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TUTORS' AND STUDENTS' VIEWS OF TUTORING: A STUDY IN HIGHER EDUCATION

INTRODUCTION

As a result of the demands of the Bologna process, teaching and learning in higher education have been challenged and changed from a traditional transmission-oriented perspective to an interaction oriented perspective, one in which the students are at the center of the learning process (Murray & McDonald, 1997). Within this context, mentoring and tutoring have shown a growing interest in the past few years, as several initiatives have been developed to enhance a culture of guidance and support to university students (Barnett, 2008; Bordes & Arredondo, 2005; Campbell & Campbell, 1997; Mangold, Bean, Adams, Schwab, & Lynch, 2003; Murray, 2001; Salinitri, 2005).

Mentoring, in its diverse forms, is seen as a way to help and guide students both at academic and professional level. According to Brown, Davis, and McClendon (1999) and Murray (2001), mentoring can be broadly defined as a one-to-one relationship between an experienced and less experienced person for the purpose of learning or developing specific competencies. Other researchers present a more specific view of this type of support. Blackwell (1989), for instance, argues that it "is a process by which persons of a superior rank, special achievements, and prestige instruct, counsel, guide and facilitate the intellectual and/or career development of persons identified as protégés" (p. 9).

Within the context of higher education, existing literature suggests the lack of consistency in the definition of mentoring along with the ambiguity in regard to its scope (e.g. Dickey, 1996; Johnson, 1989; Miller, 2002; Rodriguez, 1995). A careful look at the mentoring literature points to the lack of consensus of a generally accepted definition of mentoring (Jacobi, 1991). It also reveals an array of studies loosely aligned with the concept of mentoring.

According to Jacobi´s review (1991), a number of issues need to be addressed in this research field, namely, the lack of understanding of: "a common definition and conceptualization of mentoring; the prevalence of both informal and formal mentoring relationships; the extent, and the ways in which mentoring contributes to academic success; and the mentoring functions that are most important to academic success of college students" (p. 525). Furthermore, research on evaluation of mentoring programs in education show weak designs, based on subjective data, reported without adequate evidence of reliability and validity. In fact, apart from Campbell and Campbell's (1997) study, it is difficult to identify research on the

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effects of a university mentoring program on undergraduate retention and performance.

A critical analysis and synthesis of empirical studies centered on mentoring college students, between 1990 and 2007, was carried out by Crisp and Cruz (2009). Their goal was to make an attempt to update the review article developed by Jacobi, in 1991. The authors concluded that a solid theoretical understanding of how mentoring is perceived by different groups of students and the major components and characteristics involved in a mentoring experience is needed. Also, the impact of mentoring experiences on student outcomes needs to be explored further through rigorous methodological studies. Overall, findings have been positive and have indicated a positive relationship or impact of mentoring on student persistence and/or grade point average of undergraduate students (Campbell & Campbell, 1997; Kahveci, Southerland, & Gilmer, 2006; Mangold et al., 2003; Pagan & Edwards-Wilson, 2003; Salinitri, 2005; Wallace, Abel, & Ropers-Huilman, 2000). Additionally, Bordes and Arredondo (2005) found a positive relationship between first year students' perceptions of mentoring and their comfort with the university environment. However, future research must focus on longitudinal studies (Paglis, Green, & Bauer, 2006) and explore the role of various individuals in a students' mentoring experience (Wallace et al., 2000).

It is important to note, however, that besides the disagreement in regard to what mentoring is and the characteristics which it entails, Jacobi's (1991) review identified three aspects in which researchers are in accordance about mentoring. These continue to be largely reinforced in the literature: first, mentoring relationships are focused on the growth and accomplishment of an individual and include several forms of assistance (Chaos, Walz, & Gardner,1992; Ehrich, Hansford, & Tennent, 2004); second, a mentoring experience may include broad forms of support including assistance with professional and career development, role modeling and psychological support (Brown et al., 1999; Campbell & Campbell, 1997; Chao et al., 1992); and third, mentoring relationships are personal and reciprocal (Davidson & Foster-Johnson, 2001; Green & Bauer, 1995; Johnson, 1996).

