Student-Centred Methods in Higher Education: Implications for Student Learning and Professional Development

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Abstract: This paper presents findings from two case studies carried out in two Portuguese universities in order to analyse and understand the implications of two participatory methods of teaching and learning: portfolio and project led-education. Case 1 involved the use of portfolio as a strategy for enhancing students' self-regulated learning. Case 2 was a project-led course (one-year project) during which students were asked to design and develop a training course for a real/professional context for a real group of professionals in a given institution. Active and cyclical model of self-regulation learning occurs according to three phases: forethought, performance (volitional) control, and self-reflection; development of competencies (disciplinary and non-disciplinary); team work; and articulation university/professional context are some of the key features of these methods. Findings suggest a better understanding of teaching and learning dimensions at higher education, namely in regard to processes and outcomes of learning, skills development, and changes both conceptual and attitudinal. In the paper, students' perceptions about participatory methods are discussed, as well as the factors that contribute to students' active engagement and ways of promoting the effective use of these kinds methods. Overall, a number of dimensions were identified: i) the transition from a single towards a plural perspective; ii) the transition from a teaching-centred approach towards a learning-centred one; iii) the transition from discourse to action; iv) the transition from a an outcome approach to assessment towards a continuous and formative one; v) the transition from a disciplinary approach towards a cross-disciplinary one.

Keywords: Student-Centred Methods, Higher Education, Self-Regulated Learning, Professional Development

Introduction

THIS PAPER REPORTS on findings from two case studies carried out in two university contexts aimed at investigating the ways in which undergraduate and graduate students learn and develop throughout their academic course during which non-traditional methods were used (namely, portfolio and project-led education).

It draws upon literature on teaching and teacher education which has highlighted the potential and limitations of a variety of programs and the need to go beyond the gap between theory and practice, one of the most critical issues in Teacher Education, especially in regard to the preparation of pre-service teachers (see, for instance, Feiman-Nemser, 1990; Zeichner, 1996). Also of importance is the growing recognition of the key role of teacher educators in modelling in teaching practice and in investigating their own practices in such a way that "they themselves should be good examples of the kind of teaching they are trying to promote" (Lunenberg, Korthagen, Swennen and Willemse, 2004, p.5).

COMMON GROUND

The need to investigate and engage in a critical dialogue on and about teacher educators' practice has been a major claim made by several authors (see, for instance, Schon, 1993; Lunenberg, Korthagen, Swennen and Willemse, 2004; Loughran, 2005). Berry and Loughan (2004) assert that in conceptualizing pedagogy of teacher education "we are constantly working in two worlds: the world of our own pedagogical needs and concerns; and the world of our students' pedagogical needs and concerns". They go on to say that "a self-study methodology demands that practitioners constantly look for discrepancies between actions and intent in both worlds." (p. 24).

It is within this perspective that the work described in this paper was undertaken. Two critical friends - university teachers (who have been engaging in joint research for some years) - have decided to better understand the impact of their own teaching in two courses during which non-traditional methods were used. Case 1 involved the use of portfolio as a strategy for enhancing students' self-regulated learning (Gibbons, 2002). Case 2 was a project-led course (one-year project) during which students were asked to design and develop a training course for a real/professional context for a real group of professionals in a given institution. Active learning, team work, joint decision-making and communication skills are some of the key features involved in this kind of approach to teaching. Figure 1 presents the key features of both methods.

Figure 1: Key Features of Student-centred Methods

Learning is then seen as a multidimensional process which embodies personal aspects (both cognitive and emotional), and behavioural and contextual ones (Zimmerman, 1998). Therefore, learning is a dynamic and open process which requires students to engage in a wide array of tasks and activities which imply, in turn, careful planning, decision-making and self-reflection.

Self-regulated learning is "an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation, and behaviour, guided and constrained by their goals and the contextual features in the environment" (Pintrich, 2000, p.453). Self-regulation is a cyclical process involving three phases: "The forethought phase precedes actual performance and refers to processes that set the stage for action. The performance (volitional) control phase involves processes that occur during learning and affect attention and action. During the self-reflection phase, which occurs after performance, individuals respond to their efforts" (Schunk and Ertmer, 2000, p.633).

