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EDUCATION INQUIRY

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Introducing a Student-centred Learning Approach in Current Curriculum Reform in Mozambican Higher Education

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Abstract

The Eduardo Mondlane University (UEM) in Mozambique is introducing new participative forms of pedagogical practices into the process of its current curriculum reform. This article presents a case study of the introduction of a student-centred approach at one department and discusses some of the lecturers' perceptions and experiences concerning the process. A qualitative study was carried out based on classroom observations and interviews. Activity theory was used in the analysis of the results. The findings show that the lecturers do not feel ownership of the curriculum reform introducing student-centred learning. They express a need for training and the creation of adequate material conditions to apply the innovation. The findings also reveal contextual factors affecting student engagement in learning. In the conclusions, reflections are presented concerning the place of the generic values of learner-centeredness in the academic culture of the UEM.

Keywords: activity theory, Mozambican context, student-centred approach, university pedagogy

Introduction

Since Mozambique gained its independence in 1975, the country has dealt almost permanently with curriculum reforms at all educational levels, mostly supported by international agencies. These agencies offer relatively similar prescriptions to different countries with the aim of enhancing the efficiency and quality of education systems. However, these common prescriptions are not uniformly implemented or unquestionably received. Arnove (2007) suggests that general international trends are usually reshaped to local ends. However, Tabulawa (2003) states that there is a lack of detailed examinations of how modern teaching ideologies and methods transferred from North to South are locally adapted.

In the context of Mozambique, the current curriculum reforms in higher education have been focusing on introducing a student-centred learning approach as an

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elected method. The Strategic Plan for Higher Education (2011–2020) stresses as a prioritised action the “promotion of using student centred learning approach” in innovative pedagogical projects aimed at raising the quality of higher education (MINED, 2011:19).

Eduardo Mondlane University (UEM) is the main and oldest higher education institution in Mozambique. The university functions in a complex socio-cultural context that influences its academic environment. One important contextual factor taken into account in this paper is that the university is situated in a developing country. This leads to dependence on donors for the funding of activities such as: scholarships, supply of equipment and placement of foreign staff at faculties. The university has quite a traditional patriarchal structure. Male teachers represent two-thirds of academic staff and are in an absolute majority among senior positions.

According to the UEM’s curriculum documents, traditional teaching methods dominate university pedagogy and most courses accentuate an encyclopedic conception of knowledge (UEM, 1999; UEM, 2006). Currently, Mozambican higher education is also in the process of regional integration and adjustment to the Bologna Model, which is expected to facilitate the cross-border mobility of faculty members and students. In this context, the actual curriculum reform focuses on students’ active involvement in the learning process and a move from a teacher-centred to a student-centred pedagogical approach. However, few studies about changes in the teaching and learning process resulting from the curriculum reforms have been carried out in Mozambican higher education.

The curricular reform aims to bring new forms of teaching and learning practices and raise the quality of higher education according to common regional and international standards. Consequently, the UEM is challenged to modernise its teaching process and introduce participative methods in general and a student-centred learning approach in particular at all of its schools and faculties.

The aim of this paper is to present a study of lecturers’ perceptions and experiences concerning implementation of the student-centred learning approach at the Eduardo Mondlane University and how it corresponds to the visions of the curricula reform. In this context, the following research questions were formulated:

1. How do the lecturers perceive their role in the curriculum reform?
2. Which obstacles do lecturers experience regarding the implementation of student-centred learning?
3. Which are the lecturers’ activities in the process of implementing the student-centred learning approach?
4. Which lessons can be learned from the process of implementing the curricular reform?

Explanation of concepts used in the paper

We will discuss teachers' perceptions using two approaches suggested by Bernstein et al. (2000). These are constructivist and ecological approaches. A constructivist approach argues that the perceptual system constructs a representation of reality from fragments of sensory information and is strongly influenced by expectations and inferences based on past experiences and prior knowledge. The ecological approach claims that, in spite of our perception depending on interpretations, inferences and expectations, most of our perceptual experience is due directly to the wealth of information contained in the stimulus presented by the environment.

Traditional teaching tends to be perceived in its relationship to learning as essentially linear, one in which teaching "causes" or "produces" learning (Light & Cox, 2001:225). However, teachers can change their role from depositors of information to intellectual interpreters of information by ensuring students' involvement in the construction of meaning around ideas which generate from within their experience (Boyles, 1994). Thus, students in this way become active agents of knowledge construction, while procedures such as group discussions, presentations, group work, seminars and few moments of lecturing in the classroom can be some characteristics of student-centred learning. The lecturer's role can be "asking questions within an orientation that is guided by a process of interpretation" (Boyles, 1994:3).

