions for example on gender issues and then they would come to class and share what they have learnt. And this sharing is for me the beginning of the lesson. I do not start before ensuring that students know of what we are going to learn. (EI- FG1)

Hence in regionals schools with low ability or mixed ability learners teachers used LCT to keep students in class in a first instance, then to negotiate truce for those willing to learn to be able to do so. At another stage, teachers helped to construct the necessary skills to motivate learners in their studies and this reflects in many ways the Process Model of Stenhouse (1975).

(b) Building relationships based on respect and trust

FQ16 works in Quintal, a suburban school where students are mainly from African descent and come from working class families. Some of them have a history of aggressive behaviour. The teacher is an Asian female who comes to school in traditional Muslim dress with only her face uncovered. She has observed that LCT demands mutual respect between teacher and learner and that this relationship can be nurtured during extra-curricular activities. She recalled an event where swimming with her students brought a positive change in one rebellious learner:

I remember I had an incident with a pupil, she had painted her nails blue and I told her it was against school rules that she could not come to school with these nails. But she did, day after day ...but one day we went for an outing. We went to the sea, we swam together, they did not realise I could swim...well it was a bit *la demystification de la femme voilee*, (demystification of the veiled woman) it worked...and the very next day it was all cleaned I mean her nails. I think she realised that respect comes from both sides. I think that the ministry should understand that outings are very important...all these activities are part of our teaching, to keep discipline, to keep people at school. (EF- FQ16)

FQ16 also believes that the system does not fit all types of learners. For her the curriculum is too rigid and she explained how covering the French syllabus in rural areas could be very daunting, as students are not exposed to French. Teachers however have to teach grammatical concepts and grammatical rules. This teacher shared her experience of teaching in a newly built school with low ability students in a small rural school some years back:

When I moved to a new school in C... there was nothing, just concrete blocks. Learners were boys... we took balls we went out on the playground and with the ball we learned verbs. I would propose a tense, and one boy would propose a verb and the one who had an answer ruled the game. It was like musical chairs... playing and learning grammar, playing and learning verbs... Yes it worked with those boys. We finally did a few things which one would call 'surrealist'. It was a difficult school even at the time when the boys were in Form One or Two. There the students cannot concentrate so much. I did only basics. I tried to limit it with what they do in their daily life and tried to apply what I teach ... and tried to make it fun... I tried to be practical, doing things they will use so it worked more or less. (EF- FQ16)

The teacher played together with her learners to get them to learn a language they did not speak and grammar rules that were too complex for them. The strategy worked, as the boys were kept alert with the rules of the game and the motivation to win. The teacher claimed that they learned to demonstrate several aptitudes at the same time, listening, thinking, and giving an answer whilst sending or catching the ball. This echoes Gardner's multiple intelligence (2010), which posits that there are as many learning styles as there are types of learners and that they all can learn when given the opportunity.

4.8 Summary

This chapter analysed teachers' understanding of LCT and the perspectives in which they view it. Teachers learned the theoretical aspects of LCT in their professional courses. They learned that they had to consider their learners' interests, needs and

learning styles before selecting an appropriate classroom strategy. Teachers mentioned that LCT activities had to be planned for students' learning rather than teachers' teaching, for learners to construct their own knowledge and for learner empowerment. Formative assessments and feedback had to be integrated in learning. Due consideration should also be given to learners' background and to positive classroom relationships.

However teachers developed their own understanding of this approach from the culture of high-stakes competitions prevailing in their schools. Teachers with a cognitivist perspective trained learners principally for improved performance in examinations. Most of them used assessments as a tool to prepare learners for examinations and complemented LCT with TCT to maximise chances in examinations. Learner power was a contested issue. For the cognitivists power was understood as learners' responsibility towards their learning. For those in the emancipatory perspective, power was the chance given to learners to construct themselves above all. Teachers in the emancipatory perspective worked at keeping students in class, at engaging them with their studies and at gaining their trust.

Chapter 5

Teachers' implementation of LCT

5.1 Introduction

In this chapter I present the findings related to teachers' implementation of LCT, the reasons behind their choice of LCT and the skills they deemed important to implement LCT in their classrooms. The following research questions guide this part of the study:

- How do teachers implement LCT in class?
- Why do they choose LCT?
- What skills, according to them, are required for LCT?

Data pertaining to how teachers implemented LCT in class were gathered mainly through class observations, debriefing sessions and reflections from my diary. At times however data from interviews or focus groups were needed to gain a better insight of teachers' practice and to compare it to their philosophy of LCT.

How do teachers implement LCT in class? Data for this question were subsumed in the following themes:

- Proposing constructivist strategies
- Adopting multiple roles

5.2 Proposing constructivist strategies

Teachers understanding of LCT was translated into classrooms through a number of constructivist strategies of which cooperative learning was the most popular. How teachers implemented these strategies will now be discussed.

Cooperative learning

I have observed cooperative learning in a number of schools. Learners quickly formed themselves into groups under the directives of teachers. Generally learners were given some kind of research work before coming to class. I watched FQ14 teaching sociology to Form Four students. She structured her lesson in three parts. She devoted the first part to a revision of key concepts of the previous lesson to the whole class, the second part to monitoring interactions in groups and a third part to writing down all the findings of her students. The topic of her lesson was “Exploring the dark side of family life: causes and consequences”. The teacher asked one student to summarise the content of the previous lesson. She questioned others for some five minutes on the atmosphere depicted by the media when showing families at breakfast. She focused on some concepts and key words that she wanted students to explain before letting them work in groups.

Students in this class were clearly used to this activity as they grouped themselves rapidly, got out their newspaper cuttings and started discussing. I wrote the following reflection after this class observation:

This looked like a dynamic class. Learners shared what they have brought: newspaper and magazine cuttings on domestic violence. Girls were absorbed in what they read, there were discussions on all tables. Though the class was crowded teacher monitored work going from group to group checking if they were on the right track; she controlled noise level. Time was used efficiently. Teacher listened to groups, made comments, wrote down the key ideas of groups on the white board and asked students to use information on the board for their own notes. Reflection - Class observation 11

FG3 also regularly used cooperative learning for her Business Studies class. The teacher commented on the positive aspects of group work and the problems encountered in her classes:

What I do is that once I have given specific tasks to groups, I will go and sit for some minutes in each group and listen to the group leader’s report. From

there I will give advice or recommendations. This is how I know at what pace the group is working and if they are on the right track. I get to know their strengths and weaknesses by listening to them [...] however they will be very different when there is anybody stranger to the class in the class... be it the rector himself... there will be no interaction, no participation.... I will be the only one talking. (EI- FG3)

Later the teacher reflected:

Maybe if students were used to LCT since Form One or primary level, our work would have been easier... today we have seventeen or eighteen-year old students who have difficulty in being autonomous. (EI- FG3)

I could not observe the class of FG3 as she had already warned me of the negative impact of strangers in her class. It is clear that the reception system prevailing in the primary sector makes LCT difficult for teachers willing to try LCT in secondary schools.

Notwithstanding the fact that quite a number of teachers complained of the low academic performance of their schools, students looked happy. In all those classes where cooperative learning was used, I observed an interesting phenomenon: the bell rang and surprisingly students showed no hurry to leave the class. This was one sign that they enjoyed their task.

Experiential learning

In science classes, teachers helped construct knowledge with learners' senses. In her Form One (twelve year olds) biology class, FB6 trains learners to use all their senses and observe the different things like tables, chairs, shrubs, flowers, birds around them in the school compound. She explained how she plans it:

I will ask them to be aware of things they can smell...only then are we going to introduce the topic with questions with what they have seen smelled and whether these can be categorised...we will normally start with what is solid, then liquid, then what is gas. It is only then that we will go into the subject.

They will work with the examples they have found, discuss and evaluate.
(CF- FB6)

Teacher then constructs on what students bring to class:

They come up with properties in their own words, not always complete... I help them shape the definitions then we move on to consolidating what has been seen with exercises. The pace is not the same in all classes. Students understand and work rapidly in some classes but in others it can take more time. (CF- FB6)

FF6 works in a national girls' school. I have observed those students in class. They listen intently to teachers' guidelines, stay focused on task, deliver in time what the teacher has asked, speak softly but confidently, and demonstrate a very good command of English, a fundamental requisite to succeed in the Mauritian system.

Learning through games

A few teachers working with low ability students devised games to engage learners in their classes. MQ6 who teaches "Travel and Tourism" found it invaluable as students had to think, act and communicate whilst participating. He declared:

For me the best activity is games related to learning. I often play charade or mime game to make students understand the perception of host community towards tourists. I want them to understand how on one side, tourists perceive things compared to the host population. With charade, students do some sort of mute drama in front of the class and the rest of the group must guess the concept behind. (EF-MQ6)

This strategy resulted in a more equitable power balance in class. Learners felt empowered when the teacher was included in the group of learners. The teacher compared TC and LC strategies:

With the reception method there is a problem, I cannot get them to talk but when we do games, they are different, voices come out and they are most happy when they make me part of the game. (EF-MQ6)

Though the teacher used a strategy that enthused learners, I had some doubts about the meaningful construction of learning here asking myself if the teacher was able to engage students into deeper learning or if learners had to be entertained systematically. Nevertheless, in a school where the rate of absenteeism was high the teacher had the merit of motivating students to come to class.

FB17 uses cross words to sustain learners' interest in her home economics class. She explained why she had to look for teaching and learning activities that had a chance of working:

Here the students are quite passive, they cannot concentrate ...and they don't have respect for teachers either...they will not listen to you in class, they talk among themselves, it's quite difficult to teach here so I decided to shift to LC and use visuals ... they were more interested. (CF-FB17)

The teacher declared that visuals helped learners to remember what they have learned and this has driven her to create software applications learned in her PGCE course to support her students' learning. She gave an example:

With Form Two students I use cross words and the students have to guess the words. And on the power point I have the picture of a salad and students have to click five times to enrich the salad so you can see the egg falling on the salad...eventually students can compare series of pictures, for example how rich a salad is and why. (CF- FB17)

Thus for some teachers, the context where they worked, the low ability of their learners and the need to involve learners in their learning drove them to innovate to gain learners' attention and interest.

