Developing Teaching and Learning in Mozambican Higher Education

A Study of the Pedagogical Development Process at Eduardo Mondlane University

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I dedicate this thesis in memory of my father Pedro Augusto Mendonça, who has always had confidence in my success. Unfortunately he could not witness the end of my effort. But, I believe that wherever he is, he is witnessing this moment with love.

I love you dad forever.
Abstract

This thesis analyses the implementation of a student-centred learning approach at the Eduardo Mondlane University (UEM), in the context of the current curricular reform. The main objective of the thesis is to gain understanding of the implementation of a student-centred learning approach and how the innovation is related to the acquisition of teachers’ pedagogical competence at the above mentioned university. A sociocultural approach and more specifically Cultural Historical Activity Theory is used as a theoretical framework given that it provides a view of learning as a context based social activity. A qualitative approach based on document analysis, classroom observations and semi-structured interviews with different actors in the process of teaching, learning and teacher training was used.

The findings of the three studies carried out and presented in four articles in the thesis show that the lecturers do not feel ownership of the curriculum reform introducing the new pedagogical approach, and revealed a conflict of interests in the process of implementation of the reform. Students appear to be unclear about the significance of the new approach and they cannot judge if it is correctly implemented. Contextual factors such as a high number of students in the classroom, poor infrastructure and inadequate access to educational resources also affect the students’ performance in their learning. The university teachers expressed a need for training and the creation of adequate material conditions in order to be able to apply the innovations. However, signs of positive attitudes towards this approach were also revealed by the informants, which demonstrates the existing potential of the reform. It was found that the role of the teacher is crucial in making students active, motivated and self-regulated. Moreover, the students’ active learning depends on several factors, such as contextual, social and psychological aspects of the process.

In relation to the acquisition of teachers’ pedagogical competence, a comparative study of the official documents of Eduardo Mondlane University and Umeå University explicitly shows a focus on the development of pedagogical competence for all categories of teachers. However, due to significant differences in historical pre-conditions, cultural contexts and educational artefacts the findings revealed many differences in the corresponding collective activity systems. In conclusion, the thesis indicates that the implementation of student-centred learning at UEM depends on the availability of good educational infrastructure and also the development of human resources. Furthermore, less hierarchical communication at the university could accelerate the process.

Key words: Cultural Historical Activity Theory, curriculum reform, higher education, student-centred learning, teacher professional development
Abstract in Portuguese

Esta tese analisa a implementação de uma abordagem de aprendizagem centrada no estudante no caso vertente da Universidade Eduardo Mondlane (UEM), no contexto da reforma curricular em curso. O principal objectivo da tese é compreender o processo da implementação da aprendizagem centrada no estudante e como esta inovação está relacionada com a aquisição de competências pedagógicas dos docentes na UEM. Como referencial teórico foi usada uma abordagem sócio-cultural, mais especificamente, a Teoria da Actividade Histórico-Cultural que defende a aprendizagem como uma actividade social e baseada no contexto. A metodologia usada foi qualitativa, baseada na análise de documentos, observação de aulas e entrevistas semi-estruturadas com diferentes actores no processo de ensino e aprendizagem e acções de capacitação em exercício de docentes universitários.

Os resultados de três estudos realizados e apresentados em quatro artigos nesta tese mostram que o sentimento dos docentes é da não apropriação da reforma curricular introduzindo a nova abordagem pedagógica e um conflito de interesses no processo de implementação foi revelado. Os estudantes pareciam não estar claros sobre o significado da nova abordagem e não podiam julgar se estava a ser implementada corretamente. Factores contextuais como o elevado número de estudantes por professor/sala de aula, inadequadas infra-estruturas e inadequado acesso aos recursos educacionais, foram também apontados como desfavoráveis ao processo de ensino e aprendizagem. Os docentes universitários expressaram a necessidade de formação e criação de condições materiais adequadas para serem capazes de implementar as inovações. Contudo, sinais de atitudes positivas em relação à esta abordagem também foram revelados pelos informantes, o que demonstra o potencial existente na reforma. Esta tese, conстатou que o papel do docente é fundamental para tornar e manter os estudantes activos, motivados e auto-regulados. Além disso, a aprendizagem activa dos estudantes depende de vários factores, tais como contextuais, sociais e aspectos psicológicos.

Em relação à aquisição de competências pedagógicas dos docentes, o estudo comparativo entre os documentos normativos da Universidade Eduardo Mondlane e da Universidade de Umeå revelou explicitamente que ambas instituições estão focalizadas no desenvolvimento de competências pedagógicas para todas as categorias dos docentes. Todavia, devido a diferenças significativas nas pré-condições históricas, contextos culturais e instrumentos mediadores do processo, muitas diferenças foram reveladas nos respectivos sistemas colectivos de actividades. Em conclusão, a tese indica que a implementação de uma aprendizagem centrada no estudante na UEM depende da disponibilidade de boas infra-estruturas educacionais e do desenvolvimento de recursos humanos.

Defende ainda uma comunicação menos hierarquizada na universidade, como um factor que poderia acelerar o processo.

**Palavras-chave:** Aprendizagem centrada no estudante, Desenvolvimento profissional dos professores, Ensino Superior, Reforma curricular, Teoria da Actividade Histórico-Cultural
Abstract in Swedish

Denna avhandling analyserar genomförandet av en studentcentrerad lärande-modell (SCL) vid Eduardo Mondlane University (UEM), Moçambique, inom ramen för den pågående reformeringen av läroplanen. Huvudsyftet med avhandlingen är att beskriva och förstå hur genomförandet av SCL är relaterat till utvecklingen av lärarnas pedagogiska kompetens. Ett sociokulturellt perspektiv och mer specifikt Kulturhistorisk verksamhetsteori (Cultural Historical Activity Theory) har valts som teoretiskt ramverk eftersom den ger en bild av lärande som en kontextbaserad social aktivitet. Avhandlingens olika studier utgår från en kvalitativ ansats baserade på dokumentanalys, klassrumssobservationer och semistrukturerade intervjuer med olika aktörer.


När det gäller utvecklingen av lärarnas pedagogiska kompetens, visar en jämförande studie av de officiella dokumenten vid Eduardo Mondlane universitet och Umeå universitet tydligt att en utveckling av pedagogisk skicklighet för alla kategorier av lärare är önskvärd. Men på grund av olikheter i historiska förutsättningar, kulturella sammanhang och pedagogiska artefakter visade resultaten på många skillnader mellan de kollektiva aktivitetssystemen. Sammanfattningsvis visar avhandlingen att genomförandet av studentcentrerat lärande vid UEM är beroende av tillgången på god pedagogisk infrastruktur samt på utvecklingen av mänskliga resurser. Dessutom torde en lägre grad av hierarkisk kommunikation vid universitetet påskynda processen.

**Nyckelord:** Kulturhistorisk verksamhetsteori, läroplansreform, högre utbildning, studentcentrerad inlärning, kompetensutveckling av lärare
## Abbreviations

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<th>Abbreviation</th>
<th>Full Form</th>
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<tr>
<td>CDA</td>
<td>Centro de Desenvolvimento Académico</td>
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<td>CHAT</td>
<td>Cultural Historical Activity Theory</td>
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<td>HEI</td>
<td>Higher Education Institution</td>
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<td>ICT</td>
<td>Information Communication Technology</td>
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<td>MINED</td>
<td>Ministry of Education</td>
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<td>NUFFIC</td>
<td>The Netherlands Organization for International Cooperation</td>
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<td>SADC</td>
<td>Southern Africa for Development Community</td>
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<td>SCL</td>
<td>Student-Centred Learning</td>
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<td>SIDA</td>
<td>Swedish International Development Cooperation Agency</td>
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<td>STADEP</td>
<td>Staff Development Program</td>
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<td>UEM</td>
<td>Universidade Eduardo Mondlane</td>
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<td>UPC</td>
<td>Centre for Teaching and Learning, Umeå University</td>
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<td>ZPD</td>
<td>Zone of Proximal Development</td>
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Introduction

First of all, I would like to briefly present my personal background to explain my interest and experience in the field of education.