Research over the past 30 years on students' learning and achievement has progressively included cognitive strategies, metacognition, motivation, task engagement, and social supports in classrooms. As Paris and Paris emphasize, "self-regulated learning emerged as a construct that encompassed these various aspects of academic learning and provided more holistic views of skills, knowledge, and motivation that students acquire. The complexity of self-regulated learning has been appealing to educational researchers who seek to provide effective interventions in schools that benefit teachers and students directly" (2001, p. 90).

This paper discusses data arising from students' accounts on their own process of learning and the impact of these two approaches in two university courses and the implications for understanding our role as teacher educators and our own professional development. As Loughran (2005, p. 13) argues, self-study is "a meaningful way for uncovering important facets of the knowledge of practice".

Research Methods: Data Collection and Analysis

This paper draws upon two case studies carried out by two critical friends - university teachers - who engaged in a process of self-reflection about their own practices in two university courses. Case 1 took place in a graduate Research Methods course (n=18) and Case 2 was undertaken within the context of an undergraduate course in Education (Year 4 of the course, i.e. the final year before practicum) (n=45). Non-traditional methods of teaching were used, including portfolio as a learning tool and project-led work. In the first case students were asked to write up a portfolio throughout the course. In the second case, graduate students were asked to develop one-year project stated as follows "to design and develop a training course for a real professional context for a given professional group". This implies linking university as a context of formal education to a professional setting and the development of competencies, knowledge and skills associated with the demands and expectations of the prospective trainers in a real context of work. The project was developed by teams of three to four students each. At the end of each semester students were asked to write a "reflective essay" about their learning during and at the end of the course.

A qualitative approach was used. The following research questions were identified: how did students learn in these particular courses? How did they evaluate their learning experiences? What were the major outcomes of their learning? How did they reflect about their learning? What lessons can be learned from their reflections especially from the point of view of the university teachers involved in these courses? Data were collected during and at the end of the courses through portfolios and reflective essays that students were asked to write.

The process of qualitative data analysis was undertaken according to two phases: a vertical analysis (Miles and Huberman, 1994) according to which each of the students' essays was

analyzed separately. A second phase was then carried out according to a comparative or horizontal analysis (cross-case analysis) (Miles and Huberman, 1994). In this phase, the method of 'constant comparative analysis' (Glaser and Strauss, 1967) was used to look for common patterns as well as differences.

Findings

A number of key themes and categories emerged from the data (see Table 1). Students identified a wide range of learning outcomes. They stated that they have learned how to think critically; how to reflect (reflection has become a key issue in learning activities and in their increasing awareness of the learning process); *"working on a portfolio has allowed me to evaluate and to reflect upon my interventions, my practice in a more thorough way", "I have identified my strengths and my needs throughout the learning process". "This project was really important both to my personal and professional education. It allowed me to have a more flexible perspective, adopting a more critical point of view and a questioning attitude too." "I have learned how to make decisions more thoroughly and how to justify them both theoretically and in practice".*

Students also stated that they learned how to collaborate with colleagues; how to engage in team work (peer interaction as source of motivation; conflict management, etc); how to communicate knowledge through writing and presenting their own work to the teacher and to the class; how to motivate themselves (setting their own learning goals, managing their own motivations, increased commitment to learning, etc.). *"I have experimented with a new and unique methodology in terms of self-implication, motivation, creativity, organization and knowledge construction and of course self-regulation", "in so far as the starting point was to define learning goals in a cooperative way, I was led to define myself the process of achieving them"." I have learned how to deal with different opinions and points of view; I have also learned how to frame and justify my own understandings and perspectives and how to communicate with others." "I have learned to listen to my colleagues and to make and justify critically and in a constructive way my points of view…"* They also referred to learning the content and they highlighted the increasing relevance and meaning they attached to it. *"With this project I have learned a lot. I had the opportunity to put into practice knowledge that I have learned. At the end of this project I can really say that I did learn to articulate theory and practice" "I have learned to relate in a systematic way the theoretical assumptions underpinning training and education models in general to the real context. I have learned that training is much more complex that I thought at first."*