Another concern that has also been discussed in the mentoring literature is the role of the mentor. An analysis of the core functions of mentoring shows that the role of the mentor has not always been limited to faculty and this support has been also provided by college and university staff, senior or graduate students, peers, friends (Zalaquett & Lopez, 2006). According to Philip and Hendry (2000), for instance, there are five types of mentoring relationships that adolescents and young adults may experience. These include, as stated in the review by Crisp and Cruz (2009): "classic mentoring (one-on-one relationship between experienced adult and a younger person, similar to an apprentice), individual-team (young group of people look to an individual or a few individuals for advice), friend-to-friend (provides a safety net, common among women friends), peer-group (among a group of friends, often when exploring an issue), and long-term relationships with "risk taking adults (similar to classic mentoring, but the person being mentored has a history of rebellion)" (pp. 528-529).

Mentoring and tutoring are sometimes used interchangeably. Miller (2002) explored the concept of mentoring and the objectives of mentoring programs in a review of the education literature and he sees tutoring as one of the several themes included in mentoring. The author states that tutoring is different from mentoring as the focus of tutoring is on subject learning whereas the focus of mentoring is on life learning. Crisp and Cruz (2009) corroborate this perspective, arguing that tutoring can be included in one of the four major domains included in the mentoring concept, which is seen as an "academic subject knowledge support aimed at advancing a student´s knowledge relevant to their chosen field" (p. 539). In this view, mentoring involves providing students with support to their academic success inside the classroom, fostering the acquisition of necessary skills and knowledge. In contrast to mentoring which focuses on life learning (Miller, 2002), this type of process deals with employing tutorial skills and focusing on subject learning (Roberts, 2000).

Similar to mentoring, tutoring can be defined in different ways in different institutions. Thus the tutoring process embodies a wide range of characteristics and features (see Flores, Veiga Simão, & Carrasco, 2012). According to Thomas and Hixenbaugh (2006), tutoring may be designed for all students, or just for those in need; it may be proactive or reactive; integrated into the curriculum or an additional support activity; based on interpersonal relations or service-oriented. Also, Carrasco Embuena and Lapeña Pérez (2005) identified a set of common characteristics featured in several tutoring models in Higher Education (Boronat, Castaño, & Ruiz, 2007). These include different perspectives on tutoring such as:

- a form of guidance which is intended to promote and facilitate the development of students, in the intellectual, emotional, personal and social dimensions;
- a teaching task which personalizes university education through supervision at an individual level, which enables students to build their knowledge and attitudes and bring them to maturity, helping them plan and develop their academic progress;
- an action which enables active integration and preparation of students in the university institution, channeling and connecting with the different university services (administrative, teaching, organizational, etc.), ensuring the adequate and cost-effective use of the different resources which the institution makes available.

In this chapter, a tutoring process carried out within the context of an engineering program at the University of Minho, Portugal, will be analyzed. The purpose of this paper is to discuss the role of the tutor in higher education, focusing upon tutors and students' views and experiences of the tutoring process.

Tutoring in Project-Led Education

Tutoring is an important part of supporting student learning in Project-Led Education (PLE) and Problem-Based Learning (PBL), in so far as in these learning environments students become actively engaged in their learning process and

faculty move from the role of transmitters of knowledge to the role of facilitators (Albanese & Mitchell, 1993; Powell & Weenk, 2003).

Although both PLE and PBL aim at fostering student-centeredness, teamwork, interdisciplinarity, development of critical thinking and other competencies (de Graaff & Kolmos, 2003, 2007), they present, however, some differences. Problem-Based Learning focuses on small-scale problems related to a small number of issues within a given theme (Albanese & Mitchell, 1993; Boud & Feletti, 1997). A group of students meet for a small period of time and collectively reach a good understanding of the problem. In PBL, the emphasis is placed on making a diagnosis, providing an explanation, or interpreting a situation. In Project-Led Education, in turn, students work together in teams to solve large-scale open-ended projects (Helle, Tynjälä, & Olkinuora, 2006). Powell and Weenk (2003) described PLE as a:

> … team-based student activity related to learning and to solving large-scale open-ended projects. (…) A team of students tackles the project, provides a solution, and delivers a ´team product´, such as a prototype or a team report at an agreed delivery time (a deadline). Students show what they have learnt by discussing the 'team product' with each other and reflecting on how they have achieved it. (p. 28)

Several authors involved in research on project-led education and problem based learning have discussed the different roles that the tutor may play when participating in these kinds of approaches (Albanese & Mitchell, 1993; de Grave, Dolmans, & van der Vleuten, 1999; Dolmans et al., 2002; Neville, 1999; Powell & Weenk, 2003; Silver & Wilkerson, 1991).