Role-playing

Role-playing is recommended in language classes as it allows students to develop a whole range of communication skills (NCF, 2009). FR21 teaches French language and believes in varying activities for a dynamic lesson. In one of her literature class with Form Two students, she planned a mini-sketch, then a discussion on the meaning of

the fable they were studying and a classwork. The extract below shows constant interaction between learners and teacher:

Teacher asks one student to summarise the fable.

Student A: One day a wolf saw a lamb near a river and decided to devour it.

Teacher: How do we know it is a river?

Student A: There is the word “courant”.

Teacher: What does it mean? *(Students are excited, they all want to answer.)*

Student B: It means the movement of water.

(Teacher then reads the poem, looks into difficult words and asks students to explain those words. Students are able to guess the meaning of all those words using the context.)

Teacher: What is the moral of the story?

(Students propose a number of moral lessons. Teacher accepts or rejects what she hears. Then she probes and motivates students to think from the different words and adjectives found in the fable- she draws attention to the various pronouns and its underlying meaning. She sometimes goes to the root of a word so that students grasp the meaning of the word and understand the intention of the author.

In the last part of the class the teacher links the story to situations in real world. She asks students to find characteristics of the wolf and the lamb, draws a table opposing those 2 characters. She fills her table with students' answers. She exposes students to a few technical expressions like 'ironie' and 'champ lexical'. She touches on what is symbolical like 'Why does this story happen in a wood? What does the wood stand for?') Class observation 6

At the end of the class I wrote down the following reflection:

This was a class where there were more students' input, more students' voice. Teacher was able to make efficient use of time with some fifteen minutes devoted to sketches and the twenty minutes remaining to constructing from learners' prior knowledge. Teacher developed learners' skills like communicating, role-playing, guessing meaning, analysing plots and main features of characters in the fable. She went from superficial questioning to deeper interrogation of the text before setting homework. Students remained active throughout the class. However all the activities were teacher controlled.

Reflection - Class observation 6

The teacher planned an activity that engaged learners' attention throughout the lesson. She also went along the school ethos that demands vigorous academic work. She exposed learners to literary concepts and gradually prepared them to the question they had to work on for their homework.

Inductive learning

Inductive learning is a method whereby the teacher presents learners with a number of examples that will enable learners to understand how a given concept works. This method generally involves students into discussions and group work where they will generate hypotheses, verify them and come up with their own rule. The teacher then intervenes with the precise information or help students to discover it (Felder and Prince, 2006).

FG1 and FV4 have low to average ability students and have experimented with inductive learning. FG1 said that the theoretical part of her lesson comes after students have discovered the grammar rule and that her students tend to understand and remember more when she uses inductive teaching. She detailed her teaching:

What I do for example, I start with a few sentences that I write on the blackboard... .. the sentences are what they will focus on... I will not tell them that they will be studying verbs and all that...so I just put sentences on the blackboard then I will ask someone to go and underline the different forms of verb, then ask pairs to observe what is common to all these forms, how they

are written, how they end... without knowing that they have already started studying verb tenses.... This will be the starting point of my lesson. But before that I need to have done a preparatory work on the kind of sentences or the kind of questions that will prompt students to answer and will help discover the rule underlying the verbs. With this activity I get to know what the students know and what they think. (EI- FG1)

I observed FG1 implementing inductive learning. She had a series of sentences on top of the board and a series of question at the bottom of the board to guide students to discover the rule governing the verbs. She walked around guiding groups with more questions and drawing their attention to specific parts of verbs. When one group had found an interesting element she would ask the whole class to listen and to use the finding to speed up their work. Learners came up with part of the rule. FG1 congratulated them and the class spontaneously applauded. She later told me that she was sure they would remember this particular grammar rule for a long time.

Using the same approach FV4 in Varangue wraps her lesson in a kind of mystery to keep her students focused on what she wants them to learn. The teacher explained:

I did not tell the students what we were going to learn ...and I did not give them the definitions... usually in TC you give definitions and explanations.... What I did is that during practical I gave them small hints ...I tried to build up scaffoldings and at the end ...I asked them “what is it that you have learned?” and they told me “we have learned the tables, how to create a table”. When I asked them what is a table, they expressed themselves in Creole and could answer. They had been able to reach the objective of the lesson. So we translated together whatever they said into English and they came up to almost the same definition as in the book. (CF- FV4)

In national schools too, teachers used inductive learning. MB5 teaching physics observed that this approach engaged learners in their studies and changed his role from an authoritative teacher to a facilitator. He explained the facilitator’s role:

We must bring them to the final answer. We do not give them the answer. We give them the process to come to the answer. We guide them. (CF- MB5)

Hence inductive learning was used in both regional and national schools. In regional schools, teachers allowed frequent use of Creole or French to facilitate understanding. Teachers gave learners the opportunity to help their peers but most of the time teachers built the scaffold for learning themselves. Though inductive learning is a minimally guided approach the teacher still directed activities. This was probably due to the fact that learners were not ready yet as this approach can only work when learners have adequate information or experience with the material (Schunk, 2008).

Differentiated learning

Differentiated learning is an essential component of LCT because learners come to class with different capabilities resulting from different readiness levels, interests and learning experiences (APA, 1997). Yet this aspect of teaching was mentioned by very few teachers in interviews and was not seen in class observations. One teacher, MB5 talked of how he implemented differentiated learning:

In my class what I do is that I give exercises to the whole class, the high flyers finish their work before others, I mark their work then give them additional work, this will give me time to focus on those who are average or those are having problems. (EF- MB5)

However it is not clear whether the strategies used were LC with learner responsibility and activity at its heart, or whether strategies were teacher directed.

Constructivist teaching and learning forms part of LCT (Schweisfurth, 2011) and teachers tried a fairly wide range of activities, adapting them to their contexts and their learners' needs. Some important aspects of LCT like remedial or differentiated learning were not seen. The reason for this could be the complexity of interweaving different lesson planning into classes of 35 minutes. It could also be that because teachers are not accountable for failures they do not feel the need to devote time to remedial learning.

5.3 Adopting multiple roles

Teachers in the study believed they were LC teachers whilst in reality they were using only a few principles of LCT. But what is important to note is the disposition of those teachers who, guided by their values and beliefs, looked for ways and means to make classroom instruction meaningful. In fact disposition is as important a component as content knowledge and pedagogical skills to quality teaching (Collinson, Killeavy and Stephenson, 1999; Darling-Hammond, 1997).

Teachers tried a number of roles to achieve their objectives when implementing LCT in class. These roles slightly differed depending on whether teachers had a cognitivist view or an emancipatory view of LCT. Cognitivist teachers were

- (a) Facilitators
- (b) Coaches

Emancipatory teachers were

- (a) Providers of emotional support
- (b) Entertainers
- (c) Negotiators

(a) Teachers as facilitators

All learner-centred teachers in the study looked for ways to facilitate learning and for most of them ensuring learners' success in examinations remained their priority. In one national school the teacher commented on the importance of examinations in learners' life:

Learners in this national school want to stand out. (CF-FF6)

FR22 explained how she facilitates learning:

For example in composition writing, you know they have the content but as teachers we help them frame that content into an essay concerning structure, style, presentation ... so our task is rather like structuring ideas rather than dispensing knowledge. (CF-FR22)

As for FB6, she has to regularly propose new and challenging tasks so that learners are involved intellectually, physically and socially in projects. Even young learners after some time needed little guidance from her. They wanted so much to excel that they were able to make out by themselves how to plan, work out and finish a task. She feels that the culture of the school impacts not only on learners' expectations but also on the way she teaches. Hence teachers also are moulded by the highly competitive ethos in national schools. The prestige attached to laureateship heavily impacts on their teaching.

FB5 works in the same school. In one 35 minutes class I observed how she used learners' input to build learners' knowledge and develop critical thinking. Below are my reflections.

This 'A' level French class was quite short but the teacher was able to reach her objectives. She had planned a discussion on a theme set by Cambridge for essays. As soon as the bell went, fifteen girls came in. The seating was formal. The teacher had given a piece of research work for the theme to be discussed and did not verify if the work was done. She wrote the title of the discussion: 'Compare living in a rural area to living in a town'. She stood in front of the class and asked students to give her advantages for both sections. Students had found more advantages for towns than for villages. Teacher noted arguments in a mind map on the board. There were short but regular discussions around some main ideas. Teacher prompted input on some aspects of rural life like quality life in villages in terms of space, pace of life, quietness, closely knit relationships and cost of living. There was a rich vocabulary on the board and good interaction between teacher and students. Teacher constructed on learners' input and encouraged discussions. Her teaching however remained quite directive as she wrote, questioned, listened and encouraged reflections to the end of the class. Time constraints must have been one factor that weighed on her planning. Reflection - Class observation 1

In another national school, the teacher used the same methods to construct knowledge and critical thinking. The process he described did not include learners' decisions:

I would start by asking students, for example, the factors causing inequality in education. I would listen to what they say and from there I will construct, I will make them think of concepts involved in the topic. I will show them research evidences, references that they should use to justify their answers. I use their prior knowledge with the evidence I am giving them and it is going to structure their work. (CF-MR8)

In one regional school the teacher explained how she constructed learners' autonomy with appropriate scaffoldings:

At the beginning I give plenty of support then slowly I remove some of the support so that the child does more on her own. If I take one difficult topic like 'project management', I do group work – group of four pupils then I diminish it to two then eventually I ask them to do the work each one on their own, sometimes I do not cover some parts of a topic they have to work it out by themselves...and they do it, most of them. Somehow this showed me that whatever I was trying was working. After that there is the test taken individually. This means I see the child growing in the subject, becoming more independent in the subject. (CF-FQ15)

In another regional school where students are perceived as low ability learners, the teacher scaffolded learning differently. In her computer studies class FV4 placed 3 students in front of PC's though there were enough PC's for each one of them in the computer laboratory. She planned a series of tasks allowing breathing time between each task. Learners helped each other on how to use the ruler, create margins, align texts and use different line spacing. Students stayed focused on tasks and there were a lot of peer coaching that went on in groups for each to understand and keep pace with tasks. In the last part of the lesson, learners were requested to explain what they have learned and to define a number of concepts. Most learners were unable to express themselves in English. Below is an excerpt of the class observation:

Teacher: Joelle, Could you please read your definition on 'line spacing'?
(Joelle seems very shy and does not say a word)
Teacher asks her friend to help her. Joelle's friend starts a sentence but cannot continue).