In this paper, the concept of *teacher* and *lecturer* will be used interchangeably because most of the literature reviewed does not distinguish between them when approaching the study of an academic environment. The study will follow an activity theory approach in order to gain a theoretical understanding of the UEM's curriculum development activity.

Theory informing the study

Activity theory is an approach used in psychology and other social sciences that aims to understand individual human beings, as well as the social entities they compose, in their natural everyday life circumstances through an analysis of the genesis, structure and processes of their activities (Kaptelinin & Nardi, 2006).

According to Engeström (1999), activity theory concerns the relationships between object-related activities and psychic processes. The collective activity system is taken as a unit of analysis that connects the psychological, cultural and institutional perspectives. In this way, an activity is undertaken by a human agent (subject) who is motivated towards the solution of a problem or purpose (object), and mediated by tools (artifacts) in collaboration with others (community). In the context of educational reforms, it can mean that lecturers should be involved in construction of the object and mediation of the activity. In turn, students are expected to assume the role of active subjects of the learning activity.

Activity is considered the most basic category and key source of development of both the object and the subject. According to Kaptelinin and Nardi (2006), activity theory emphasises the importance of social factors and the interaction between so-

cial agents and their environments. The principle of *tool mediation* plays a central role within the theory. Tools shape the way in which human beings interact with reality. In the context of this paper, tools can mean laboratory equipment, technical resources, administrative rules to organise the work in a department, norms and professional language that can all be seen as artifacts of academic activity. Tools are made by humans and mediate the relations among human beings or between people and the material or product in different stages. The study of mediating tools becomes important as they usually reflect the experiences of other people who have tried to solve similar problems at an earlier time and invented or modified the tool to make it more efficient (Kaptelinin & Nardi, 2006).

The relations between the subject, object and mediating tools of an activity embedded in a socio-cultural context are illustrated in Figure 1 below:

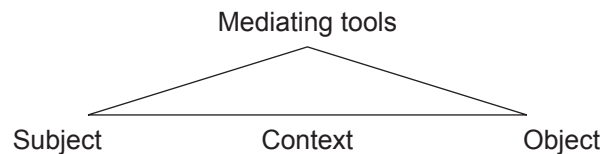


Figure 1. Fundamental structure of an activity

Activity theory emphasises that in most human contexts our activities are mediated through the use of culturally established instruments, including language, artifacts and established procedures. Artifacts are there for us when we are introduced to a certain activity, but they are also a product of our activity and, as such, are constantly changed through the activity.

Another important principle of the theory is that of internalisation and externalisation. This principle stresses that external activities ultimately result in shaping internal ones and vice versa. Kaptelinin and Nardi (2006) also stress that human beings are shaped by culture, their minds are deeply influenced by language, and they are not alone when interacting with the world. They therefore act with, or through, other people as members of groups, organisations, communities or cultures. The same authors assert that a key factor of an individual's success is the success or failure of the social entity, a collective subject, to which the individual belongs.

Engeström (1999) states that activity theoretical ideas have an increased impact in specific fields of inquiry such as learning and teaching. In the classroom learning activity, the object of activity is the understanding of events, concepts and theoretical relationships, while the mediating tools can be the descriptions, narratives and explanations through which this understanding is achieved.

Methodology

A case study was carried out at the Department of Forest Engineering of Eduardo Mondlane University. According to Denscombe (2007), case studies focus on one or

a few particular instances of a particular phenomenon, providing in-depth accounts of events, relationships, experiences or processes in order to illuminate the general by looking at the particular.

Two qualitative methods were used, namely, classroom observation and semi-structured interviews that were conducted by the first author. The observations gave the opportunity to gather data on the physical, human and interactional settings, while the interviews enabled the participants to discuss their interpretations of the world in which they live and express how they regard situations from their own point of view (Denscombe, 2007; Cohen et al., 2000). The literature review supported the observations and interviews and helped achieve a better understanding of the various concepts discussed in the paper.

Sample

The Department of Forest Engineering was selected for two reasons: the background of the main researcher (first author) is a Biology major. This was expected to help during the classroom observations. Another reason was accessibility (available transport facilities and relatively secure access). Seventeen classes from the first to fourth years were selected and observed. The objectives of the classroom observation were to perceive the context, organisational environment and the process of teaching and learning; interactions and inter-relationships between teachers and students, and students and students. The observations were conducted in twelve classrooms and five amphitheatres.