My parents were nurses and I wanted to follow their path when I was a child. However, after the independence of Mozambique, my country lost many teachers with the exit of Portuguese settlers. In this context, a lot of secondary school students were recruited to become teachers. Thus in 1978, I attended an accelerated pedagogical training (two years) in Maputo (the capital of Mozambique) to become a secondary school biology teacher. So, I have been involved in the teaching profession since 1980 when I was appointed as a teacher in Manica province, in the centre of Mozambique. From that time onwards, I have been working in the field of education as a teacher, head of a pedagogical department and a principal in schools in Mozambique.

During my professional life, I faced problems related to the teaching of concepts which students considered to be too abstract and whose meaning they had difficulties to understand. Their motivation was sometimes very low. In part, the reason for this could be that the school had neither laboratory nor library facilities to support their studies. Another reason could be that the teachers (including myself) did not have enough experience and pedagogical knowledge to engage students in their studies. In order to minimize the above mentioned difficulties, my colleagues and I used to discuss together the best ways to approach some of the content. I gained many important experiences from such peer-discussions. They inspired me to work to improve the pedagogical performance of myself and of my colleagues.

When the Pedagogical University was opened in 1985 in Maputo, I wanted to continue my studies further and learn more about teaching strategies and methods. In my undergraduate dissertation, I worked with the introduction of a historical approach in teaching biology in order to motivate pupils and improve their learning.

Later, when I was appointed as the head of a secondary school, I faced many problems related to the quality of teaching. The majority of teachers did not have either long experience in the classroom or pedagogical training. I studied this situation in my masters dissertation, prepared at the Faculty of Education, Eduardo Mondlane University. I analyzed the effects of peer collaboration in secondary school science departments. The purpose was to improve teachers’ performance in the classroom based on the sharing of pedagogical skills and collective experiences among colleagues.

I combined my masters studies with my work in school. Before I finished my masters thesis, I was invited to work at the Academic Development Centre [Centro de Desenvolvimento Académico] (CDA) at the Faculty of Education. It was a great challenge for me. CDA contributes with in-service teacher train-
ing for all teachers at Eduardo Mondlane University (UEM) and other higher education institutions. These courses are compulsory for the junior teachers, but all teachers are advised to take the courses in order to upgrade their pedagogical competence. CDA also supports students in methods of study and research methodology.

I started teaching a course about study methods to first year students and became later a facilitator of other pedagogical courses for university teachers. The contents of such courses are focused on methods of teaching and learning in higher education, students’ assessment and ICT in Education. The main methods used are group work, participants’ own presentations and discussions.

During the years that I was working at CDA, I realized that many pedagogical problems are similar to those at other levels of education, which I had previous experience of. The majority of teachers at UEM do not have special pedagogical training. They only have experience and a background in their own subjects. The faculties invite the best graduates to follow academic careers, but these junior teachers have many problems in organizing the teaching and learning process in the classroom. With regard to this, I developed a particular interest in studying this situation in my Doctoral thesis, since I wanted to increase my knowledge of how a student-centred learning (SCL) approach can be implemented in the context of the current curricular reform at UEM. I also realized that this implementation comprised some problems since it dealt both with a pedagogical innovation in the process of teaching and learning and also the fact that the majority of teachers do not have enough pedagogical knowledge.

The following section will present the general and the specific aims of this thesis, as well as the research questions.

**Aims**
The general aims of this thesis are to gain understanding of the implementation process of a student-centred learning approach (SCL) at UEM and to understand how this change in the pedagogical approach is supported by the development of the university teachers’ pedagogical competence.

**The specific aims are:**
- To describe and problematize the implementation of SCL in the context of the current curriculum reform at UEM. (Article I)
- To describe students’ and teachers’ perceptions of SCL and their perceived roles and agency in the process of implementing this approach at UEM. (Article II)
• To analyze how the development of university teachers’ pedagogical competence through activities at the Academic Development Centre at UEM is realized in comparison with similar activities at Umeå University in order to understand their roles in the process of the implementation of pedagogical innovations. (Article III)

• To present and discuss experiences of active learning in a pedagogical training course at Umeå University, in order to gain knowledge for the further development of the university pedagogical courses at UEM. (Article IV)

To answer these aims, the following research questions were formulated:

1. What characterizes the implementation of SCL at UEM (stated values, mechanisms, criteria, activities, expected pedagogical outcomes) in the context of the current curricular reform?

2. What are the teachers’ perceptions, experiences and pedagogical practices concerning the implementation of SCL?

3. What are the students’ perceptions of teaching and learning at the university, in the context of the current curricular reform?

4. What can be learned from the Centre for Teaching and Learning, [Universitetspedagogiskt Centrum] (UPC) at Umeå, i.e. a European University?

5. What characterizes the teaching and learning culture of an in-service higher education course in pedagogy at a European university?

The following section will describe the context of the study. With regard to this, a brief description of the Republic of Mozambique, the Mozambican higher education system in general and the Eduardo Mondlane University in particular, will be introduced. Related to Mozambican higher education, some visions of the Strategic Plan of Higher Education (MINED, 2011a) and of the Strategic Plan of UEM (UEM, 2008) related to changes and the implementation of innovations in the process of teaching and learning, will also be presented. Finally, some thoughts related to the implementation of SCL at UEM that are seen as problematic (UEM, 1999), will be presented.
Study context

In this section the general socio-economic and cultural-historical context of the study will be presented. The main study of this thesis was carried out in Maputo, the capital of the Republic of Mozambique and largest city with a population of over 1.5 million.

A country in the process of rapid and dramatic changes

Mozambique is a country in Southeast Africa on the shores of the Indian Ocean. The only official language is Portuguese, which is spoken mostly as a second language. The country’s population of around 24 million is composed overwhelmingly of Bantu people. There are 13 main Bantu languages in the country. The largest religion is Christianity, with significant minorities following Islam and African traditional religions (http://hdrstats.undp.org/en/countries/profiles/MOZ.html).

Figure 1: Map of the Republic of Mozambique. Source: http://www.google.se/url (2014).
Mozambique gained independence from Portugal on 25th June 1975. After independence, the country shifted its political orientation towards socialism. During this transition period, some rebel Portuguese settlers destroyed shops and other facilities before fleeing to Portugal or South Africa. In spite of the economic difficulties of the time, people still had access to basic food, due to the establishment of cooperatives.

Nowadays, the country is oriented to developing a democratic society based on a free market economy. The infrastructures destroyed during the civil war are being rapidly restored and industrial exploration of mineral resources such as natural gas and coal has started. Nonetheless, the country still has high economic external dependence. Mozambique has attracted large foreign investments in the aluminum industry, the energy sector, and the extraction of mineral resources. As a member of SADC (Southern Africa for Development Community), Mozambique's economic activities are steered towards agriculture, food production, mineral resources for exportation and sustainable development, i.e. energy, tourism and regional transport (MINED, 2011a).