Teacher: Anybody?

(Class remains silent.

Teacher asks two students to read their definitions but they do not respond).

Teacher: Meera give me your definition on “align center”.

(Meera starts a sentence but cannot continue)

Teacher: Can somebody help her? *(Teacher waits)*

(Students answer in Creole but the teacher wants an answer in English

Finally we hear one voice).

Teacher : Yes this definition comes from the screen.

(Teacher explains how to get information of any feature by placing cursor on that specific feature).

Teacher: So we have our definition for line spacing. Let us look for definition for align left, align right. Class observation 12

It must be noted that between her interview and class observation FV4 had been transferred from Varangue, a regional boys’ school to Bagnol a regional girls’ school. In the debriefing session the teacher said that her learners understood and completed their tasks but were unable to define and explain the concepts they have learned in English. To prepare for examinations the teacher dictated notes. Hence the language barrier was one factor that she thought impeded the success of LCT in classes.

Teachers working with big classes found it easier to carry out pair learning. FQ15 explained:

They have to work out a case study. They work in pairs. They analyse information, answer questions. They have to present it in front of the class, the rest of the class can ask them questions so can I. Whatever gaps we see, we fill them in.... We correct it right away before anyone takes a wrong answer... I am expanding the strategy ... and it is working wonderfully. (CF- FQ15)

Teachers as facilitators were found in both national and regional schools. Teachers helped learners construct, structure and enhance learning. They gained learners’ engagement and developed social skills for team working. Teachers’ pace in national schools was more rapid probably because it suited the cognitive levels of students.

Teachers in regional schools had a slower pace, allowed slightly more interaction among learners and sometimes even allowed periods of quietness for assimilation and reflection (Haynes, 2010). In general teachers controlled the whole process of LCT. Some teachers equally stated that though learners could perform most tasks, writing in English was a major problem and this impacted negatively on their performance in examinations.

(b) Teachers as coaches

Teachers also took on the role of coaches in specific situations. MG1 had the responsibility of accompanying his students until their projects were submitted and learners were ready to sit for examinations. In his interview he declared:

I have the role of a coach giving directions to whatever they have to achieve. In my class it is learning by doing. ... Project works are done at all levels even though classes have students of different ability. (CI- MG1)

It seems that subject content heavily influenced his LCT. He preferred to construct real understanding of a number of topics rather than superficially cover the whole curriculum. In the course of the year the teacher assesses the capacity of his learners and take decisions he thinks will benefit learners given the weight of syllabus and time constraints. He chooses what to teach and what to leave behind:

I have been here since 2005 and I know well the kind of students we have... I know which topics they will be able to understand and which ones they won't. There are some topics you could teach now and at the end of the year they would have completely forgotten about it. So I concentrate on topics they will remember, on concepts that can be reinforced, on lessons they will have the capacity to understand. (CI- MG1)

I observed one of the classes of MG1 in his workshop. The walls were covered with colourful posters. These were illustrations of different processes in design and technology, concepts with definitions and examples or pieces of research carried out by students. MG1 started his 70 minutes class with learners' input. He pasted a sheet on the wall where learners wrote the materials needed for a project. MG1 briefly

commented on the list before going into the day's lesson. During the first period he used the lecture method, drawing on the board, writing concepts, explaining and pausing regularly for learners to take notes. During the second period he assigned tasks to groups of students. When asked why he did not give handouts to save time, he said that listening and writing were important skills for his students who had short span of attention and that the lessons would be available for revision in their notebook whereas all handouts would be lost. The teacher's practice was consistent with what he said earlier concerning his understanding of LCT:

I need to expose them to concepts, there are a lot of theories they need to know and they have to listen first to my explanations. After that comes the LCT. I will ask them to carry out a piece of research on the Internet on the material. We will have a poster in class and they will all stick their findings on that poster, so that everyone sees and shares. (CI- MG1)

Another task of the teacher-coach is to select the appropriate model to improve learning. FQ15 explained the reasons behind her choice:

I had to try several models in grouping students before getting the right mix. I have regular informal talk with those students and they told me they liked both lecture and group work but they preferred investigative work. But I choose group work when I have to teach difficult concepts or for tasks they do not like for example calculation and statistics. When they have sufficient skills, then I break the group and have them work in pairs. In fact I believe pair work is more efficient in my context. (CD- FB15)

A different kind of coach was seen in national schools. Teachers also dealt with content and skills but in a different way. Learners coming to those schools were "more discernable" students and had "loads of information through the Net more than the teachers themselves" (CF-FR22); consequently the teacher felt it useful to show students how to make the best use of this information. FR22 reflected on the outcomes of being more of a coach than a teacher:

They develop independent ways to analyse information. If they do not develop these skills it would be difficult for them to score good grades. (CF-FR22)

Teachers equally acted as coach grooming candidates in their race for laureateship. They concentrated their efforts on the technicalities of how to score full marks in examinations. After a class test MR8 used the marks scored by learners to show them their weaknesses and how to address them. Below is an extract of a class observation:

Teacher: Roy what did you write concerning sub question 2?

(Roy reads his answer)

Teacher: *(to class)*

Do you agree with the definition read?

Students seem hesitant to talk. There is some inaudible murmur...

Teacher: Roy, how many marks did you get for sub question 1?

Roy: Three out of five.

Teacher: Where is your mistake?

Roy: It lacks depth.

Teacher: No, you did not support your definition with examples.

Class observation 5

I noted my reflection after this class observation:

This class had some elements of LCT like using feedback to improve performance. However the teacher did not provide opportunities for interaction among learners. Though the teacher did ask for peers' views when they listened to the different answers, he did not wait for answers when they were slow to come. For instance he did not ask the class what was missing in X answer, he simply directed learners on what they should write. It was more a question of scoring full marks than understanding what was amiss. But I have to be fair; it is difficult to review all the test questions and all possible answers in a seventy minutes class. Nevertheless students remained concentrated throughout the seventy minutes class. Reflection - Class observation 5

Teachers' focus in elite schools went beyond just getting good grades. There was a race in which not only potential laureates but also teachers as laureate-makers were involved. Teachers were immersed in the elitist culture and were proud to be part of it.

The objectives of the teacher-coach were the same whether in regional or national schools. Like experienced coaches they knew what worked and used techniques to optimise success in examinations. The coach in the regional school took personal risks when he decided not to cover the whole curriculum but to focus on topics that were scoring for his students. The one in national school trained learners more as strategists in a competition than as learners but that was in line with the school culture.

(a) Teachers as providers of emotional and social support

In a number of difficult schools teachers first ensured that students were emotionally and socially stable before starting the academic year. Teachers in Quintal started with groundwork on the family, cultural, social, ethnic and linguistic background of learners. Teachers used this information to help solve problems that could mar learners' studies and to adapt strategies to learners' needs. Teacher support could take many forms like regular counseling, or looking for external support from educational psychologists or social workers. FQ16 explained:

We try to deal with problems so that the rest of the year or in the coming years we can work. We have to use the information to set bench marks. (EF-FQ16)

During one of my visits to Quintal, MQ6 showed me a file of students' writings. He said he never relied solely on what learners said in front of their friends, he had them write all they wished him to know so that he could help them. It was in this way that he came to know that one student had a mother dying of AIDS, another one had a father in prison and a few worked during weekends to help their family financially. MQ6 said that from the very first time he used this technique, the way he looked at his students changed. He no longer considered them only as "students" he respected them as "persons".

Like other teachers in the emancipatory perspective, MVF4 adapted his rules to his learners' reality. Teachers were attentive to what they said and did in order to propose some form of learning they would not reject. Once teachers had made some progress in ensuring learners' emotional stability, they worked at helping learners build their expectations. Teachers encouraged them to reflect on their life, to write down their

goals and the best way to achieve them. Teachers then used this as a road map to keep them on track:

This is how I get them to understand what we are doing, how to be focused on targets. (EI-FG1)

Thus those teachers saw that what was fundamental when they implemented LCT was the respect and the support each learner was entitled to as a person when they came to class.

(b) Teachers as entertainers

To engage students with learning in some schools, teachers learned new skills to “entertain the kids” (EF-MQ6). They found that they could sustain the attention of learners when they took on the role of an entertainer as FQ16 said:

Yes, a kind of television entertainer because these people watch TV all the time so if we can do like these people if we can put away our shyness... we try to bring joy into learning... then we can get closer to our students. (EF-FQ16)

Teachers’ objective was to create a different relationship between learners and content for the lesson to leave its mark:

They have to enjoy the lesson first; the academic benefits will follow.

(EI-FG1)

Fun activities were implemented in upper as well as lower forms. MQ6 tried them with his ‘A’ level students and explained his reasons:

It’s just because they will follow the class for 10 minutes and then their minds will wander elsewhere out of the class... you have systematically to retain their attention...look for things that would make them interested in the topic... I think you should be an actor... at any time play a role, just put yourself in another person’s skin and show them. (EF- MQ6)

Hence there was a will on the part of teachers to seek ways to make lessons enjoyable so that learners were motivated to come to and remain in class.