A timetable of classes and a list of lecturers' names were provided by the head of the department. Five lecturers (three being women) were randomly selected from the list for the interviews. Administrative and ethical considerations were taken into account. The head of the department was consulted. Then, a letter was sent to the Dean of the Faculty of Agriculture and Forest Engineering to obtain permission to carry out research at the department. The head of the department sent a letter to all lecturers at the department by email and a hard copy was posted on the department wall. The lecturers were informed before the interviews that all data would be protected and they gave their consent to participate in the study.

Data collection

A small-scale pilot study was conducted at the Faculty of Forestry at another university in order to test the observation schedule and semi-structured interview guide. The observations focused on the contextual factors affecting teaching and learning, the interaction between teachers and students and among students in the classroom. The interview guide was formulated based on the results of the classroom observations and also attempted to reveal the lecturers' reflections about organisation of the process of teaching and learning. Then the observation schedule and interview guide were improved and adapted to the context of Eduardo Mondlane University.

All observations were made continuously on a notepad during the lessons. The interviews at the UEM purposefully touched on the issue of lecturers' involvement in the process of curriculum reform at university and department level, as well as the relationships in the department in the process of teaching, learning and research. As the main intention was to gain an understanding of the lecturers' perceptions and experiences, the lecturers were given the opportunity to express their thoughts concerning pedagogical practices in this context.

The interviews were conducted with the lecturers in their offices or at a quiet place at the university. The interviews were all face-to-face and tape-recorded. Each interview lasted 45 to 60 minutes. The interviews were later transcribed verbatim to enable the interviewer to make a better interpretation. According to Denscombe (2007), the transcription process brings the researcher closer to the data. The validation of the interviews was done after each interview through the replay of the recorder with the interviewer and interviewee listening together.

Data analysis

In the process of analysing the interview transcripts, categories of similar and different responses were generated. In this way, some themes were chosen based on the categories that emerged. Data from the observations helped refine the categories and four main themes arose from the interviews, namely: *bureaucracy-centred curriculum innovations; unfavourable conditions for implementing a student-centred approach, lecturers' unpreparedness for change; and low student engagement in learning*. These themes will be discussed in the findings below and illustrated with some quotes from the interviews.

Findings

Bureaucracy-centred curriculum innovations

The process of teaching and learning implemented in the classroom reflects the materialisation of the curriculum's intentions. The progress of the current curriculum reform at the UEM was not at all "peaceful", according to the lecturers' comments. For instance, reports by the lecturers of their experience of the curriculum reform showed they were very unhappy the process was not transparent. They knew about the ongoing reform and some ideas of the "new pedagogy", but did not feel that their voice would count in this process.

The curriculum policy-makers at the university introduced this new approach without a comprehensive discussion with lecturers at the department level and students in their organisations. There was no shared understanding of the meaning of the reform, the value base of this pedagogical innovation or psychological preparation for implementing this new teaching paradigm. Consequently, the process is now seen as an obligation that is not appealing yet must be implemented at all UEM faculties and schools. A lecturer said that "*...I don't know if it will be successful*".

Unfavourable conditions for implementing a student-centred approach

The observations revealed that student numbers in the classroom are high, in particular in the first and second years, and exceed 80. This could inhibit the lecturer from planning tasks involving group discussions or other activities. The groups in the third and fourth years are smaller as students have already been separated by undertaking specialisations. There are also more student activities during the lessons – more tasks presented in the classrooms, such as reports from practices, essays etc.

In the UEM context, linking conceptual knowledge to practice through laboratory activities or research is problematic because of the absence of the necessary facilities, a fact repeatedly reported by the lecturers. The lecturers talked about facing innumerable challenges in their everyday activities. For instance, one lecturer stressed “...we have difficulties with everything! Difficulties in organising practices, difficulties with equipment, difficulties with space... difficulties with time. If I have time, students don't have, because their schedule is very tight”.

Lecturers' unpreparedness for change

When asked how they are dealing with student-centred learning approaches in the classroom, the lecturers reported they did not feel comfortable with these approaches. One respondent commented “*On the first hand, lecturers must know what these approaches mean...*”. Asked if they follow this approach, the same lecturer initially posed the question “...*why don't we follow this approach? ...maybe we have a need for resources, we haven't enough knowledge, but I suspect that the lack of knowledge is the main barrier*”.