Mozambique remains one of the world’s poorest countries, in 185th place out of 187 in the Human Development Index in 2013. The state budget is supported to about 50% by external resources (MINED, 2011a). While common citizens use unsafe “public transport” called Chapas, risking their lives every day getting to work or school, there is an overflow of luxury cars on the roads. The growing stratification in Mozambican society is thus clearly visible as well as the growing disappointment of people over the precarious living conditions, which results in regular strikes. Instability emerges from time to time in different parts of the country obstructing the transit of vehicles between the South and North and also provoking the deaths of many people. These conflicts are claimed to be caused by poor governance, corruption and the perpetuation of poverty.

These conflicts and tensions in society affect the daily life of every citizen. Logically, they should be considered in the analysis of any social processes, including educational innovations, since contextual factors influence the flow of events and psychological state of people involved in them.

The changing roles of traditional culture in Mozambican society

As an African country, Mozambique has its deep rooted traditions and ways of being. In general, children are taught to respect their seniors and not to argue with parents. To challenge the wisdom of the elders is considered rude and an act of defiance (Ndege, 2007). This has always been a foundation of family education and life in the traditional community.

The role of traditional culture in society has changed greatly during the life span of my generation. Before independence, the colonial administration marginalised traditional culture and values. For instance, folk beliefs and rituals were considered uncivilized and thus were discouraged. During this period some cultural stratification was created in society. There was a minority of
“assimilated” Mozambicans, who behaved like the settlers, and a majority of “non-assimilated,” who maintained their traditional culture.

After independence, the national government encouraged the reinvigoration of some traditions, such as folklore, but maintained an orientation towards state-driven cultural unification and a socialist modernization of society. Thus, the use of local languages in educational institutions was discouraged, since Portuguese was the language of national unification. Also, traditional marriages called lobolo were forbidden as these included offering substantial gifts to the bride’s family.

Nowadays, it is possible to witness a strengthening of traditional cultural influences in the society in general. For instance, lobolo is becoming popular in many families regardless of social or economic status. It is considered to give higher status and stronger protection for a woman by the extended family of her husband.

Currently, there are clear tensions in Mozambican society between a modern individualistic society that prioritises the nuclear family and traditional cultural values where the rules and needs of the extended family are in focus.

**Higher Education in Mozambique**

According to the Strategic Plan of Higher Education (MINED, 2011a) the mission of Higher Education in Mozambique is to promote equity in participation and access and also to respond to the developmental needs of the country. Higher Education shall contribute to the promotion of national unity and democracy, the development of regional integration, international cooperation, protection and sustainability of the environment (MINED, 2011a).

According to Feelesson & Mählck (2013) the lack of skilled individuals to produce value, make use of existing technology and develop context-specific innovations and solutions, are the main weaknesses in African countries. This is also valid in the case of Mozambique. When the country started to change to a free market economy in the 1990’s a rapid expansion of higher education institutions (HEIs) also took place. In 1995 there were only 4 HEIs in the country, all of them public (Feelesson & Mählck, 2013). The number of HEIs grew recently to 46 (MINED, 2013). There are 17 governmental and 29 non-governmental institutions spread all over the country. However, this growth has not been accompanied by a corresponding creation of educational infrastructure in order to support the processes of teaching, learning and research. According to the Strategic Plan of Higher Education (MINED, 2011a) there are HEIs working without libraries, internet facilities and laboratories. Nevertheless, solutions are being discussed in order to allow the operation of the private HEIs as a way of supporting the increasing demand for students’ enrolment.

Higher Education has very high prestige in Mozambique but its access and quality are issues of concern expressed in many official documents.
Eduardo Mondlane University
The main study of this thesis was conducted at Eduardo Mondlane University (UEM). UEM is the major and oldest institution of higher education in Mozambique and is located in Maputo. UEM was founded in 1962 and was then called the General Studies of Mozambique. The General Studies of Mozambique acquired university status in 1968 and was called the University of Lourenço Marques (Universidade de Lourenço Marques), and offered a comprehensive programme of university courses. Then, one year after Mozambican independence in 1976, the University was renamed in honour of Eduardo Mondlane, an anthropologist and the first president of the Frelimo Party (Mário et al., 2003).

After independence, the shortage of qualified teachers at UEM was dramatic due to the exodus of the Portuguese (Mário et al., 2003). During this period, UEM became dependent on foreign teachers mainly from the Socialist bloc in Europe but also from Cuba. Currently, UEM has more staff with Doctoral and Masters Degrees than all other higher education institutions in Mozambique together. According to statistical data from the Ministry of Education, the number of academic staff at UEM who hold a PhD is 315 from a total of 1585 teachers (MINED, 2012).

At UEM the number of students attending different courses was 23,481 in 2010 (MINED, 2011a). UEM also offers graduate and post-graduate evening courses at the majority of its faculties and schools. These courses comprise the 2nd and 3rd cycles of training and give the graduate an academic masters degree and at the faculty of Arts and Social Sciences also a doctoral degree. There are sixty-one postgraduate courses. Of these, four are PhD courses and the remaining fifty-seven are Masters (http://www.uem.mz/index.php/pt/ensino/pos-graduacao).

Different donors are involved in the training of UEM staff. For example, the NUFFIC organization (The Netherlands Organization for International Cooperation) is mostly engaged in developing pedagogical competence in Higher Education and also academic training in Psychology and Sciences of Education. The Swedish International Development Cooperation (SIDA) program has been engaged in Masters and PhD training at UEM for the last three decades (Feelesson & Mählck, 2013).

UEM is considered to be the most important and prestigious university in Mozambique. It is also struggling constantly to improve the quality of teaching and research at the university.

Pedagogical challenges at UEM
This thesis analyses the process of the implementation of pedagogical innovations, in particular a student-centred learning approach, at UEM. This section will present the pedagogical challenges concerning the implementation of this approach.
In 1999 an evaluation of the curricular reform process at UEM showed that transmissive teaching methods dominated university pedagogy (UEM, 1999). At the same time, the curriculum reform documents declared a need to shift university pedagogy to a student-centred learning (SCL) approach and participative methods (UEM, 1999).

About ten years later, the Teacher’s Training Plan for Higher Education 2012-2015 (MINED, 2011b) and the Strategic Plan of Education 2012-2016 (MINED, 2012) confirmed the need to improve the quality of teaching and learning in higher education. The measures aimed at a pedagogical renewal of the university teachers were suggested to include training in issues related to student-centred learning and participative methods.

Cossa et al. (2012) reporting on a study carried out at UEM shows that university teachers receive little support to raise their level of professional knowledge and skills. This fact contributes negatively to their performance in the classroom. Cossa et al. (2012) point out that although UEM offers courses in pedagogical training, they still do not meet the expectations for improving the quality of teaching. This issue will be discussed further in the following section.

The Academic Development Centre

Pedagogical teacher training at UEM is concentrated to the Academic Development Centre [Centro de Desenvolvimento Académico, CDA] at the Faculty of Education. Nowadays CDA also provides pedagogical support to other governmental and non-governmental institutions of higher education spread all over the country.

The CDA emerged as a result of the institutionalization of the Staff Development Program (STADEP) in 2000. STADEP was created with the support of NUFFIC in 1989 with the purpose of building an internal capacity for continuous academic staff development (Mandlate, 2003). Most of the CDA’s course contents, methods and strategies were inherited from Dutch counterparts, i.e. a western country.

Currently, CDA staff consists of nine teachers employed by the Faculty of Education; six of them are in charge of pedagogical teacher training and three work with student support. Teachers from other departments and faculties of UEM are invited to facilitate some courses.