(c) Teachers as negotiators

In some challenging classrooms, teachers developed negotiator's skills to be able to teach. A proportion of learners, undisciplined and disengaged with their studies can dismantle all the classroom furniture, harass the teacher and hold a whole class hostage with their destructive power. Classroom situations are such that teachers need to negotiate with those students who "make their own decisions, choose their behaviour" (MVF4) and systematically disrupt all teaching activities.

MVF4 signed a tacit pact for truce as a first measure to transform an alien territory into a learning space. He believed that developing positive attitudes and relationships in his students were the most valuable outcomes. He explained how classroom relationships and learners' freedoms were interweaved:

I meet students individually and I talk to them one-to-one. I foster a relationship based on understanding and tolerance. I allow learners' freedom against the promise that they will complete their tasks but these tasks are not always submitted. I try to get the maximum students with me, I leave alone those who do not want to work for as long as they want, and sometimes those I have forgotten come back to me. (EI-MVF4)

A few months later I was able to observe MVF4 managing a class of 'O' level repeaters and noted the following:

The class was full and students sat in pairs. At the back of the class desks were arranged in one long line like a frontier. Students sitting at those tables had their copybooks opened in front of them but they seemed in another world. Some were listening to music. Others were sleeping on their desks. Teacher discussed a text in class moving around the class and at the back from time to time. He did not talk to anybody at the back. Class observation 16

MVF4 later told me that there used to be several lines of desks at the back. Those who were ready to work had moved their desks in front. He was waiting for a few more to join the class.

FQ16 works in a less hostile environment. However she has to negotiate with her students to get work done because students do not have computers at home. She explained how she implements it:

When there is research to be done, I set the work group wise, they do not need to go on the Net all of them they can look in magazines, books and then they combine it... we have to be flexible, innovative... we need to give different time frame for the same work. (EF-MQ16)

In some contexts teachers had to constantly develop new skills in addition to teaching skills. Negotiating skills were important. They were a pre-requisite to teaching in some aggressive classrooms.

Hence, teachers had varied roles. Cognitivist teachers were facilitators in the learning process or coaches selecting content, model and time frame to optimise performance. Emancipatory teachers worked at gathering sufficient information on their students so that they could propose appropriate help. They created positive classroom environment and also looked for opportunities outside classrooms to instill values. In order to control the tensions in some of their classrooms teachers and students accepted mutual concessions concerning attendance, behaviour and freedom. The different roles, views and ways chosen by teachers to implement LCT throw light on their disposition and their philosophy of LCT.

Teachers' dispositions motivated their goals but these dispositions have to be coupled with requisite ability for success (Ritchhart, 2002). What was missing here was appropriate support to guide teachers in authentic LCT.

5. 4 Pragmatic reasons underpinning teachers' choice of LCT

Data for the two research questions: "How do teachers implement LCT?" and "Why do teachers choose LCT?" often overlapped. We have seen that teachers at times chose LCT to enhance learning with a view to improve learners' performance in examinations and at times to reconcile learners with schooling. Other reasons underpinning teachers' choice of LCT are pragmatic ones.

Teachers found LCT pragmatic as it provided new tools capable of transforming a rigid education system into a more vibrant one. Many teachers in this study chose LCT when they realised that traditional teaching was inadequate for the quality of learners they had to teach. They observed that a systematic lecturing approach resulted in dull classes with learners disconnected from what teachers were transmitting. Teachers declared:

Before my PGCE I thought I was doing well, I explained a lot...and well... after that I discovered that the message did not pass the way I thought it would. (CF-FB7)

When I started it was mainly lecture and notes taking. Later I became aware that students were less engaged in the class, they started daydreaming or they looked bored...then I said no I have to change strategy so that I can keep the interest of the child. (CF-FD10)

I had to learn to teach that way (LCT). It was essential. The first time I taught by giving notes. Students did not understand anything. I asked questions, I wanted some feedback on what they have grasped... the answers were not relevant. (EF-MQ5)

In some cases where learners were unruly, teachers used LC activities and explained the transformation of their students:

The class is really disciplined, I do not have any classroom management problem and you can see the students they are with you all the time. (CF-FV4)

Teachers also chose LCT after having observed how social interactions contributed to knowledge building:

In my mixed ability class, during group works the high flyer will look after his friends, he will lead the group, explain. Learners naturally go to him. I intervene only when there are problems. (CF-MV3)

Though this could look contradictory, sometimes examination pressure drove teachers to select LCT for revision purposes. Group revision motivated whole class attendance

at a time when students generally stayed home. FB16 observed how LCT filled her class:

I am keeping a specific day for my LC class and this is the only day Upper six students are turning up at school [...] When there is “normal teaching” there are no students. (CF-FB19)

In one case the innumerable forms that LCT could take motivated one teacher to look for new teaching and learning tools adapted to her context:

I have been experimenting a lot with LCT, there has been a lot of trial and error, for example if I have two Forms six, in one class I might try one technique with one topic and in another one another technique. I would see which is best. (CF-FQ15)

Undoubtedly teachers' choice of LCT was linked to what these teachers have learned about the theory and the advantages of this approach but what made them turn to LCT when other approaches failed was seeing its positive impact on learners.

Finally in one school it was class sizes that prompted the use of LCT. FG1 recalled:

I must say that La Tourelle is one of the rare schools where you can implement LCT [...] When I first came here it was a cultural choc. I remember getting into a ‘normal’ class of ten to fifteen and a literature class with only five students, never in my entire life have I seen so few students per class. At the same time in our professional course, tutors emphasized active rather than passive learning, so a group of classmates and I we made as if our class was a laboratory where we started to experiment activities and this is how I myself started to develop active learning. (EI-FG1)

For FQ15 and FG1 LCT was here linked with the professional courses they have followed. There was an eagerness to probe deeper into the potential of this approach.

What was evident with teachers in this study was the considerable variation in terms of teaching and learning strategies. Teachers chose their strategies to maintain learners' interest in learning, to avoid monotonous periods where learners could misbehave, to encourage peer coaching, group revision or for practitioner research. Though none of

the participants displayed the kind of LCT detailed in LCT literature, there was an undeniable commitment to improve classroom activities with a new focus on the learner. It seemed to me that all teachers in their own way constructed a repertoire from a “bricolage” of earlier professional courses, beliefs, influences, contexts, and experiences (Sugrue, 2009, p. 380).

5.5 Professional skills and soft skills for effective LCT

Teachers’ responses to the question: “What skills, according to teachers, are required for effective LCT?” pointed to two sets of skills. These are professional skills and soft skills.

The most important professional skill mentioned by teachers was Pedagogical Content Knowledge (PCK). But they all emphasised that mastery of one’s subject content knowledge had to come first to give meaning to any form of pedagogical skills. Content knowledge is expertise in the subject one is teaching and PCK is the ability of the teacher to transform topics in pedagogically powerful ways and yet adapted to the level of all learners (Shulman, 1986). One important responsibility of the LC teacher is to take into account the diversity of learners, their background and the conceptions that these students bring with them in order to tailor learning situations to their needs.

Teachers I have observed did master their subject though what was sometimes problematic was the PCK. For instance FD10 had to struggle to make her learners understand the concept of “redemption of shares”. She explained:

I introduced two new but simple concepts in the previous class and today I explained one more concept. I think this was too much for them so students were a bit confused. (CD- FD10)

Some teachers declared that regularly proposing new activities was important for LCT as it allowed teachers to choose the most appropriate strategy from their repertoire. However time was a problem:

I must be able to think of activities... visuals can be used and I can create materials but finding time is problematic. (CF-FB20)

A number of teachers found that having good planning skills was essential in LCT:

Planning the class is important, the time factor is important, so I need to explain beforehand what I expect of students ... what they will do, the amount of time they will get... this is very important (CF- MB7)

One teacher summed up the skills she felt were central for LCT:

To be able to conduct a LC class you should be competent in your subject, you should know what you are looking for, you need to have your objectives at the beginning and at the end of your lesson, you have to reflect if you have attained your objectives. (CF-FR22)

Teachers also felt that the specific skills that increased chances for an effective LCT were “soft skills” like listening skills, communicating skills or ability to show empathy.

For LC teachers, it was important to have a number of dispositions to be able to create fruitful relationships between teacher and learners in classrooms. Some of these skills were demonstrated during lessons.

MQ6 talked of teacher-learner interactions:

For example I know all my students, I call them by their first name, I have informal chats with them when I meet them in the corridor, I treat them with respect and they trust me. This brings us closer. (EF-MQ6)

FB5 shared the same beliefs as MQ6. She said that effective LCT depended on “communication and inter personal skills because we do not interact with machines, we interact with people”. Indeed I observed the teacher conducting a class discussion, managing learners’ participation, encouraging those who were very shy and having a gracious word for each contributor.

For FD10 the teacher has to be a “good listener, to know how to judge and guide”. She thought that showing empathy was one way of building the confidence and self-esteem of learners. FD10 demonstrated those skills in one class I observed:

She asks one question, reformulates it in a simpler form, in English, in French until she gets some kind of answer...she forces students to think ‘when money goes out, what account do you debit...you have to think...’she corrects, she advises, she praises. She has special attention for those who were absent in the previous lesson. Class observation 4

FQ15 said that teachers always have good intentions but these are not enough, teachers have to show that they care for their students. Showing them the way to success by taking one step at a time was how she demonstrated care.

In one national school the teacher said that her students love “being recognized as brilliant by peers and being praised by the teacher” (CF-FB6), consequently she has developed the habit of publicly acknowledging all noticeable efforts of her learners. She thought this helped in strengthening teacher-learners relationships.