Pointing out some aspects of methods more centred on the students, another lecturer stressed that “...*the success of this approach depends on training lecturers and adjusting materials to fulfil all recommended cognitive domains*”. When asked about the situation with teaching and learning processes, one lecturer reported “...*we complain that students are weak, but we haven't a solid base to improve them...*”. Another one said “*we can still see lecturers who spend 50% of their class talking... who can't interact with students and give them in advance contents for searching and yield good results*”. Important aspects emerged in these statements, such as a lack of knowledge on how to apply a student-centred approach and teachers' need for in-service training in this area.

It was also revealed that peer-relationships at the department level sometimes seem problematic. Certain lecturers have difficulties sharing their knowledge with colleagues. For instance, one person said that “...*there are subjects with only one lecturer and he refuses to collaborate with and train assistants. When he is not available, nobody else can teach*”.

Low student engagement in learning

When asked how students are dealing with the student-centred learning approach, all lecturers reported that few students respond positively. The lecturers complained that students find it difficult to participate actively in the classes or fulfil the tasks. They seemed to be shy or even apparently uncomfortable when being asked by the teacher. For instance, one lecturer said “... *a student must learn more, must do research, surf the net, go to the library, ask their lecturers after classes*”. Another one said that “...*what happens is that students didn't realise yet that they are the centre of the learning and some of us don't understand that we are not the centre of knowledge, but the facilitators*”. The lecturers revealed a shared understanding that students do not have a habit of regular interaction in the classroom, of looking for information before classes and bringing questions to the classrooms. A lecturer reflecting on the situation concerning the weak commitment of students to searching information for seminars stated that “...*I don't know if it is laziness or if it is a custom they have brought from secondary school...*”.

Some students were always five to twenty minutes late to class. Certain lecturers did not allow them to enter the classroom, although in general the relationships between the students and lecturers and among the students was good. In spite of the good relationships, the interaction between students and lecturers and among the students was weak during classes, particularly in the first and second years. Some lecturers called for participation in the classroom, but few students could talk freely when asked to give their opinion about an argument. Sometimes students slept during the lectures. This shows that they were bored, uninterested and lacked motivation and enthusiasm. Nevertheless, in the third and fourth years students are becoming more active in seminars. A comment by a lecturer can serve to summarise the situation regarding curriculum reform at the UEM “...*in fact, many things in the teaching and learning process didn't change. The old practices still dominate the classroom*”.

Discussion and conclusions

The findings presented above point out the weak involvement of lecturers in collective curriculum reform activity at the UEM in general and at the Department of Forest Engineering in particular. Levander and Repo-Kaarento (2004) showed that changes in teaching and learning may take place if they are integrated into the organisational and human resources development of a university. This is the way to enhance a sustainable and consistent improvement in the quality of teaching and learning. They state that shared visions create a sustainable social base for development and open a broader perspective.

From the analysis of the context of the reform we can agree with Arnove (2007:2) who suggested that reforms taking place in poor developing countries “are being implemented by education policy makers who often have little choice but to do so in exchange for access to needed funds”. Eventually, we could also notice that univer-

sity policy-makers/administrators could justify the need for reform by arguments grounded in political and economic theories as Tabulawa (2003) mentioned in his study. Unfortunately, these arguments presented in the curricular documents have not materialised in practical pedagogical actions.

Related to the first research question about lecturers' perceptions of their role in implementing the student-centred curriculum, our findings reveal that the lecturers were not prepared to adopt this innovation. It should be recognised that the lecturers' involvement was not clearly discussed in advance and the rules and roles of the people involved in the curriculum reform were not fully defined. Here one could suggest that to avoid resistance it is important to involve all academic actors in all stages of the process of introducing curriculum innovations. Using the conceptual framework of activity theory, we can state that the learner-centeredness of the educational process did not become a shared object of activity among the different curriculum actors. The UEM bureaucracy could not assure that the lecturers would become real facilitators of learning and put students' needs in the focus of their pedagogical work which, according to Mckeachie (1986) and Boyles (1994), is essential to the success of the approach.

In activity theory, collective human activity begins in the process of labour. Labour is, in the first place, a process in which both man and nature participate, and in which man regulates and controls the material re-actions between himself and nature (Engeström, 1999). In this paper, nature can mean the institutional environment where the lecturer develops his/her activities, at the department level and in the classroom or laboratory. In this perspective, the role of lecturers as facilitators of the process is crucial in order to introduce students to the new paradigm of teaching and learning and discuss with everyone involved the mechanisms of control and management. When people share their ideas and feelings some common knowledge is generated. Resistance appears when people do not feel confident in carrying out some activity. This can be noted in the case of the UEM curriculum reform where implicit resistance can be observed when it comes to implementing the new pedagogical approaches.