Every year about 100 university teachers are trained on different courses offered by CDA. Sometimes, additional external financial aid, for instance, from Italian or Dutch funds, makes it possible to increase the number of course participants to almost 400. CDA is dependent financially on the Faculty of Education and the funds made available annually do not cover expenses for courses in other schools of UEM located in other provinces. Distance courses are not given yet, due to lack of capability and equipment.
Theoretical framework

In order to gain a better understanding of the process of implementation of SCL, this thesis draws on a Cultural Historical Activity Theory (CHAT) framework. CHAT has been used by several researchers to study changes in higher education and the introductions of new pedagogical practices (Peck, Gallucci & Lippincott, 2009; Williams, 2009; Karpov, 2003).

One of the particularities of CHAT is that it encourages thinking proactively about how activities and practices can be changed, for example, how certain changes in the context or mediating tools can influence practice. These considerations were important when choosing the theoretical framework for the research of this thesis.

CHAT has its roots in Vygotsky’s approach and relates to a sociocultural perspective on learning and development. Vasquéz (2006) showed that CHAT helps to understand practices in the academic environment, since it emphasizes the importance of social factors and interaction between agents and their environments. It also emphasizes contradictions in social activities as means of development in the activity system. According to Yamagata-Lynch and Haudenschild (2009) CHAT has been broadly used in the last decades in educational settings since it conceptualizes individuals and their environment as a holistic unit of analysis. In this view, relationships with peers contribute to the development of an individual and the system of activity. This peer collaboration plays a crucial role in transformative experiences and the cooperative construction of knowledge (Mahn & John-Steiner, 2010). Thus, in educational settings, CHAT is also viewed as an interventionist approach, due to its potential to change educational practices (Vasquéz, 2006).

The context of activity includes social structures and institutions, policies and cultural practices. The individual finds her or himself positioned within structures, practices and discourses of the social context. The cultural aspects of the activity system impact most powerfully or directly on the development of epistemic mentality and identity. In general, CHAT sees societies and their individual members as mutually constitutive. Personal development is shaped by the process of enculturation and individual activities serve to develop the socio-cultural context. Wells and Claxton (2002, p. 3) state that “cultures play a large role in shaping the development of individual minds; and individuals’ thoughts and deeds serve to maintain or alter the cultural milieu.”

In CHAT the principle of tool mediation plays a central role. It states that mediating tools shape the way human beings interact with reality. Engeström and Miettinen (1999, p. 8) reported that “any local activity resorts to some historically formed mediating artefacts”. Artefacts include different instruments, language and culturally established procedures. Ajayi (2008, p. 640) noted that “social practice always involves distinctive ways of acting, interacting, valuing,
feeling, knowing, and using various objects and technologies that constitute social practices.” In this thesis, tool mediation refers to, among other things, administrative guidelines at the university that regulate the process of teaching, internet facilities and pedagogical instruments used to support the implementation of the new teaching approaches.

Vygotsky asserted that an individual develops by participating in common activities with other humans, mediated by language, technical artefacts as well as norms and modes of acting (Engeström & Miettinen, 1999). When learners interact with others in their social environment they also acquire the ideas, language, values, and dispositions of the new social group. In the same thread of thinking, Mercer (2004, p. 139) also shows that education can be seen as a process in which people work together, and when they work together they “do not only interact” but “interthink”.

CHAT recognizes diversity, because different outcomes can be expected from different learning contexts. From this perspective, this thesis sees CHAT as a tool to better understand the role of different cultural, social and contextual manifestations in educational settings, particularly at UEM.

Consequently, the collective activity system that connects psychological, cultural and institutional perspectives is used as a unit of analysis in this thesis. According to Vásquez (2006) such an approach has much to offer in the understanding of the integration and enhancement of intellectual and material resources. This makes it possible to understand, manage, and clarify the complexity involved in the facilitation of the development of the individual and society.

CHAT also helped in the analysis and discussion of organizational aspects of the implementation of new pedagogical approach, the role of the collective and individual in the process, as well as the pedagogical organization of learning. The notion of agency is central in this analysis. According to Edwards (2005) agency is the capacity to identify the goals to which one is directing one’s action and to evaluate whether one had been successful. In this sense, CHAT conceptualizes the potency of human agency because an individual agency creates new solutions to meet needs as conditions change. Beyond social and cultural contexts of activities, human cognitive development and functioning also depend on the relation between individual and society (Ajayi, 2008).

Here it is interesting to add a particular cultural aspect that might help to understand the process and the results of SCL implementation at UEM, drawing on Hargreaves (1994) monochromic and polychromic cultural approaches to time. In monochromic cultures people are used to strictly follow predetermined timetables. There are clear success indicators to producing expected outcomes on time. In polychromic cultures, setting hard and fast deadlines is not a norm. There are many social and informal interactions that are assumed to be more important to serve social harmony than to meet clearly defined technical specifications. According to Hargreaves, African culture belongs to the polychromic
type. In terms of educational change, the proper shared intention for change could be seen as a satisfactory result in itself in a polychromic culture, without the formulation of specific hard deadlines, expected outcomes and design of follow up evaluations.
Methodology

This chapter will present and discuss the methodology used in this thesis designed to understand the mechanisms behind the process of SCL implementation at UEM. This process was studied with the help of different perspectives that could support an understanding of the context of the SCL implementation, the pedagogical practices carried out in the classroom, as well as the modes of communication between teachers and students and among students. Thus the thesis focuses on aspects such as: the understanding and interpretation of SCL, the means of teaching and learning, as well as: how SCL is being supported at the institutional level in the development of teachers’ pedagogical competence. A comparison of pedagogical practices at UEM and a European university was designed in order to obtain insight into the process of implementing pedagogical innovations at UEM. Personal experiences of UEM and Umeå University helped in the process of data analysis.

Research Design

The research design used in this thesis assumes a qualitative approach, bearing in mind that an understanding and interpretation of different perceptions about the implementation of a student-centred learning approach at UEM was paramount. Creswell (2009, p. 4) asserts that “qualitative research is a means for exploring and understanding the meaning individuals or groups ascribe to a social or human problem”. A qualitative approach is also perceived as multi-methodological, involving an interpretive, naturalistic perspective to its subject matter (Denscombe, 2008; Ritchie & Lewis, 2003). Stake (1994) and Neuman (2003) consider that the combination of multiple methods, empirical materials and perspectives in a single study is best understood as a strategy that adds rigour, breadth, and depth to any investigation. Furthermore, it emphasizes the importance of looking at variables in the natural setting in which they are found.

The choice of different qualitative methods was determined in order to verify the validity and reliability of the results presented in the thesis. This process occurred in different phases. First of all, data from observations, interviews, documents and theories were triangulated. According to Ritchie & Lewis (2003) triangulation is a common way to verify the validity and reliability of the findings. Secondly, the results were presented in seminars and conferences, where feedback from other researchers helped to improve the data analysis. This thesis thus aims to gain an understanding of the social, cultural and contextual aspects of implementing SCL in the context of the current curriculum reform, and how this is related to the teachers’ acquisition of pedagogical competence at UEM. With regard to this, different qualitative methods of data collection have been used, such as classroom observations, semi-structured interviews, comparative document analyses and participant observation. In general, qualitative research seeks to explore the interpretations and experienc-
es of different individuals and groups, in particular in social contexts in order to better understand the social phenomena being studied (Ritchie & Lewis, 2003). To achieve this, a pilot study was carried out in a faculty in a different context than the main study, with the aim of improving the accuracy and reliability of the data I was looking for, as well as to increase knowledge of the context. Consequently, it was necessary to test the adequacy of the protocol for classroom observations and the interview guide, as well as to gain knowledge about the context of teaching and learning, in order to improve the research questions proposed.