Powell and Weenk (2003), for instance, suggest a number of possible roles of the tutor. They include the tutor as settler of the exercise (determining the form and content of the project), as the stimulator of the students (by showing interest and encouraging students to overcome difficulties), as monitoring the learning process (supporting students and providing feedback throughout the project) and finally, the tutor can act as a technical expert and as an evaluator. The authors state that the tutor may perform several roles and that these should not be viewed in a prescribed matter. Based on the characteristics of the project (Helle, Tynjälä, & Olkinuora, 2006), certain roles are more or less appropriate. Being the settler of the exercise, a technical expert or an evaluator of a project implies content specific knowledge of the tutor which cannot be expected in the case of a tutor who is especially appointed to take the role of supporting teamwork and project management. This is usually the case of tutors involved in extensive interdisciplinary projects, as is the case of the study reported in this chapter to which we now turn.

CONTEXT OF THE STUDY

From 2004/2005 onwards, first year students in Industrial Management and Engineering program (IME) at the University of Minho have been participating in Project-Led Education (PLE), during the first semester of the course. The main

reason for adopting PLE in this context is associated with the importance of fostering interdisciplinary approaches in engineering curricula and student motivation. Interdisciplinarity is a key feature of PLE, in so far as students need to relate different content areas and apply them to a project throughout the semester (Powell & Weenk, 2003).

In Project-Led Education, students work together in teams to solve large-scale open-ended projects related to their (future) professional context. The kind of project selected for each semester draws upon a challenging theme, which requires the development of students' learning outcomes of the Project Supporting Courses (PSC). The competencies that students need to develop within this approach include both technical competencies that students must develop while doing all the PSCs and also the transversal competencies (e.g. project management, problem-solving, oral and written communication, self-regulation of learning, amongst others). In regard to the PSCs that participate in the first year project, they include: General Chemistry (GC); Calculus C (CC); Introduction to Industrial Engineering (IIE) and Computer Programming 1 (CP1) (see Figure 1).

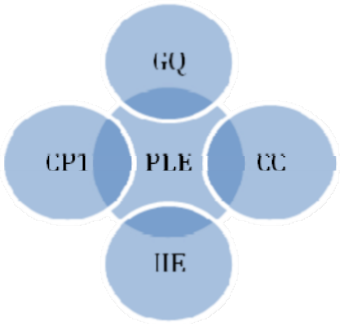

Figure 1. Project-supporting courses involved in the first year of PLE

The student teams are composed of six to eight students and they have a tutor that supports them and monitors the development of the project. The tutor's role is to facilitate student progress and monitor the learning process (Powell & Weenk, 2003).

PLE is coordinated by a team made up of the course coordinator, lecturers, tutors and educational researchers. In the first week of the project, a tutor is randomly assigned to each team of students. The tutors are usually teachers from the department (Department of Production and Systems – DPS), where the program is developed. Occasionally, tutors are selected from other departments, always on a voluntary basis. These are mainly lecturers from PSCs who are willing to take on the tutoring role. The tutors from DPS were PSC lecturers as well as non-PSC lecturers. Tutors were most of the times responsible for one team only.

Findings from previous research carried out in this context have shown that results of PLE are, in general, positive, for both students and lecturers (Fernandes,

Flores, & Lima, 2009a; Lima, Carvalho, Flores, & van Hattum, 2007). By and large, the project has shown an effective contribution to the active involvement of students in their own learning processes and to the development of transversal competencies, enhancing their motivation and helping them improve their performance in the first year of their studies – the year which is generally considered to be critical in terms of early drop out and academic achievement (Fernandes, Flores, & Lima, 2012; Fernandes, Lima, Cardoso, Leão, & Flores, 2009; van Hattum & Mesquita, 2011).