Activity theory highlights the importance of peer collaboration by referring to human activity that is mediated by different tools and artifacts (Engeström, 1999). In pedagogical activity, the most important artifact is language that by means of dialogue permits interaction with colleagues. This is typical of the process of social development generally. Referring to the role of dialogue in activity theory, Wells (2002) pointed out that the aim of dialogue is to increase the individual and collective understanding of issues and problems addressed. The dialogue is more "progressive" when focused on an object that is to be constructed and improved. In the context of curriculum reform at the UEM, the object to be implemented and improved is the participative methods in general and the student-centred approach in particular. In this process everyone involved faces not only the challenge of *acquiring* an established culture (internalisation), but they also encounter situations in which they must *formulate*

and *construct* a desirable culture (externalisation). Evidence collected in this study shows that curriculum reform ideas were not internalised by staff at the department so the lecturers also could not implement them in their external practice.

Related to the second and third research questions concerning the lecturers' experiences of obstacles and pedagogical practices, the interviewed lecturers recognised they needed knowledge and appropriate conditions to implement the student-centred learning approach. The subject of the learning activity based on this approach is the student who needs to respond firstly to the demands of the university and then to those of the labour market, whereas the object is the knowledge and skills needed in everyday and professional life. One of the leading activity developers, Lompscher (1999), affirms that despite declarations about the learners' position as an active subject teachers are often more interested in their own actions and the tools needed for the transmission of knowledge than in the learners' actions needed for the construction of knowledge. This is what is also happening in the UEM's classrooms.

When presenting some contradictions in learning activity, Lompscher (1999) stresses that learning activity differs from other kinds of activity as it aims, above all, at psychic transformations of the subject itself. Hence, the acquisition of new knowledge and skill requires certain prerequisites in terms of abilities, motivation and memory structures that are only partially developed to the necessary degree at certain moments. Psychologists stress that motivation cannot be directly observed, but is inferred from what we can observe. Particular stimuli can elicit different responses at different times (Bernstein et al., 2000). As our observations reveal, lecturers and students at the UEM did not demonstrate the skills and habits of organising the student-centred learning the curriculum reform sought to introduce. The UEM's academic environment does not stimulate the development of their commitment to this pedagogical approach.

Kaptelinin and Nardi (2006) point out that consciousness is realised through what we do – our activities. The lecturers' comments reinforced the evidence from the observations that the students have poorly developed reflective skills as well as skills of oral scientific communication and these are not enforced in the classroom. During the interviews, some lecturers recognised the need to work together with students in order to improve the teaching and learning process. They also talked about *the need for appropriate conditions* to carry out research with students and the need for the students to *reflect* on their practices in the classroom.

The Strategic Plan of Higher Education (MESCT, 2000) refers to the need to study the effectiveness of alternative policies to improve staff motivation. Nowadays, the lack of enthusiasm and low pedagogical productivity of teachers at the UEM could be connected to their low salaries and absence of other stimuli (UEM, 2008). Accordingly, they do not invest much energy in the pedagogical progress in their courses and instead seek extra part-time work at private institutions.

Referring to some aspects of activity theory, Kaptelinin and Nardi (2006) stress that human beings are shaped by culture, their minds are deeply influenced by language, and they are not alone when interacting with the world. In addition, they act with, or through, other people as members of groups, organisations, communities or cultures. They also state that a key factor of an individual's success is the success or failure of the social entity, a collective subject, to which the individual belongs. This finally leads us to reflections on the lessons learned from the process of implementing the curriculum reform at the UEM emerging from the fourth research question in this study. We can conclude that the pedagogical and administrative staff at the UEM, as the collective subject activity, have not yet been very successful in achieving the objectives of the reform. It appears that the dialogue and transparency in the academic environment are crucial for the development of shared values and implementation of sustainable pedagogical innovations. It also seems important, as Tabulawa (2003) suggests, to consider that student-centred learning is not value-neutral. It is a view about the world, about the kind of people and society that is envisioned by education. However, its implementation is often administrated as if this is a value-free technical method, thus contradicting the proper pedagogical nature of this approach. In order to increase students' agency in the learning process, values of learner-centeredness should become shared values of the entire academic community at the UEM and a student-centred pedagogical approach become a shared object of the curriculum activity for all actors involved.

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