The main study was conducted at UEM in Mozambique at the Faculty of Agronomy and Forestry Engineering and at the Faculty of Education at the Academic Development Centre (CDA). In order to also understand how the process of the acquisition of teachers’ pedagogical competence in a different context than UEM is organized and carried out, a comparative study and participant observation were done in Sweden, at Umeå University, at the Centre for Teaching and Learning (UPC).

The Faculty of Agronomy and Forestry Engineering was chosen in order to gain knowledge about how the new pedagogical approach proposed in the curriculum reform documents is being implemented. It was a convenience choice, due to accessibility and also due to the fact that the researcher has a background in Biology. This fact facilitated a better understanding of the contents treated during the process of teaching and learning. Researchers often choose convenience sampling, due to easier access (Ritchie and Lewis, 2003).

**Classroom observations**

Seventeen classroom observations were carried out of first to fourth year students, involving ten different teachers in order to obtain knowledge of the social context of teaching and learning, as well as the process of teaching and learning, the relationship between teachers and students and students/students. These in-site observations helped the researcher to grasp the real teaching and learning situation at the faculty, and also assisted the process of data analysis when comparing observation data with other information collected. Denscombe (2008, p. 206) asserted that “it draws on the direct evidence of the eye to witness events first hand”, and also “It is based on the premise that, for certain purposes, it is best to observe what actually happens”. In the case of UEM, it was important to compare what is written in the official documents with what is happening in the classrooms.

**Semi-structured Interviews**

A better understanding of the implementation of the new pedagogical approach proposed in the curriculum reforms at UEM is best reported by the main actors of the process of teaching and learning. Guided by this vision, five teachers and six students chosen randomly from the classrooms observed were interviewed.
in order to explore their perceptions and feelings about the process of implementation of SCL at UEM. Random sampling enables the generalisation of the results to a larger population (Creswell, 2009). According to Denscombe (2008) semi-structured interviews enable the interviewer to have a clear list of issues to be addressed and questions to be answered. Moreover, the interviewer is flexible in terms of the order in which the topics are considered and the informants develop ideas and speak more widely on the issues raised by the researcher in open-ended answers. All interviews were recorded, transcribed verbatim and translated from Portuguese to English.

**Comparative document analysis**

In order to better understand how the new proposed pedagogical approach is aligned with the acquisition of teachers’ pedagogical competence at UEM, a document analysis was fundamental. Also, a comparative analysis between the units in charge of the development of university teachers’ pedagogical competence in both contexts, the Academic Development Centre at UEM and the Centre for Teaching and Learning at Umeå University, was carried out. The aim was to compare the demands for the acquisition of pedagogical competencies in a European and an African university.

Curriculum documents from the universities’ centres and reports from interviews with the staff of both centres were compared and analyzed based on an inductive approach. Furthermore, an analysis and comparison of course evaluations performed by course participants from both centres was carried out. The aim was to explore the similarities and differences in relation to the organizational process of pedagogical teacher training at both universities, with the purpose of gaining knowledge of the contents, methods and strategies used, as well as to obtain experiences from a European university. The opinions of the participants facilitated an understanding of the pedagogical concerns of the university teachers in both contexts.

**Participant observation**

A participant observation was carried out at UPC, with the aim of gaining an understanding of the social interaction and social and cultural aspects of learning on a pedagogical teacher training course at Umeå University. During the observation, field notes about the roles of the facilitators and participants, as well as the activities performed during the seminars, were written down in a note pad at the end of each session of the course. Afterwards, narratives were developed based on the field notes in order to describe the patterns of interaction and activities carried out during the course. Riessman (2008, p. 5) stresses that narratives “can refer to an entire life story, woven from threads of interviews, observations and documents”. According to Denscombe (2008) participant observation enables the researcher to gain insight about cultures and events and can produce data by observing and listening to what is said.
Data Analysis
The results of the three empirical studies are presented in four articles. Thus, the first study is reported in articles I and II. The second study is reported in article III and the third study is reported in article IV. An inductive approach to analysis was used. In this regard, different categories and themes were created, based on different patterns that characterized social, cultural and contextual factors in the process of SCL implementation. These factors provided scaffolding for a better understanding of the results. According to Creswell (2009) inductive analysis focuses on individual meaning in empirical data materials that are qualitative.

Assuming a sociocultural perspective in the analysis of educational practices facilitated finding the different themes and categories presented and discussed in each study of the thesis. Each study contributed a different aspect when investigating sociocultural and contextual factors, as well as personal experiences. These contributed to the interpretation and understanding of the big picture that is the context of UEM. Theories as an argument, a discussion or a rationale, help to explain or predict different phenomena (Creswell, 2009).

Figure 2 below summarizes the understanding gained of the SCL implementation at UEM and how it was constructed in this thesis.

**Figure 2:** Factors Contributing to Construction of Knowledge about the Process of SCL Implementation.
**The process of data collection**

Table 1 below summarizes the process of data collection: the year, the number of lecturers and students involved and the context.

<table>
<thead>
<tr>
<th>Year</th>
<th>Data</th>
<th>Place</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>Pilot study</td>
<td>Umeå University</td>
</tr>
<tr>
<td></td>
<td>Semi-structured interviews</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8 classroom observations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 teachers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 masters students</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>Classroom observations</td>
<td>UEM</td>
</tr>
<tr>
<td></td>
<td>Semi-structured interviews</td>
<td></td>
</tr>
<tr>
<td></td>
<td>17 classrooms observations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 teachers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6 students from 1st to 4th</td>
<td></td>
</tr>
<tr>
<td></td>
<td>years</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>Participant observation</td>
<td>Umeå University</td>
</tr>
<tr>
<td>2011/12</td>
<td>Document analysis</td>
<td>Umeå University and UEM</td>
</tr>
<tr>
<td></td>
<td>Official documents from</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Umeå University and UEM,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>related to teaching and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>learning and in-service</td>
<td></td>
</tr>
<tr>
<td></td>
<td>teacher training</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Comparative study semi-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>structured interviews</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 teachers from UPC and 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>teachers from CDA</td>
<td></td>
</tr>
</tbody>
</table>

**Validation of the results**

The results were validated through peer community reviews at four international conferences as indicated in the table 2 below.

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
<th>Place</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>Paper “Inner Tensions in Introducing a Student Centered Learning</td>
<td>Berlin, Germany</td>
</tr>
<tr>
<td></td>
<td>Approach in Mozambican Higher Education” was presented at the</td>
<td></td>
</tr>
<tr>
<td></td>
<td>European Conference on Educational Research (ECER)</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>Paper “Development of teachers’ pedagogical competence: a</td>
<td>Cádiz, Spain</td>
</tr>
<tr>
<td></td>
<td>comparative study between a European and an African University” was</td>
<td></td>
</tr>
<tr>
<td></td>
<td>presented at the European Conference on Educational Research (ECER)</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>Paper “Comparative analysis of university pedagogical centers’</td>
<td>Kristianstad University,</td>
</tr>
<tr>
<td></td>
<td>activities in Sweden and Mozambique” was presented at The sixth</td>
<td>Sweden</td>
</tr>
<tr>
<td></td>
<td>Nordic Conference on Cultural and Activity Research (ISCAR 2013)</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>Paper “Exploring an experience of active learning in Higher Education”</td>
<td>Lund, Sweden</td>
</tr>
<tr>
<td></td>
<td>was presented at ISP-UEM Workshop</td>
<td></td>
</tr>
</tbody>
</table>
**Ethical considerations**

Administrative and ethical considerations were taken into account before data collection. For instance, regarding the pilot study, a personal contact was made with the head of department at the Faculty of Forestry and then a timetable of classes and a list of lecturers’ names were provided by the head of the department. According to the availability of the researcher, an email was sent to each lecturer selected, asking for permission to observe their lessons and explaining the objectives of the classroom observations. Before the lesson started, the researcher was introduced to the students. In relation to the main study, a letter was sent to the Dean of the Faculty of Agronomy and Forestry Engineering who then gave permission to meet the head of the Department. The lecturers were then informed about the presence of the researcher at the Department. Later, the process was the same in relation to the pilot study. In this way, the researcher obtained permission from all participants to carry out the study and their protection was safeguarded. In relation to participant observation, the researcher asked for permission from the facilitators of the UPC courses before the course started. All documents used in the thesis were available during the course or downloaded from internet.