MVF4 believed that teachers had to develop new skills with each class and with each passing year. He declared:

Students come to school as a part of their life and with many deficits; it is to the teacher to inculcate values, responsibility where parents have not done so. Nowadays you may be transferred anytime to a difficult school and you need to adapt. Learning to anticipate conflicts and to take steps to prevent counter-productive confrontations is essential. (EI-MVF4)

Knowledge of the necessary skills to implement LCT was important to help teachers willing to try LCT. In lieu of skills the majority of teachers said that mastery of one’s subject was a pre requisite to LCT and the next most important skill was teachers’ PCK. This statement is not surprising as teachers in the system often become teachers by default and do not necessarily invest in their own professional development. Additionally LCT necessitated variety in teachers’ repertoire, careful planning of classroom activities and teacher reflection. Soft skills to understand and guide learners were equally vital for LCT.

5.6 Summary

Teachers implemented a whole range of learner-centred activities, which they selected according to the level of their students and to their context. Though these activities were meant to provide sufficient flexibility for learners to construct their own learning, most activities in the study were teacher-controlled. Moreover teachers focused on whole class activities. No differentiated learning was observed.

Cognitivist teachers saw themselves in the role of facilitators and coaches working at optimising learners' chances in examinations. The facilitators gave the necessary push to learners to reach their objectives; they gradually developed in learners the capacity for independent work, critical thinking and peer coaching. The facilitators in national schools worked on style and presentation whereas those in regional schools addressed deficits and consolidated learning. The teacher-coach in regional schools selected the best strategies and the easier topics to help learners pass their examination whereas in elite schools the teacher-coach was often a strategist coaching learners for scholarships. Teachers' beliefs seemed moulded by the system and by their own experiences of teaching and learning. Teachers and learners strived for laureateship in national schools. In regional schools teachers worked at helping learners get through the system at all costs.

The emancipatory teachers had more difficult roles. They had to prepare learners for learning through attendance in class, respect for the learning space and eventually participation in the teaching-learning process. Preliminary tasks included gathering information on students in order to help them cope with learning. Some teachers tried to make class time an enjoyable moment while others negotiated truce to be able to teach.

Teachers selected LCT for many reasons but mostly when they felt it would benefit their learners not only in terms of learning but also of learners' performance in examinations. LCT was also chosen in specific situations where it was used to transform classrooms into more dynamic settings, to motivate learners' interest in

learning and to scaffold learning among mixed ability students. Concurrently LCT inspired practitioner research. Undoubtedly teachers chose learner-centred activities because they have used them before and they have witnessed their effectiveness.

For effective LCT teachers deemed mastery of one's subject and PCK essential. Teachers equally thought that soft skills like showing empathy, care or praising contributed to effective LCT. Teachers felt that in more and more cases, adaptability and conflict resolution were becoming necessary skills to manage teaching and learning in the system.

Chapter 6

Discussion

6.1 Introduction

The Mauritian system of education does not offer any in-service professional development to teachers who are free to choose the teaching and learning approach they like. Participants in the study selected their activities according to their belief, contexts and knowledge they had of LC activities.

In this chapter I provide responses to the four research questions of the study. I include a summary of the findings outlined in chapters four and five and a discussion of those findings as I relate them to the theoretical framework and research methodology.

The major findings to my research questions are as follows:

- Teachers' understanding of LCT came from professional courses, classroom experiences and personal beliefs
- A cognitivist perspective for examination-oriented teachers
- An emancipatory perspective for teachers reconciling learners and learning
- Teachers' choice of LCT driven by pragmatic reasons
- Teachers consider professional skills and 'soft' skills vital for effective LCT

6.2 Teachers' understanding of LCT from professional courses, classroom experiences and personal beliefs

This study adopts a social constructivist paradigm, which views teachers' understanding according to their different realities (Denzin and Lincoln, 2005). The knowledge teachers gained in professional courses laid down the basis of their understanding of LCT but teachers' beliefs and their working contexts shaped their personal convictions of the approach. Teachers learned the underlying philosophies of

learner-centred instruction and the activities associated with the approach first from teacher educators and eventually through classroom practice. They listed the following principles as fundamental to their view of LCT: learner-centredness in the teaching and learning process, individualised attention, learners' decision on content and learning methods, knowledge of learners' background and classroom dialogue to create supportive classroom environments. This list corroborates with the cognitive, affective and motivational, social and individual aspects of LC principles as laid down by Cornelius-White and Harbaugh (2010). What is missing is the metacognitive aspect of LCT. The reasons behind could be because teachers did not have the required expertise to develop metacognitive skills or as some researchers have suggested, those teachers may not have developed wholly constructivist-oriented ideas yet (Trumbull and Slack, 1991; Flores, Lopez, Gallegos and Barojas, 2000).

What emerged as a major finding was teachers' commitment to improving learners' outcomes in examinations. Teachers were immersed in a culture where performance in examinations came first. Getting good grades had priority over learning for understanding. With such an orientation there is a tendency for students to prefer that teachers direct them to what they need to learn to optimise success in examinations (Kok-Aun Toh *et al.*, 2003). In fact most teachers equally stated their preference for TCT when learners' performance was at stake. This choice could be linked to the influence of teachers' own experiences as students as our teachers have been exposed mainly to the reception mode as students (Lortie, 1975; Trumbull and Slack, 1991). Teachers could also have framed their understanding of teaching and learning according to successful performance they have witnessed or lived themselves as students notwithstanding their professional training (Nespor, 1987; Pajares, 1992; Goddard and Foster, 2001).

As mentioned in the introduction chapter, Mauritian students compete very young for admission in an elite school and teachers in the state system consider it a privilege to work in those schools. One interesting finding in the study was the passion some teachers have for the culture of laureateship in our system. Teachers in national schools admitted that their teaching was transformed by demands of their students and the elitist culture. For these teachers it is clear that culture was a determining factor in

their teaching orientation (Pajares, 1992) and that both contexts and beliefs outweighed their training (Knowles, 1994).

6.3 A cognitivist perspective for examination-oriented teachers

Most teachers adopted a cognitivist perspective of LCT that is more examination-oriented than learning-oriented. Those teachers considered learners' abilities and expectations when they planned learning, devised activities that would facilitate learning and believed it legitimate to use the benefits of LCT to raise whole class performance in examinations. Teachers took on multiple roles according to their contexts and learners in order to achieve their objectives.

There was a deep-rooted conviction in most teachers that a blend of TCT and LCT ensured construction of knowledge on the one hand and consolidation of knowledge on the other. Thus, in spite of education policies strongly recommending LCT, teachers implemented approaches dictated by their values and beliefs (Pajares, 1992; van Driel, Beijard, and Verloop, 2001; Woolfolk Hoy, Davis and Pape, 2006). Nevertheless it seems that this secured the confidence of some teachers, apprehensive learners and parents. In fact this concurs with what researchers have found, that there is a disconnection between constructivist teaching practices and summative examinations largely based on behaviourist learning theories. A number of studies have evidenced that when examinations test students' capacity to replicate facts and figures, learning becomes teacher-centred (Shepard, 2000; Tabulawa, 2003; Vavrus, 2009; Schweisfurth, 2013).

A common feature in cognitivist LCT was the tight control teachers had of all activities. Observational data showed more teachers' than learners' talk, teacher-directed learning process, more teacher-learners interactions than learner-learner interactions. Just as Croft (2002) and O'Sullivan (2004) observed in some African countries LCT was shaped by contexts and much more centred on *learning* than on *learners*. Some researchers found that in education system having a heavy curriculum and a school culture of TCT teachers were considered as the sole expert of the teaching and learning process (Mohammed and Harlech-Jones, 2008; Mtika, 2008;

Zeichner and Tabachnik, 1981). Vavrus (2009) added that teachers found it more practical to control learning when classes were overcrowded, a reality in some of our schools.

Findings also revealed that teachers in the cognitivist perspective used the easiest aspects of LCT in their practice. They chose more often group work, group discussions or group presentations with emphasis on communication skills and research skills. More complex teaching approaches like implementing inductive learning or forming learners as co-constructors of knowledge were rarely used. Though some teachers did talk about how they addressed learners' weaknesses, this aspect of LCT did not emerge as an important aspect of teachers' concerns and was not observed in the various teaching strategies implemented in class. Similar situations have been documented in African countries and researchers linked teachers' restricted repertoire to insufficient opportunities to practice LCT and to reflect on its attendant methods (Vavrus, Thomas and Bartlett, 2011).

Additionally cognitivist teachers were against giving power to learners. They believed the system was already too permissive and learners were overly protected. Decisions concerning what to teach and how to teach belonged to teachers in spite of their claims that this right was shared with learners. Learner power in the cognitivist perspective was understood more as learners' responsibility to succeed in their examinations than the freedom of learners to decide on their learning. Studies of LCT in sub-Saharan context showed the same attitude from teachers. Researchers suggest that the democratic philosophy underpinning LCT could create uneasiness among some teachers not ready to view learners as partners in learning (Leyendecker, Ottevanger and van den Akker, 2008).

Overall teachers kept a number of traditional elements in their LCT: classroom assessments tended to be assessment of learning rather than assessment for learning and feedback was used more for summative than formative purposes. Hence teachers implemented only partially the various categories of learner-centred principles (APA Workgroup 1997; Cornelius-White and Harbaugh, 2010). Their views and practice would be situated in between the traditional and the constructivist view of teaching (Koballa, Graber, Coleman and Kemp, 2000) or it could be qualified as a hybrid form

of LCT (Thomson, 2013). Notwithstanding the fact that teachers created a more social environment with occasional scaffoldings to extend the capabilities of learners (Bruning *et al.*, 2004), it is questionable whether teachers were able to instill into learners the willingness to uphold greater responsibility for their learning. Learners have been dependent on teachers for too long to expect a complete change of mentality from both teachers and learners.