Table 1: Emerging Categories

Themes	Categories
Learning outcomes and processes	How to think critically/how to reflect How to work as a team How to communicate How to make critical judgments How to motivate oneself Content and scientific knowledge Clarification of professional profile How to self-regulate learning
Development of competencies	Selection, analysis and interpretation of information competencies Self-regulatory competencies Research competencies
Conceptual and attitudinal changes	Importance of reflection on learning Changes in ways of thinking Changes in the understanding of content knowledge View on teacher and student role on the teaching/learning process
Constraints and limitations	Aspects associated with content knowledge (previous knowledge) Theory/practice articulation How to contrast conceptual models and perspectives Time and task management
Ways of overcoming difficulties encountered	Complementary readings Hands-on work carried out in the classroom Discussion within the group of students Support and monitoring from the teacher

From students' accounts it was possible to identify a number of competencies they developed throughout the course: i) research competencies (the ability to ask questions, to analyse and critically think about the content, the activities, etc.); *"This project was really important in terms of learning especially in regard to a number of competencies I do believe that I have developed. I have learned how to work in a team, how to critically reflect, how to search, select and analyse a great amount of information. And of course I have developed research competencies…", "This project has allowed me to contrast different perspectives, paradigms and theories and I had the opportunity to look at reality in a different way. I realized that sometimes a given reality is not what it looks like at first. There are implicit realities and issues that you need to deconstruct in order to capture the whole picture… this project was really great in that sense…", "The most important learning for me was the opportunity to deconstruct and go beyond the surface of dominant discourses in education which sometimes are incoherent…";* ii) competencies related to information searching, selection and interpretation; *"it helped in organizing and structuring knowledge related to research"; "in elabor-*

ating on the classroom topics I was able to revise the key aspects and make sense of the most important aspects… it implied going beyond the organization of data to a more conceptual and reflective perspective…" iii) competencies which enabled them to manage their own learning in a more autonomous way in different moments (strategic planning – including looking for information, resources, etc.; implementing it - to engage in tasks and activities, to look for help and support, etc.; and reflection – to evaluate the outcomes, to review their own decisions and strategies) *"I learned how to make decisions and how to justify them"; "I learned how to define the problem to be studied and framing it theoretically by reflecting throughout the course…", "it helped me to planning and taking action accordingly"; "what surprised me in this method of learning, apart from readings, reflections, notes, research, was the possibility of articulating and applying the topics, I was able to understand the importance of continuous evaluation in order to make improvements…"; "I had to set personal goals, to check progress, to self-evaluate my work and to identify issues to be improved in the process and sharing it with other colleagues";* and iv) communication skills *"the concept of portfolio has become part of communicating with others".*

Conceptual and attitudinal changes seemed to emerge. Students stated that they have changed their ways of thinking (becoming more open and aware of other perspectives within the group) and their ways of understanding the content knowledge (from reproduction logic towards a transformative/constructivist one; and from a more linear interpretation towards a more complex and contextual understanding). Changes also seemed to have occurred at the level of understanding the student role in the teaching/learning process: *"in having a look at my portfolio, I can remember what was going on throughout the semester, each page tells a story, talks about feelings and reflection made me more aware of my active role as student"; the portfolio helped me in having a more active role, it made me make personal choices and having more freedom in terms of self-regulating my learning".* Changes also took place in understanding the teacher role as well: *"using portfolio has transformed the relationship student-learning and teacher-teaching in a more shared and mediated relationship and has increased the responsibility for all".* They emphasized a more active role in the ways they see themselves as learners and they recognize the growing importance of reflection in the process of learning.