The following section will present the findings generated from the data analysis of the three studies presented in the four articles in the thesis.
RESULTS

Results

The results presented are guided by the following research questions posed earlier, discussed in the three studies carried out and presented in the four articles in this thesis, i.e. 1) What characterizes the implementation of SCL at UEM (stated values, mechanisms, criteria, activities, expected pedagogical outcomes) in the context of the current curriculum reform?; 2) What are the lecturers’ perceptions, experiences and pedagogical practices concerning the implementation of SCL?; 3) What are the students’ perceptions of teaching and learning at the university, in the context of the current curricular reform?; 4) What can be learned from the Centre for Teaching and Learning, [Universitetspedagogiskt Centrum] (UPC) at Umeå, i.e. a European University? And finally 5) What characterizes the teaching and learning culture at the in-service higher education pedagogy course in a European university?

The first and second research questions are answered in article I (Mendonça et al., 2012) which presents lecturers’ perceptions of the new curriculum reform and their experiences and pedagogical practices related to the implementation of the SCL approach. The results from classroom observations and semi-structured interviews showed that the process of implementation at UEM is difficult. For instance, teachers were very unhappy because the process was not transparent. According to them, they knew about the ongoing reform and some ideas of the new pedagogy, but did not feel that their voice would count in the process.

The lecturers interviewed reported that there was no shared understanding of the meaning of the reform, the value base of the pedagogical innovation or psychological preparation for implementing this new approach. In this regard, their interpretation of the approach and its practical implementation differs significantly. Neither the teachers nor the students felt that they were owners and active agents of the curriculum reform. It appears that the university management drove this reform, rendering it ‘administration-centred’. With regard to this, the main barriers pointed out by the lecturers concerning the SCL implementation were lack of knowledge and resources.

Article II (Mendonça & Popov, 2014a) answers the third research question, which concerns students’ perceptions and expectations of teaching and learning at the university, in light of the current curriculum reform. Reports from interviews and classroom observations showed inner tensions in the implementation of SCL at UEM. The findings revealed how different curriculum actors perceive their agency in the process of introducing new pedagogical approaches. Findings such as highly centralized power relationships and tensions in communication at different levels of the organization at the university were noticed. For instance, the results from the students’ interviews showed a lack of knowledge and skills concerning SCL. One of the reasons for this could be the lack of communication at department level with the purpose of introducing
the students to the innovation. During classroom observations it was evident that few alternative forms of student activities took place.

Article III (Mendonça & Popov, 2014b) answers the fourth research question. With reference to this, a comparison between the Centre for Teaching and Learning, [Universitetspedagogiskt Centrum] (UPC) at Umeå University and the Academic Development Centre [Centro de Desenvolvimento Académico] (CDA) at Eduardo Mondlane University was made. The results showed that the official rhetoric of both universities explicitly focuses on the development of pedagogical competence for all categories of teachers. Therefore, as was expected, similarities were identified in the object and expected outcomes of the centres’ activity, which is the development of teachers’ pedagogical knowledge.

However, due to significant differences in historical pre-conditions, cultural contexts and artefacts used for mediating activities in the two centres the findings revealed many differences in the corresponding collective activity systems. For instance, at UEM, the guidelines on assessment of teachers’ and researchers’ performance (UEM, 2005) does not mention participation in university pedagogy courses as an indicator of teachers’ professional development during the year. Pedagogical courses are only requested when considering category promotion from probationers to assistant lecturers. On the contrary, at Umeå University, more concrete support for conducting staff pedagogical training than at UEM was found.

Article IV (Mendonça & Frånberg, 2014) answers the fifth research question. The article presents a personal experience of an active learning approach in a pedagogical course in European higher education. The findings revealed that the course facilitators had selected activities that allowed social forms of learning. For instance, beyond individual learning, peer interaction activities with a critical friend, group work, presentations and discussions that supported participants’ social learning and inner reflection in the process of teaching and learning in higher education were scheduled. The role of the facilitators was to guide and give feedback.

The process of assessment was done in a formative way, based on presentations and discussions, followed by the facilitators’ comments after group work. The summative assessment consisted of an individual assignment that on approval resulted in a course certificate. In this regard, the participants of the course actively contributed in the process of assessment, reading and commenting on the work of the critical friend. In parallel with the process of teaching and learning, a partial and a final course evaluation was carried out. Communication with the facilitators and participants during the process of teaching, learning and assessment was done both by email and orally throughout the course and helped to support a better understanding of the activities proposed, to deliver the literature and the materials for the course and meet the deadlines.
In conclusion, contradictions during the process of the SCL implementation are obvious in teachers’ and students’ reports, as well as in the curricular documents and other documents presented in this thesis. Therefore, the weaknesses pointed out in the SCL implementation are related to the lack of a collective understanding of the basic requirements for the materialization of the pedagogical innovation at UEM. For instance, it seems as if the implementation of SCL was undervalued. Further, the lack of communication aggravated the misunderstanding of the philosophy of SCL.

Another weakness that can be mentioned is the absence of concrete procedures in relation to the role of teachers, students and managers in the process of change. For instance, terms of reference or a checklist were lacking to inspire teachers to look for strategies that could help to improve the organization of learning environments in the light of the SCL approach. Moreover, the lack of monitoring of the implementation process may have hampered the early identification of the real difficulties experienced by teachers and students.

SCL entails a revolutionary change in relationships in the classroom based on dialogue among all stakeholders in the process of teaching and learning. Mediating tools are also important in order to scaffold the learning activities. In this sense, reflecting on the best ways of implementing SCL could be a good start. Hence, I will conclude this section with Dahlström (2002, p. 68) saying “the way we think has its origin in material and practical conditions.”
Discussion

The discussion is based on the main findings of the thesis that are summarized in the following three themes, namely; a) the implementation of SCL at UEM; b) teachers’ pedagogical development, and finally; c) understanding the meaning of active learning.

The implementation of SCL at UEM

The findings presented in Articles I and II of this thesis show that the implementation of an SCL approach at UEM was not an easy process. Teachers and students reported that they do not feel ownership of the reform and they do not have enough knowledge to perform the innovations. With regarding to this, it is important to understand what may undermine this process.