6.4 An emancipatory perspective for teachers reconciling learners and learning

There were some overlaps between the cognitivist and the emancipatory perspectives. However what was distinct in the emancipatory perspective was that teachers first constructed the learner as a “living, breathing human being” (Giroux, 2012, p. 21). They provided emotional and social support to students at risk of failing. To keep learners inside classrooms teachers ensured that they were comfortable. This comfort was interpreted in the widest sense to include all the parameters that would motivate learners’ attendance and eventually a re-engagement with their learning. Learners were given the possibility to pause from learning, to pace their learning and to choose the learning they desired. This situation shows a kind of contingent constructivism (Vavrus, 2009) and a cultural translation of LC practices (Thomson, 2013) in specific contexts. Teachers tried to improve the quality of learners’ life starting right away from classroom experiences (Fraser 2008; Tikly and Barrett 2011). There was a determination in searching for a space between the pressures of the system and classroom crisis (Chisholm and Leyendecker, 2008).

Teachers provided flexible ways and times for submission of tasks that they thought were necessary conditions for successful learning (Opdenakker and Van Damme, 2006; Ralph, 2005). They tried to instill values in their teaching and found that respect was more effectively nurtured outside the four walls of classrooms. Many of them did not look for immediate results; they viewed learning in the longer term. They became motivators showing learners how to build expectations in life. They chose at times to be entertainers to maintain interest in learning activities and content. More importantly in some challenging schools they were by force negotiators of classroom behaviour. Even in this role teachers assessed the cognitive and affective levels of learners to provide meaningful learning to learners albeit a prescriptive curriculum.

They achieved a fundamental principle of LCT when they proposed tasks that matched learners' needs, that were personally relevant to them and that could sustain their interest (McCombs and Whistler, 1997; Tomlinson and Imbeau, 2010; Weimer, 2013).

There was an effort towards less power distance between teacher and learners (Hofstede, 1980). The freedom granted to learners was the sine qua non condition for learners not to challenge the role of the teacher and for some teachers to ensure that the classroom remained a learning space. As bell hooks (1994) described it, those teachers broke away from traditional patterns of classroom management to re-engage learners with schooling. Teachers' strategies here did not really empower learners to develop learner-centred skills like setting one's targets and monitoring one's learning in the short or even medium term. They just provided a reflection time to some learners to decide if they wanted to be in class or not. The power given here by teachers to learners seemed to be motivated by their specific contexts.

The study also revealed that LCT is effective when teachers adopt several roles to achieve their objectives (Weimer, 2013). In this study teachers "wore different hats" in the process of implementing LCT. They were "gardeners" to the extent that they created the positive classroom atmosphere to make their learners comfortable (Fox, 1983). They were "coaches" when they had to assess learners' capacities and decide on the content and the strategies that would ensure success in examinations (Spence, 2010). Thus as researchers studying African contexts found, teachers' implementation of LCT was heavily determined by the prevailing school culture and context (Thomson, 2013; Vavrus, 2009).

6.5 Teachers' choice of LCT driven by pragmatic reasons

In addition to their aims of improving learning outcomes and re-engaging learners with their studies, teachers turned to LCT from time to time for pragmatic reasons. In fact as Payneandy (2002) observed, teachers in Mauritius revert back to traditional teaching even after their professional courses. But at times a realisation that didactic teaching was inefficient pushed many teachers to shift from TCT to LCT or to complement their lectures with more LC activities. They became aware of the

inadequacy of their traditional teaching methods when they observed learners either “daydreaming” disconnected from what they were transmitting or systematically disrupting lessons. Implementation of LCT proved valuable in transforming passive and bored learners into active and receptive ones.

Teachers sometimes implemented LCT when they wanted high ability learners to contribute to knowledge building. They had observed how social interactions could be useful in scaffolding classroom learning. As Guskey (2002) found, it is the experience of successful strategies where improvement in student learning has been demonstrated that drove teachers to renew the experience. Hence in some situations teachers selectively and cautiously adopted LC strategies taking one incremental step at a time in order not to jeopardise their control over classroom activities (Kok-Aun Toh *et al.*, 2003).

6. 6 Teachers consider professional skills and ‘soft’ skills vital for LCT

Teachers who had gained experience in LCT thought that two sets of skills were needed for effective LCT. The first set of skills was cognitive and the second one was soft skills. Among the cognitive skills teachers talked of mastery of one’s subject. This statement is understandable as many teachers in Mauritius get into the profession by default and may not master what they should teach. Teachers mentioned PCK together with lesson planning, classroom management and teacher reflection as important teaching skills (Hashweh, 2003; Shulman, 1987). They also included testing new strategies for their repertoire. This was important as it allowed teachers to choose the most appropriate strategy from a variety of LC strategies for diverse groups of learners.

The necessary soft skills discussed were teachers’ capacity to relate to their learners, to listen, to communicate and to show empathy (Goleman, 1998). Praising was considered as important as guiding. But one skill deemed especially relevant to our system was the capacity to adapt to all kinds of contexts, as teachers are liable to transfer at any time. Thus an ethics of concern for learners, subject expertise and PCK were considered the most important elements for effective LCT. This was clearly

insufficient when measured to general LC principles like learner autonomy and empowerment (McCombs and Whistler, 1997; Mostrom and Blumberg; 2012). This could be due to teachers' insufficient knowledge of the principles underpinning LCT or to a strong culture of teacher controlled classrooms. Indeed when teachers have large classes to manage and when students are not motivated to learn, teachers may be reticent to exchange time-tested methods for those they do not master. However we have to admit that in a context where teachers teach in isolation, where no support is given either at school level or at the Ministry's level, it is difficult for teachers to critically view their teaching (Vavrus, 2009).

6.7 Gaps in LCT

There were some discrepancies between what teachers claimed to be their understanding of LCT and the enactments of their claims. One of them was differentiated learning. LCT requires that teachers recognise and accommodate different learning modalities (McCombs and Whistler, 1997) but there were no individual, remedial or differentiated learning strategies in any of the classes I observed.

I also observed a lack of interaction among learners. Except for group work teachers did not provide opportunities for discussions between learners or around divergent views that would have promoted higher-order thinking in learners (Bohart, 2004). This was probably due to the heavy syllabus and the 45 minutes class, which is too short to cater for both, content coverage and individualised attention. One important category of LC principles, the metacognitive category that has the potential of constructing learner autonomy was not explicitly taught. Teachers did not encourage learners to reflect on how they learn best and to select appropriate strategies for specific tasks. One reason for this could be the lack of teacher professional development in our system (Chisholm *et al.*, 2000).

As for the development of learner autonomy, teachers either did not know how to teach it or did not think it important enough to devote time to it. Authentic learning activities also would have made a difference had teachers created opportunities for

authentic learning. But there were no tasks set for a realistic purpose like writing for real readers. Teachers' goals were to prepare learners to the kind of tasks set in examination papers.

Assessment for learning is crucial to LCT but the pressure of exams can be such that some of its aspects are set aside (Cooper and Cowie, 2010). For instance peer and self-assessments were not considered, neither did teachers involve learners in the process of evaluation as recommended in LCT (Cowie and Bell, 1999). All the strategies used for learner understanding converged towards summative examinations.

What was equally missing was the use of feedback to advance learning. In national schools feedback was used to train learners to score full marks to get into the race for laureateship. But teachers did not integrate their feedback in lessons to improve individual growth and progress as recommended in LC principles (McCombs and Whistler, 1997). A culture of summative assessments and quantitative feedback could be responsible for this situation.

Even teachers adopting an emancipatory view wanted their learners to leave school with a certificate. They strived to re-engage learners with their studies as this was one important gateway to further studies and employability. Those teachers tried to tailor strategies according to their contexts and their learners (Robertson, 2003; Vega and Tayler, 2005).

Successful learning depends on the collaboration of teachers to gain a better understanding of their learners (Opdenakker and Van Damme, 2006), but teachers in the study did not go one step further to discuss with colleagues strategies that had more chances of succeeding or to discuss the equity of the system (Giroux, 2012). This feature of teacher isolationism in state schools has been analysed in my IFS on teacher professionalism (Allybokus, 2012).

When measured against Weimer's (2013) key concepts, findings showed that most teachers kept their directive role and did not give to learners the power that generally goes with LCT. Teachers equated this power with their responsibility to learn. As far as content was concerned there was an attempt at promoting understanding but priority for most remained coverage of content, learners' role for its part was

transformed to some extent. Though they continued to follow teachers' guidelines to perform in examinations, learners became more active, more engaged, at times more independent. Teachers in the emancipatory perspective provided differential treatment to learners and allowed them flexibility in learning activities and assessments. However assessments and use of feedback were teacher-controlled and oriented towards summative evaluation.

6.8 Summary

In this chapter I discussed the major findings to my research questions in relation to the theoretical framework and research methodology selected. I explored mainly through interviews and focus group discussions teachers' understanding of LCT and found that teachers believed that learners had to be at the heart of the learning process and that all strategies had to be geared toward their individual need for successful learning. Teachers' understanding of LCT was not limited to learning for the sake of learning; it had to meet examination exigencies. Thus with the pressure of examinations teachers found it effective to use a blend of approach, mixing LCT and TCT or using only TCT in some contexts. Teachers' understanding could be linked to their years of apprenticeship as students, to their experiences as students or the prevailing culture of laureateship.

The study showed learner-centred teachers adopting either the cognitivist or the emancipatory perspective of LCT according to their context. Teachers took on different roles within their respective perspectives. In the cognitivist perspective that was examination-oriented, they were facilitators and coaches trying to maximise examination performance. Teachers kept a number of traditional elements in their LCT which gave a kind of hybrid form to their LCT. Teachers in the emancipatory perspective gave a more human dimension to learning. They were providers of psychological and social support, motivators showing learners how to achieve their goals, entertainers to keep learners focused on studies and negotiators of peace in aggressive classrooms.

Teachers selected LCT fundamentally to improve learning or to re-engage learners

with their studies. But at times they chose LCT to regain the attention of learners after a series of lecture or when they felt that learner interaction would help raise the performance of low ability learners. It also happened that teachers found LCT conducive to practitioner research. Hence teachers deliberately chose LCT because they were fully aware of its benefits (Vavrus, 2009).