Students have also identified a number of constraints and limitations of the two approaches, namely in regard to time and task-management and ways of dealing better with work carried out in and out of the classroom: *"there was a difficulty in managing different ways of understanding the theoretical perspectives and personal beliefs about them and it took time for us to adjust the language and pace of work…"; "difficulties in finding time to complete all the tasks were dealt with extra work from the members of the group."; "sometimes we find it hard to manage time because discussions usually took much time…".*

Analyzing students' reflections throughout the process several issues may be highlighted. First, the methods used in classroom were considered to be innovative for the students as they challenged their views of the (traditional) teaching/learning process. Second, they enhanced a more closed relationship between learning and evaluation despite the initial lack of confidence and, in a way, scepticism *("at first I was scared, and I thought how am I able to account for my learning and to reflect on it, and how am I going to work on it throughout the semester?"*). One of the key issues reiterated by the students was the increase awareness and freedom which characterize the process of learning in a self-regulated way *"it is important to get rid of the idea of working and be assessed by somebody else, you have to replace this*

somebody else by yourself…" Time was also an important difficulty felt by the students in the use of portfolio and on the project. Time to discuss, time to reflect, time to make decisions were key issues reiterated in their accounts. Students also identified the following problems: the difficulty in assessing their own work, the anxiety about the nature and purpose of the tasks, the lack of "models" in order to guide their action and the lack of preparation in doing a creative and personal work and concerns about the subjective dimension of assessment.

These learning experiences have helped us to better understand the impact of our practice as teacher educators and in enhancing meaningful learning environment in our classrooms. We look at these implications in the next section.

Discussion

Throughout this process we have been reflecting on some issues which may lead to a better analysis of our practice as teacher educators and to challenge (and change) it. By and large, we experienced

1. the transition from a single towards a plural perspective. In other words, we have as-sumed the importance of the "other" as a value-added in the teaching/learning process and in evaluation, valuing cooperative learning and joint construction of knowledge enhancing the potential of all the actors in the process;
2. the transition from a teaching-centred approach towards a learning-centred one. We aimed at "scaffolding" students' learning pathway promoting self-regulation of their learning;
3. the transition from discourse to action in so far as we acted as mediating influences in learning for autonomy and within a view of lifelong learning;
4. the transition from an outcome approach to assessment towards a continuous and formative one. Working on tools that facilitate continuous feedback was a key issue in the design and development of our project;
5. the transition from a disciplinary approach towards a cross-disciplinary one. The mobil-ization, in a creative, flexible and contextual way, of knowledge and competencies was promoted in various moments of the course.
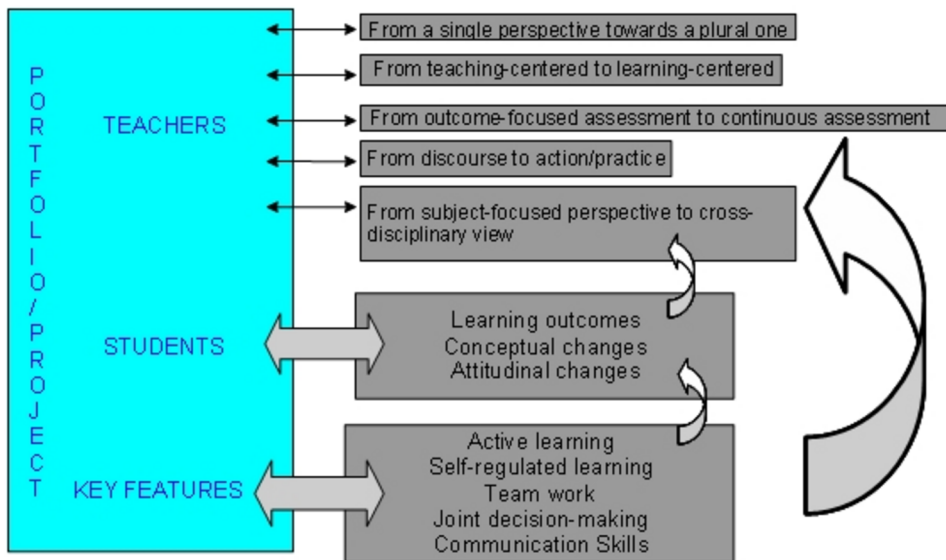
Figure 2: Key Issues Arising from Reflection on the Case Studies

This study may contribute to foster our understanding and development of a quality of pedagogy in higher education, especially in regard to perspectives and practices about teaching (and teaching about teaching) and in contributing to develop a "language" of teaching education. The participation in this study and the reflections on our own practice and exchange process may lead to some implications for us as teacher educators and for the use of such participatory methods in our classrooms.