In a report commissioned by the World Bank, Chilundo (2006, p. 12) stated that the curriculum reform “has been a very participatory process, which involved consultation with employers, and the productive sector”, and also, it was “carried out in all institutions by commissions that included internal staff and external experts, usually from other HEIs”. However, reports from teachers and students presented in papers I and II in this thesis, showed that the process of implementation was not transparent. For instance, they lacked a comprehensive understanding of the meaning of the new proposed pedagogical approach and also a lack of knowledge of how to perform the innovation. The findings also show that at UEM the communication flow between curriculum reform designers and administrators, teachers and students was not efficient and the innovation did not become appealing. In this sense, it seems that the pedagogical innovations at UEM were merely a top-down process driven by the university bureaucracy, considering that the main actors, e.g. teachers and students, were not properly prepared and also the context of implementation was not improved.

Similarly, Guro and Weber (2010) reporting about the implementation of SCL at the basic education level in Mozambique, stressed that decisions are made at the top National level and then have to be implemented by regional and local levels. Thus, many unforeseen problems emerged in the educational field that hindered the innovation process.

Discussing this top-down process of implementing educational innovations in the context of developing countries from a global perspective, Schriewer (2000) has explained that higher education in developing countries still ideologically depends on the West and attempts to borrow new educational “decontextualized” models for local use.

Related to this, Samoff (2007) also showed that the Western imposition of SCL in developing countries, in particular in higher education has its reasons. Models and replicas of curriculum and pedagogy, as well as staff and student
codes of conduct were channelled to developing countries through the work of educational advisors inspired by Western academic traditions.

Furthermore, as Tabulawa (2003) showed, international aid agencies explicitly support learner-centred pedagogy assuming that it can stimulate democratization and development. In this sense, education was seen as a vehicle for promoting individualist ideology, free market values and democracy around the world.

However, many voices have been raised against the transfer of “decontextualized” educational models around the globe. For example, Rizvi and Linard (2010) emphasized the dynamic role played by a particular context in shaping the process of teaching and learning.

**Teachers’ pedagogical development**

Articles I-III presented in this thesis raise the issue of the teachers’ pedagogical development at UEM, highlighted from different perspectives. Article III shows that the rhetoric of official documents at UEM lack alignment with pedagogical practice in relation to teachers’ professional training. For instance, the Regulation of teachers’ careers at UEM (Boletim da República, 2010) points out the importance of raising the quality of teaching and upgrading teachers’ professional competence. The document also stresses the lecturers’ duty “to participate in short term vocational training” (Boletim da República, 2010, p. 466). However, this is not realized in practice for different reasons. One of the reasons why broad categories of teaching staff at UEM are not willing to attend pedagogical training courses could be that UEM’s official documents demand pedagogical training only when changing category from the lowest professional level “probationary” to the next one “assistant lecturers” but not for the career development of other categories of teachers.

In this regard, a comparison of official documents from Umeå University and UEM showed that at Umeå University there are clear rules and guidelines for teacher employment. Demonstration of teaching skills is a requirement for employment of all categories of teachers. Furthermore, all newly employed teachers should take an introductory six-week course in higher education pedagogy. All teachers should also continuously work on their pedagogical development which should be reflected in their teaching portfolio (Mendonça & Popov, 2014b). UEM policy documents provide few incentives to motivate teachers to join university pedagogy courses voluntary. Thus, the administrative context does not stimulate the development of a culture of lifelong pedagogical learning at the University.

International research shows that pedagogical courses for teachers at universities can be viewed as an additional space of learning at the university, i.e. a space where more experienced teachers can advise less experienced and they can learn from each other’s different experiences. Bhabha (1994, p. 53) coined the term “third space” as a space for the “production of meaning of the utterance in a performative and institutional strategy.” Applying this concept to
educational contexts, Gutiérrez (2008) showed that a collective third space of learning can be viewed as a particular kind of a zone of proximal development (ZPD) concerned with the horizontal forms of expertise that develop within and across individual practices. Chaiklin (2003) explains that ZPD “presupposes an interaction on a task between a more competent person and a less competent person, such that the less competent person becomes independently proficient” (p. 41). The absence of more experienced and higher academic level teachers at university pedagogical courses at UEM makes it problematic to realise the potential effects of a third space (CDA courses) on the development of individual teachers’ pedagogical competence and change of pedagogical culture at the university in general.

**Understanding the meaning of active learning**

The following section will present a brief explanation of what active learning means in the context of this thesis. CHAT and SCL approaches refer to the importance of students’ activities as a means of knowledge construction and development. With regard to this, teachers’ and students’ roles in the process of designing meaningful learning activities will be discussed.

Active learning is defined as an instructional method that engages students in the process of reflective and self-regulated learning. It has received considerable attention in recent years (Pinheiro & Simões, 2012). Active learning emphasizes the role of dialogue and social interactions for enhancing students’ critical thinking and generating new ideas (Kim et al., 2013; Teemant, 2010).

The results presented in Article IV in this thesis show that the teacher’s role is decisive in making students active, motivated and self-regulated. Also, it was shown that contextual, social and psychological aspects influence students’ activities and motivation. Article IV also showed that teacher-student dialogue is important to inform students about the study process and also raise their motivation for learning. Online communication was reported as a powerful tool used to circulate information and send the course literature and assignments. The use of ICT tools could be described as benefitting learners’ closer engagement with content, skills development, and readiness for regular contacts with the teacher.

In the case of UEM the application of above mentioned strategies and activities remains very problematic. Modern communication channels remain out of reach for a majority of the students since they do not have easy access to the Internet. The student community at UEM is very stratified concerning the availability of material conditions and study resources. Both rich and poor students take part in the same study group. This often leads to tensions in the group as poor students have less possibilities to prepare home assignments and participate in interactions through social media at home. They become disadvantaged in their learning opportunities. At the same time, the teachers demand nowadays that assignments are sent via email or that data is to be collected on the Internet.
Winstone and Millward (2012) showed that active learning methods reduce reliance on the lecturer as conveyor of all knowledge. However, Dahlström (2002) points out that the educator must also be instructive and has the obligation to create learning situations both in intellectual and physical terms to assist students’ learning. In the case of Mozambique the teachers’ role in making students active, motivated and self-regulated becomes more challenging taking into account the diversified student population and material conditions in which they work.

Winstone and Millward (2012) also showed that active learning is more effective with smaller groups of students. At UEM where the number of students in the classrooms is high, the implementation of active learning processes also demands high teacher pedagogical competence, which is not currently the case. In this regard, UEM is challenged to improve the study environment and raise teachers’ professional competence if the goal is the implementation of pedagogies that rely on students’ independence and proactivity. The goals of instruction and the resources available for realizing these goals must be attuned.
Conclusions

This thesis presents an analysis of the implementation of SCL at UEM, the major and oldest public institution of higher education in Mozambique. The different empirical studies carried out in the process of data collection brought different perspectives of analysis to the problems presented. These perspectives facilitated the understanding of the context of pedagogical innovations. Moreover, the theoretical framework and my own lived experience as a teacher at UEM, gave a supportive base for the analysis.

The analysis of the results of this thesis suggests that communication with all stakeholders in the process of introducing pedagogical innovations should be prioritized in order to make the goals of the reform more understandable and perhaps more appealing. The thesis also shows that few things have changed in the pedagogical practices at UEM since the curriculum reform evaluation in 1999. Several factors were pointed out as obstacles to the process of change. For instance, the findings show poor flow of information between the curriculum designers and the actors of the implementation of the curriculum innovations. The resistance to change happens when the teachers and students do not know how to carry out and do not feel comfortable in performing required SCL activities. Policy-makers and institutional leadership have the responsibility to bring proposals to all stakeholders in their organizations, in order to make the process transparent and motivating.