METHODS

This chapter draws upon data from a broader piece of research aimed at evaluating the impact of Project-Led Education (PLE) on students' learning processes and on faculty work (Fernandes, 2011). It aims at analyzing the tutoring process carried out within the context of PLE implemented in the first year of the IME program, and it focuses on the following research questions:

- How do tutors look at their experiences as tutors in PLE?
- What are the students' perspectives in regard to the tutoring process in PLE?
- What are the challenges for implementing tutoring processes in higher education institutions?

Data collection focused on tutors and students' perspectives and experiences. All of the participants have agreed to participate in this study which draws upon the principles and methods of instrumental case study, as suggested by Stake (2003, p. 137), in so far as it provided "insight into an issue." The aim is not to draw a generalization but to facilitate the understanding of the ways in which the different stakeholders experience the tutoring process within PLE. Data were collected through semi-structured interviews to tutors and focus groups and questionnaires to students at the end of the project. The interviews were conducted to nine tutors who participated in tutoring processes within PLE. The main dimensions included in the interview protocol focused on their experiences as tutors in PLE, strategies used during tutorial meetings, tutors' role(s) in PLE, conditions for effective tutoring practices, and skills required for an effective tutor.

In regard to students' perceptions, the questionnaires administered at the end of the project and the focus groups carried out to a group of students who have volunteered to participate in the study aimed at collecting data concerning the overall satisfaction of their experience in PLE. For the purpose of this chapter we will focus only on the dimensions which relate to the tutoring process and the role of the tutor in PLE. As far as data analysis is concerned, content analysis was carried out in order to identify recurring patterns as well as contrasting themes in the participants' accounts (Miles & Huberman, 1994).

FINDINGS

Findings are presented according to the overall perceptions of the stakeholders involved in PLE, namely, tutors and students. From the data analysis, four main categories were identified: the tutoring process in PLE, the role of the tutor, skills for effective tutoring and, finally, the difficulties and challenges of tutoring. These themes will be explored in this section.

The Tutoring Process in PLE

The tutoring process in PLE is developed by a lecturer who is involved in one of the courses lectured in the semester in which the project is carried out. Each tutor is responsible for a team of 6 to 7 students, which is formed at the beginning of the project. Students are free to choose their teammates, but should meet, however, some criteria in order to assure that the groups are heterogeneous, for example, in regard to gender issues and previous technical expertise (undergraduate studies). Typically, each PLE edition consists of six groups and six tutors, respectively.

The tutoring process in PLE can be characterized by a weekly meeting between the tutor and his/her group. During this meeting, which takes about one hour, the tutors discuss with the students several issues related to teamwork and project management. Tutorial meetings are held in the project room of each group, at a pre-scheduled time and date, decided by the tutor and his/her team. Tutorial meetings are not included in students' timetable, they are held in extra-curricular moments.

According to findings from tutors and students participating in PLE, it is possible to identify a number of important characteristics of tutoring which are in line with existing literature (Bordes & Arredondo, 2005; Carrasco Embuena & Lapeña Pérez, 2005; Crisp & Cruz, 2009; Miller, 2002; Roberts, 2000). These include tutoring as a form of academic subject knowledge support aimed at advancing students' knowledge relevant to their chosen field (Crisp & Cruz, 2009; Miller, 2002; Roberts, 2000), tutoring as a form of guidance which is intended to promote and facilitate students' development, in the intellectual, emotional, personal and social dimensions (Carrasco Embuena & Lapeña Pérez, 2005) and tutoring process as an opportunity to develop positive relationship between first year students' and their comfort with the university environment (Bordes & Arredondo, 2005). Data also indicate that tutors in PLE must develop a set of roles, as stated by Powell and Weenk (2003). These roles may include, for instance, being a settler of the exercise, a stimulator of the students or one who monitors the students' learning process and provides feedback throughout the project.