According to teachers, effective LCT needed both cognitive and soft skills. The first set included expertise in one's subject and PCK and the second one was good interpersonal relationship.

The studies showed that despite teachers' personal and professional qualities, a number of important aspects of LCT were either missing or inadequate. These were differentiated learning, authentic learning tasks, peer and self-assessments, use of feedback to improve learning and metacognitive learning. It is difficult to say whether teachers were aware of these gaps or not but I feel that such a situation is due to a large extent to teacher isolation, to lack of support from school and from the broader education system in state schools.

The analysis of teachers' views discussed in this study is a reflection of my own observation and understanding of the process of research. As Symon, Cassell and Dickson (2000) recommend, researchers need to be reflexive of their own subjectivity. Hence though I use teachers' voice everywhere in the study to co-create new knowledge with teachers' knowledge, I have to acknowledge my own subjectivity in interpreting findings. My long teaching experience and my vision of what LCT should look like may have influenced what I heard and observed. Thus those findings reflect my subjectivity, as it is I who decided on and interacted with my research tools. Consequently my study is a representation of my respondents' realities through the lenses I use to see the world (Burr, 2003).

Chapter 7

LCT: a powerful approach

7.1 Introduction

The aim of this study was to explore how Mauritian state secondary school teachers who chose LCT understood this approach and implemented it in their class. It was also important to know why and how teachers used LCT and which skills they thought were important for effective LCT.

This study was carried out with teachers who regularly selected LCT as a teaching and learning approach and it gives evidence that LCT can make a difference in all our schools, whether regional or national, with high flyers or low ability learners. LCT is particularly relevant in schools with learners who need more time, more attention, more curricular freedom and more flexibility in their learning and evaluation. LCT adapted to specific contexts and culture can make schools places where learners are motivated to learn.

7.2 LCT: an approach initiated in professional training courses, shaped by teachers' beliefs and adapted to contexts

Teachers gained theoretical knowledge of LCT in their professional courses. Their understanding of LCT however involved only some of the learner-centred principles recommended in learner-centred instruction. Teachers talked of LCT as an approach that shifted the focus from teaching to learning and from transmission to construction of knowledge. Teachers also learned the democratic philosophy underpinning the approach and the need for teachers to know their learners in order to select the most effective strategy to optimise their learning and to provide opportunities for learner empowerment.

In practice, teachers tried to adapt their knowledge of LCT to their contexts and also according to their own beliefs. The majority of teachers believed that LCT was inadequate to prepare learners for examinations. In this regard some teachers complemented LCT with TCT, but most teachers replaced LCT by TCT. This situation suggests teachers' convictions in the effectiveness of TCT, a familiar approach to all Mauritian teachers. According to Lortie (1975) teachers' selection of teaching approach is often linked to their own experiences as learners. The reversion to TCT has equally been evidenced in countries with high-stakes examination (Kok-Aun Toh *et al.*, 2003).

7.3 A cognitivist perspective for examination-oriented teachers

A core finding in this study is the two perspectives in which LCT was understood and implemented by teachers. One group of teachers chose a cognitivist perspective. Their main goal was learners' performance in examinations. Those teachers worked both in regional and national schools with high ability and mixed ability learners. They used LC strategies to facilitate learning, to encourage learners to become more active and to be more focused on tasks. They developed the social interaction in LC activities to scaffold and enhance learning in class.

Those teachers chose LC principles with which they were probably familiar and which they found easy to transpose in practice. Cooperative learning was one activity I have observed in all schools. However the study showed key missing dimensions of LCT in teachers' practice: teachers did not negotiate learning processes and goals with individual learners according to their individual characteristics, needs and goals (McCombs and Whistler, 1997; Tomlinson and Imbeau, 2010; Weimer, 2013). Teachers' efforts went more towards a focus on whole class learning rather than individual's learning. There was no time devoted to metacognitive learning in order to construct life-long learners. There was no learner involvement in assessment of learning and assessment feedback was not used to improve learning in class or for self-regulating skills.

7.4 An emancipatory perspective for teachers working with disengaged students

A second group of teachers embraced an emancipatory perspective. They had to manage unruly and disengaged students. Like the cognitivists, their ultimate goal also was to help learners gain a certificate after leaving school but their approach was different. They had to attend to more urgent needs in their context first, like looking for ways to ensure learners' attendance in class, respect for the teacher and the learning environment and the re-engagement of students with their studies (Cornelius-White and Harbaugh, 2010). Their roles ranged from providing emotional support for fragile learners to building learners' expectations, implementing fun activities and negotiating peace with aggressive students. This second group was more learner-centred as teachers considered their learners individually, taking in consideration who they were, what input they were bringing to class and collaborating with learners to achieve some positive learning outcomes in classrooms.

Teachers' worksites considerably influenced the roles teachers took on to achieve their goals. In contexts where the basic and intermediate level of learner engagement (Cornelius-White and Harbaugh, 2010) already existed, teachers were mainly facilitators. In more challenging contexts teachers' roles decupled. They were counselors for learners who could not deal with their problems; risk takers in devising their own rules; entertainers and negotiators with young rebels.

7.5 Teacher professionalism involving cognitive and soft skills

The success of LCT in some extreme cases depends on teachers' emotional intelligence, conflict resolution skills together with good PCK. Teachers try to adapt to different contexts when they are transferred. However the study shows enormous gaps between state schools in terms of school culture, school ethos or learners' motivation. Hence worksite support is important when teachers are transferred from one school to another and continuing professional development is vital for teachers to reflect on their practice and to stay abreast of new findings (Borko, 2004). This will however depend on school's resources and Ministry's commitment. Lack of such training may result in teacher stress and disastrous classroom situations not being tackled in time (Hargreaves and Fink, 2006; Brock and Grady, 2000).

7. 6 The promise of LCT in Mauritian SSS

There are a few successful adaptations of LCT in developing countries. A study in Kenya showed that teachers who were supported in their professional development were able to interweave LCT in their traditional classrooms (Hardman *et al.*, 2009). Likewise Croft (2002) in Malawi and Barrett (2007) in Tanzania found teachers using LCT principles to address the needs of different groups of learners.

Researchers link the failure of LCT in developing countries to top-down decisions (O’Sullivan, 2002; Mohammed and Harlech-Jones, 2008), material constraints (Urwick and Junaidu, 1991; O’Donoghue, 1994) and a strong culture of didactic teaching (Akyeampong, Lussier, Pryor, and Westbrook, 2013). The case of Mauritius is different. Teacher autonomy throughout the system, school facilities and specially the will of those emancipatory teachers to transform the learning process encouraged teachers to use LCT. As observed by Johnson, Monk and Hodges (2000) in South Africa, some teachers made gradual changes to their traditional teaching approach, taking one step at a time. Other teachers developed their own perspective of LCT according to their analysis of their contexts. This concurs with the findings of Thomson (2013) who documented how teachers looked for appropriate teaching methods that would blend in the culture of their students.

The literature also shows that education systems with high-stakes examinations forced teachers to shift from LCT to TCT (Kok-Aun Toh *et al.*, 2003; George and Lubben, 2002) but though participants in the study did use TCT, their choice of approach rested on their beliefs and experience. For them this was sometimes the best approach in their context, like for example in the explanation of complex concepts to students or in the preparation of ‘A’ level students for competitions in elite schools.

7. 7 Limitations of the study

The following limitations of the study are acknowledged. This study is limited as it is based on data from thirty voluntary participants working in eight secondary schools that do not necessarily reflect the reality of a whole education system. Some of the subjects taught in our schools were not represented and some were overrepresented.

However the findings in this study may have implication for other schools. The research identified the strategies teachers planned, tested and implemented in differing contexts to reach their goals. Further research is needed with a larger sample, more representative subjects and including other participants like learners and school leaders to gain a deeper understanding of classroom practices in different settings.

A key limitation of the study relates to teachers' beliefs. Some contradictions in what teachers claimed and what they practiced were noted. In spite of the difficulty of categorising beliefs (Pajares, 1992) teachers' beliefs seemed to sway between the traditional and the constructivist category (Koballa, Graber, Coleman and Kemp, 2000). However here I have to acknowledge the assumptions I bring to my analysis. The whole process of the research from the selection of research methods to interpretation of findings bears the influence of my values. Hence a more prolonged observation in classrooms would be needed to analyse the link between teachers' practice, beliefs, their reports and my interpretation.

The data in this study were collected mainly from interviews and focus group discussions. As only 18 teachers opened their classes for observations, observation data was insufficient for a comprehensive picture of teachers' practice of LCT in classrooms. A more open culture of observation will certainly bring deeper understanding of teaching practices.

7. 8 Implications for my professional role and the wider professional context

In my role as a school leader in the state system it was essential for me to understand what secondary school teachers felt about LCT, what they knew of it and what they could implement on their own. The knowledge I have gained of teachers' capacities and needs, of the constraints of the system and the type of learners that we have in regional and national schools will help me design small-scale projects on LCT in my school. Involving learners in their class activities and their modes of assessments will certainly bring a change in my school as a learning community rather than a space used like an outlet for frustrated students.

I also intend to disseminate my findings. The ministry regularly and rhetorically lays emphasis on quality education without providing the necessary support to teachers in the system. Hence a summary of my study will be forwarded to the Ministry of Education. I will equally publish part of my study in regional journals for educators.

7.9 Final Thoughts

I tend to agree with Giroux (2012) when I reflect on the Mauritian system of education. For many of our secondary students the tyranny of outcome-based and high-stakes testing have turned the space of public schooling into a kind of penitentiary. They are grappling with a system that has alienated them from teachers, classrooms and schools. The main business of schools being teaching and learning, I as the school leader have a moral obligation of empowering my teachers to provide a teaching and learning process that will engage all learners, and especially those increasing numbers of misfits rejected by the system each year. LCT as an approach that teachers themselves have chosen stands a good chance of transforming competitive classrooms into more democratic spaces and of reconciling an increasing number of students with themselves first, then with a form of instruction that gives due consideration to their humanity and finally with positive experiences of school learning.