The Strategic Plan of Higher Education (MINED, 2011a) encourages innovations and democratic principles in the process of teaching and learning in Mozambican higher education. In this regard, since the implementation of SCL in Mozambican higher education is a governmental imposition, UEM should look for effective ways of materializing this demand. It is necessary to discuss at the Pedagogical Directorate of UEM practical ways of implementing SCL anchored in the real context of each faculty or school. The role of the university as a learning organization is to create the necessary conditions by defining clearly how to materialize the government’s intention at UEM. The weaknesses in contextual and social factors pointed out in this thesis block all efforts that teachers and students make, and consequently result in a generalized dissatisfaction among all actors at the university. It is UEM’s duty to prioritize the improvement of material conditions and the development of human resources in order to improve the pedagogical environment.

Regarding the organisation of pedagogical courses at UEM as a mediating tool in the process of implementation of innovations, it could be suggested that UEM should clearly specify the role of pedagogical courses at the university and also establish norms and regulations for the development of its pedagogical culture in the official documents.

The Academic Development Centre at UEM is now in the process of restructuring the courses offered in order to meet the needs of different categories
of teachers. The courses use and promote development of a dialogic learning environment and aim to construct teachers’ competence in implementing new pedagogical practices such as an SCL approach.

Senior teachers in the academia have to assume a shared responsibility with newly employed teachers for the development of a modern pedagogical culture at the university. This is the culture of lifelong pedagogical learning at the university! A teacher must develop different strategies that lead students to active learning and the development of critical thinking. These strategies are promoted in pedagogical courses at CDA. Discussing, reflecting and sharing experiences with colleagues from different scientific fields could be a productive way of finding optimal ways of preparing active learning environments and assessing students’ activities in an SCL perspective adjusted to the UEM context.

Reflecting on the improvement of the quality of staff at UEM, Mário et al. (2003, p. 50), stressed that “change is possible only with a change in the academic culture as a whole that defines the attitudes of teachers and their students to the educational process.” However, good academic culture includes, according to Koppi et al. (1998), the tradition of learning from each other, through exchange of individual experiences. This tradition should be cultivated at UEM, perhaps through the initiation of a reflective process, based on participants’ different roles in pedagogical practices. In this sense, practitioners could be motivated to look for alternative pedagogical strategies when preparing learning activities for their students.

The efficacy of pedagogical courses at the university depends on the support of the university’s regulative instruments that should materialize the rhetoric of the official documents in relation to the quality of teaching and learning in higher education. For instance, in Sweden pedagogical competence is considered critical to ensure a teacher’s support for the students’ learning. Ryegård, Olsson and Apelgren (2010) reported that universities in Sweden may only employ teachers who are proficient both in their particular discipline and in pedagogy. This employment strategy would create necessary pre-conditions for improving the quality of teaching also at UEM.

According to the theoretical framework used in this thesis, the implementation of pedagogical innovations is always mediated by different tools such as physical, social and normative items that can support or hinder the process of improving teaching and learning. The findings of this thesis show that at UEM, the mediating tools used to encourage the process of pedagogical innovations are not always effective. This issue of effective mediation remains challenging for UEM managers and lies at the hart of the process of the materialization of the curriculum reform intentions.
Epilogue

Personal reflections on my intercultural pedagogical journey
In the introduction of this thesis I highlighted my interest in contributing to the implementation of Student-Centred Learning (SCL) at UEM in the light of the ongoing curriculum reform process. When I started the research I was naïve in relation to some preconditions and efforts needed for the implementation of SCL and was unaware of the importance of some preconditions in the SCL paradigm. I will now reflect on this from the early stages of my journey to ensure that the real demands of the paradigm become apparent to all. In UEM’s case one of the elements that should be reflected on at an earlier stage is the authoritative and hierarchical relationship between students and teachers and also between teachers and managers.

An issue that I particularly reflected on was that communication among the different stakeholders in the process of change was limited. I assume that it is related to issues of African culture and traditions of hierarchy. There is a belief that the young cannot question the knowledge of the elders. The young people have to obey the elders and are not supposed to question them. These attitudes brought to the classroom imply that students do not express their feelings, including objecting to something that they do not agree with in the process of teaching and learning.

With this reflection, I would like to share what I could not present and discuss as a researcher since it deals with me as a teacher since I performed both roles in this thesis. As a researcher I have tried to present and discuss the results of empirical data. However, I would feel guilty if I suppressed my own voice here, considering that I am part of the context of activity. Therefore, I would like to follow a process of reflection on pedagogical practices in order to develop an academic culture based on dialogue and reflection.

Considering what I have mentioned above I would like first of all, to reflect on the important role of managers within an activity system. I could see during my professional life that in fact people avoid questioning the boss’s assertions and decisions. People apparently agree with their superior however many times in private they complain and do not follow what supposedly was “agreed” on. I am also a product of this culture of hierarchy, a phenomenon that appears not to have changed over the years and is transmitted from generation to generation. The culture of hierarchy in an activity system blocks the normal flow of information, reduces the effectiveness of job performance and affects any initiative. For instance, within a system in which there are many steps necessary to accomplish communication with deans, head of departments or others in the academy, there is a feeling of fear or hesitation prior to getting things done, and before the green light has been given by the boss.

So, the attitude of managers is crucial to ensure openness and the facilitation of carrying out tasks, instead of a culture of dependence, blaming and complain-
ing. This thesis shows that teachers tend to complain about everything. Also students complain about lack of communication with their teachers. Likewise managers blame teachers for their resistance to accepting innovations. The culture of blaming and complaining generates tensions and contradictions as reported in this thesis. However, if teachers feel supported by their departments or faculties, they can also help their students. It is a kind of spiral, that is to say that by empowering teachers in their activities it can be a way for teachers to empower their students as well. Attitudes are learned in the process of activity.

For instance, looking at Umeå University, as a European University, my experience showed that the flow of information happens easily and things get done because there is a culture of communication and not a strong culture of hierarchy at the university. Therefore, UEM is challenged to rethink concerning the best ways of involving as many students, teachers, researchers and administrators as possible to increase collaborative work at the different departments of the faculties and also between faculties. Moreover, it is important to obtain knowledge of the potential of each faculty in order to increase the exchange of knowledge and expertise. In this way, students can gain more support in constructing their knowledge and skills.

Another aspect that I would like to reflect on concerns the creation of a new culture of collaboration among teachers. The teacher’s pedagogical development can be achieved partly through peer observation. Peer observation means listening to the suggestions of a critical colleague. In the introduction, I have reported my personal experience of these peer observations that gave me useful inputs on my teaching performance. For instance, Harland (2012) reported that asking a colleague to come into our classroom or lecture to help in our teaching is without doubt one the best professional development choices we can make.

In this sense, teachers can cultivate the culture of collaboration and reflection on pedagogical practices at the university. This cooperation can be a starting point for more open communication at UEM and a starting point for reflection on pedagogical changes and innovations in the academia. Based on this innovation the teacher him or herself can also develop a culture of reflection and discussion with students, changing the traditional beliefs and practices between the elders and the young ones. This can help with the development of values that can be put in practice in their everyday life and also in society.

This thesis shows concerns also in relation to students’ assessment. There is a deeply entrenched culture of summative assessment that is not transparent, is punitive and is not to be questioned once the marks are given at the university. As an alternative, teachers could start to involve students in their own assessment, using alternative and fair methods of assessing students’ understandings.

In conclusion, the successful implementation of an SCL paradigm will be difficult if it doesn’t take into account the necessary prerequisites of the paradigm and different aspects of the context such as pedagogical and cultural perspectives and also the practices, attitudes and beliefs, effective communication, and involvement of the different stakeholders (managers, teachers and students).
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