Two kinds of reflections may be identified. First, it should be highlighted the intrinsic importance of this study to the authors themselves. It relates to the possibility of planning teaching and assessing in a collaborative way with the purpose of integrating assessment in the teaching/learning process according to the context, integrating theory and practice and making it possible for students to using strategic knowledge. We build our practice on the idea of collaboration - understood as the pathway from the analysis of students' expectations and needs (through self-reflection) to the discussion of ways to develop the projects (by identifying the tasks and ways of achieving the goals, and to the sharing of ideas and reflections in the classroom). Shared outcomes, independent thinking and learning and collaboration were three interrelated concepts throughout the course. Collaboration has made possible to identify new ways of looking at others and at ourselves within the group. Collaboration was based upon an ongoing dialogue with and amongst students in order to make decisions about and on the process of planning and developing teaching and learning. As teachers we were able to understand that these communicative exchanges have led to enhancing procedural and strategic knowledge which was developing throughout the process during planning, discussion, regulation and decision-making processes.

A second reflection includes innovation in our practice but goes beyond that in so far as it relates to teaching and learning at higher education. In order to enhance quality teaching and learning within this context, a collaborative and cross-disciplinary approach to innovation is needed which, in turn, needs to be recognized and valued by higher education institutions

at a political level. University education remains in many cases a disciplinary and content knowledge-focused in which a fragmented and, sometimes, isolated way of learning is prevalent. One of the goals of our project was to build on a more integrated and cross-disciplinary way of planning and evaluating, activating students' strategic knowledge in order for them to make contextualized and adequate decisions. The two methods showed that it is possible to move forward and to enhance a more integrated and interdisciplinary teaching. For this, investigating teaching through reflection on teaching and on how to teach was a key feature of the project. Joint reflection on our practice that has been implemented during the project was crucial for our own development as teacher educators and as researchers. It challenged some aspects of the theoretical background as well as our practice within the context of two different courses: i) teacher as a key mediating element between knowledge and students in ways conducive to a more active and self-regulated role in the learning process; ii) interaction as a key element in the process in so far as it is catalyst of the construction, reconstruction, change, interpretation and making sense of knowledge. Vygotsky (1994) asserts that interaction acts in the development of the individual. There is an ongoing and continuous interaction between internal processes and the outside social world leading to a personal perspective. In this way, knowledge construction implies a shared action in so far as it is through others that the relationship between knowledge subject and object is maintained. Interaction played a key role in our program as well as student autonomy as the ability to design personal and joint projects, searching for valuable information, making sense of it, being critical and reflective on different possibilities and points of view in order to make coherent and thorough decisions. Autonomy, then, relates to an empowering attitude which integrates different dimensions of life as well as intellectual, moral, affective, social and political aspects.

We believe that through our program we have promoted students' autonomy as they have participated and interacted in the teaching/learning process, challenging taken-for-granted assumptions and sorting out conflicts and problems by questioning and reflecting on their learning process. This may be highlighted in self-regulated learning, in short, in enhancing students' abilities to manage their own projects, progress and strategies. However, it does not mean spontaneous and non-systematic strategies for students. On the contrary, it implies establishing contracts, pedagogical strategies in order to enhance motivation towards self-regulated learning.

This study is ongoing. It was a good start for us to engage in a more systematic and theoretical dialogue. It made us make more explicit our theories and perspectives about teaching at higher education. It seems that at this stage we need to find a more specific focus to foster our understandings of our role as mediators within the context of teaching at higher education, especially now with the widespread "paradigm shift" within the Bologna process underway in many European universities. What are the implications for teaching and learning at higher education? What is our role as teacher educators? What can be done with other colleagues even from different fields of knowledge in this changing context in terms of making explicit theories of teaching and learning and personal assumptions? These are questions that are now being asked and framed within the context of a collaborative research project. Teaching is complex and challenging. As teacher and teachers educators we are engaged in making sense of and reflecting on our own practice by investigating and reinventing it for, as Bullough and Pinnegar (2001, p. 20) state, "the aim of self-study research is to provoke, challenge, and illuminate rather than confirm and settle". Such a standpoint becomes crucial if we are to promote professional development of both student teacher and teacher educators.

Note

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