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APPENDICES

Appendix 1

Permission from Ministry



REPUBLIC OF MAURITIUS
MINISTRY OF EDUCATION AND HUMAN RESOURCES

Our Ref: ME/0/305/3/T3

10 April 2013

Mrs Sabina ALLYBOKUS
138, Virgil Naz
Quatre Bornes

Dear Madam,

Research Project

I refer to your letter dated 26 March 2013 in connection with your research project.

2. The Ministry is pleased to inform you that approval has been granted for you to carry out the proposed study in secondary schools in Zones 3 and 4, as mentioned in the letter under reference.
3. It is understood that:
 - (i) it will be left to the discretion of Educators themselves to decide whether to participate or not,
 - (ii) there will be no disruption of classes ,
 - (iii) you will submit a brief of your findings at a later stage.
4. You are kindly advised to liaise with the Heads of schools concerned for all necessary arrangements prior to conducting your survey.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'E. Pillay'.

E. Pillay (Mrs)
for Ag. Senior Chief Executive

Appendix 2

Questionnaire to teachers

Educator's profile

Age

Gender

Subject taught

Professional qualification (*Pgce, BEd, MEd...*)

Years of teaching experience

Are you an H o D?

Teaching practice

How would you define your students?

- Low ability
- Average ability
- High ability

How do you plan your teaching?

- Teacher decides on what and how to teach
- Teacher decides on lesson but uses student responses to drive lessons
- Teacher decides on lesson but uses student responses to shift teaching strategy
- Other (please explain briefly)

What kind of strategies do you use?

- Teacher directed teaching and learning
- Group work
- Discovery learning
- Others (Pl explain)

How do you start new lessons?

- By explaining new concepts
- By questioning on prior knowledge
- By using examples from everyday life
- Others (Pl explain)

How do you end your lessons?

- By reviewing lessons
- By giving homework
- By questioning students on lesson
- Others (Pl explain)

How do you assess students' learning in class?

- Paper and pencil tests
- Class observation
- Questioning
- Others (Pl. explain)

How do you assess your teaching?

- Through student performance
- Through questioning of students
- Through reflection
- Through interaction with students

How do you cater for the low ability students in your class?

- Proposing different tasks
- Looking after them during free time
- Asking peers to help
- Others (Pl explain)

What according to you is the main aim of a teacher?

.....

Appendix 3

Consent form

Dear Educator

My name is Sabina Allybokus, a doctoral student at the Institute of Education, University of London. I am working on the following research project: *The implementation of learner-centred teaching in Mauritian state secondary schools: examining teachers' beliefs and classroom practice* and am inviting you to participate in the study.

I am specifically interested in how educators in the state secondary system understand the concept of learner-centred teaching and how they interpret it in their practice. The aim of this study is to inform policy makers of learner-centred teaching practices in state schools in Mauritius with a view of tailoring professional development for teacher expertise in this field.

The study will cover a period of six months, from May 2013 to October 2013.

In the first phase of the project teachers will be invited to talk of learner-centred strategies they have either tried, created, adapted. (This could be of any type ...like pair work, group work, projects, hands-on activities, outdoor tasks or whole class instruction with a focus on individual needs of students...) In the second phase I will seek your permission to observe your class. This will help me understand class interactions.

As the study will involve group discussions participants will be requested to respect the privacy of other members of the group by not disclosing any personal information shared during discussions.

I am responsible for the project and should you have any question, I can be contacted at sabinally@yahoo.com

Before we start the project I would like to emphasize that

- Your participation is entirely voluntary
- You are free to refuse class observation or to answer any question.
- You are free to withdraw from the project at any time.

All information collected for the research will be kept strictly confidential. Excerpts from interviews / results may be part of the final research report and in such cases your permission will be sought before your 'words' are used. However under no circumstances will your name or any identifying characteristics be included in the report.

I do hope you will agree to participate. If you do, please sign this form to indicate that you are willing to be part of the project. Sabina Allybokus

Name.....

Signature Date

Appendix 4

Framework used in the semi-structured interviews

The table below shows the framework used in the semi-structured interview.

Concepts	Questions
BELIEFS	<ul style="list-style-type: none">• What do you think of learner-centred teaching?• What is your philosophy/ definition of LCT?• Do you think there is only one way of using LCT?• Do you think there is only one way or various ways of using LCT?• Can you give me an example of how you use LCT?• Tell me the way you used to teach and the way you do it now. What has been the cause of the transformation?• What, according to you, are the fundamental components of LCT?
CONTENT	<ul style="list-style-type: none">• Tell me how you prepare your content for L C teaching• What aspects of content are important?• Why?
INSTRUCTOR	<ul style="list-style-type: none">• What are the role and responsibilities of a teacher?• What are the factors that you consider when you are planning lessons?• What are the activities you associate with LCT?• When do you implement them? Why?• Could you describe one lesson? How you start, the activities used and how you end?• How do you help students construct their own understanding of a lesson/ concept?• Do you use their response to develop new ideas or meanings? If yes, could you give examples?

	<ul style="list-style-type: none"> • How do you get to know what they are thinking?
Teacher competencies in LCT	<ul style="list-style-type: none"> • What are the essential skills needed in LCT? • Is knowing the learner important in planning LCT? What aspects of learners do you consider before choosing classroom activities? • Do you consider the family background / culture/ learning style of your student when planning lessons? Content / topic; lower/ upper forms; ability (high/ average/ low) of the class • Are you aware of how your students learn best? If yes, have you used that knowledge? How?
THE LEARNER	<ul style="list-style-type: none"> • What are the responsibilities of learners? • It is said that LCT is equally about facilitating relationship, like training learners to interact with people, starting with their peers. What do you think of it? <ul style="list-style-type: none"> • Training students to be self-regulated, to build their own study skills is one aspect of LCT. Do you think you do that? How do you do it? Do you train them to take these specific responsibilities? How? • LCT is equally about training students to be autonomous. What do you think of that? How do you prepare them for autonomy?
ASSESSMENTS	<ul style="list-style-type: none"> • Tell me what you think of classroom assessments, how do you implement them, what use do you make of them. • Have you tried peer assessment? Involving students in selecting criteria? What kind of feedback do you give to learners? • Is LCT a barrier to exams?

Appendix 5

List of codes

The first column has descriptive labels under one theme, the second the code and the third the research questions or sub questions.

Beliefs / practice Influence of	Codes	How do teachers' beliefs shape practice
Experience as student	Bel.stud	
Apprenticeship		
Upbringing		
Professional development	Bel.pd	What are the factors that Influence your classroom practice?
Knowledge		
Teacher training		
Teaching experience		
Research		
Evidence in classroom		
Policy		
Years of teaching experience		
Subject matter	Bel.subj	Why do you choose LCT?
Learning for understanding		How do you understand LCT?
Learning for exams		
Grade level		
Classroom events		
Mind sets	Bel.mind	
Feelings		
Expectations		
Culture		
Values		
Attitudes		
Students ability	Bel.abil	Does quality of learners matter in LCT?
- High ability		
- Average		
- Low ability		
Traditional Beliefs	Bel.trad	Classroom practice- how do you teach?
Transfer knowledge		
Expecting precise definitions		
Expecting precise answers		
Expecting precise explanations		
Process Beliefs	Bel.proc	

Problem-solving		
Discovery		
Inductive		
Constructivist	Bel.const	
Construction		
Interpretations		
Authentic learning activities		
Cooperative learning		
Prior knowledge		
Personalized learning		
Teacher & Learner interactions		
Learner & Learner interactions		

Appendix 6

Conceptual Matrix

Teachers' understanding of LCT					
	FD13	FD10	FD9	MQ5	FQ15
Focus on the learners' and on the teachers' competences/ skills	It is focusing on the needs of the child, the different ways how he can grasp and the different ways we can teach.	We put things in point wise and learners have to develop and fill in, they come forward with explanations and solutions. And if it is not good we correct.	The teacher has to implement strategies to develop learner-centred skills	It should be the student first and then you.	Concentration should be more on the learner and how the learner is going to learn and how I am going to adapt it in class.
	MB6	FB18	FB19	FV4	FG1
Classroom dialogue	For me LCT is when you give to the learner the opportunity to express himself so when I start the class I give to students the opportunity to give me a feedback on what we have been doing last time.	LCT is when it is not only me who am talking but equally my students who are involved in the class.	I use LCT as my subject deals with philosophy where we need to know the point of view of students,	Learners are free to speak out.	Allowing students to express their views to explain the way they understand concepts without the interference of the teacher initially

	MG1		FB19		FG1
Learners' goals	The outcomes will be focused on the students' objectives, that is what they want to achieve for themselves...		I make them aware of what they have to do and of the consequences of not working		They have to enjoy the lesson first, the academic benefits will follow,
	MG1	FG1	FB19	FQ16	MV2
Affective aspect of learning	(I teach them) to see what will make things better... more beautiful and this skill is developed through enhancement of what they create. This is how I try to develop their affective skills.	They have to enjoy the lesson first, the academic benefits will follow,	When I have done a piece of research I share it with my upper forms students on Facebook	We took balls we went out on the playground and with the ball throwing we learned verbs. And it was like musical chairs. Playing and learning grammar, playing and learning verbs. We got gradually closer	I constantly negotiate. There can be no learning if I do not understand my students, what drives them to work or not to work. I talk to them; I have informal contracts with them. The emotional aspect is essential.
	MB6	FB17	FB19	FD10	FR21
Cognitive and social aspects of learning	I have a yahoo group and a personal website for my students and the discussion forum is dynamic.	Discovery learning	Research work, group work and sharing	The learner must conduct research and come up with his own findings	Drama Discussion, theatre, expose, experimentation, going on their own to find information not only relying on teachers

	FV4				
Constructing on prior knowledge	We take care of what learners already know From this we will start our preparation and we will try to involve them				