In general, tutors and students describe the tutoring process as the following:

> As a tutor, my priority has to do with what I think the main needs of the group are. What I have noticed is that most of the difficulties that students face are problems related to project management and motivation. And these two issues are highly related because sometimes students' motivation drops

> because no one in the team knows where to go and this is due to the lack of planning and project management skills. (Tutor)

> In regard to the topics discussed in the tutorial meetings, what I usually do is to look at where students are in the project. I ask them if they are meeting their planning, I discuss tasks with them. (Tutor)

> The tutor tries to gather all the information from the staff coordination team and inform us what we should know. For example, before the milestones, like a midterm presentation, the tutor tells us how much time we have for the presentation and helps us decide what contents we should present and how we should organize/prepare the presentation. (Student)

> The tutor was an important element in the group. I don´t think she was the kind of person that would tell us what we had to say/do. In the tutorial meetings, I would see the tutor as a person who was there to try to help you, not only with issues related to the project, but also in things related to your own problems. (Student)

Besides these tasks that characterize the tutors activity, it is important to recognize that in this kind of learning approach students play a more active and critical role in the learning process as they are requested to develop a set of transversal competencies. Therefore the guidance and support of a tutor in dealing with teamwork and project management issues is of great importance. As argued by one of the students in the questionnaire at the end of the year:

> The main difference between PLE and traditional learning is the ways in which we work. PLE is more demanding and it forces students to work harder, both individually and in group. I think it is more effective like this as it is learning independently. (Student)

This quote highlights that working with projects is more demanding for students than traditional teaching and learning environments, where students play a more passive role. First year engineering students have little experience in teamwork, project management and other important skills that are required to be developed by today's' engineers. Thus coaching in this field will be of great value for students.

Most tutors who are engaged in PLE experiences state that the tutoring process can make a difference for the successful implementation of project based approaches. They pointed out several advantages of being involved in tutoring processes, such as improving student and teacher relationship, stimulating student motivation and, mainly, supporting and monitoring student learning (Veiga Simão, Flores, Fernandes, & Figueira, 2008). These findings call into question the role of the tutor in the context of project-led education.

The Role of the Tutor

Data from students and tutors' perceptions point out four main roles of the tutor in PLE (see Figure 2). These include monitoring the project, motivating the team, supporting problem solving and assessing the project.

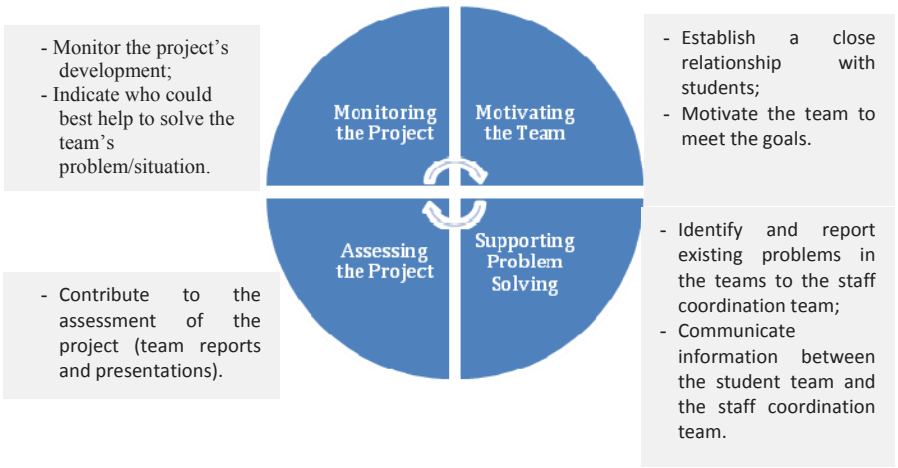

Figure 2. Tutor's role in PLE

One of the tutors' main roles is to monitor the development of the project. The tutor should support students in the development of project management skills, as it is of great importance for students to know how to manage tasks, solve problems, set up deadlines, participate in the decision making process, take a leadership role if necessary, etc. Tutors refer that sometimes one of the difficulties that commonly arises relates to knowing what to do next, which sometimes involves making important decisions that will determine the project's direction. The tutor can play an important role in supporting students with formative and timely feedback and he/she may also suggest other available resources which they can use, as the following quotes illustrate:

> I try to provide feedback about the project development. At a certain point, I ask them what they want to do. I try to understand when teams need to make decisions. Sometimes the team doesn't go any further because a decision needs to be made. (Tutor)

> Being a tutor is like supervising – there are different ways of doing it. In some cases, it is more effective to take a more authoritative stance, in other cases it results better to stimulate students' reflection, ask them questions. There is not just one way to do it. In summary, it means meeting with the students and supporting them in whatever they need. (Tutor)

Also of great importance is student motivation. The tutor can help keep students motivated by setting out challenges related to their work or, in some other cases, just by being there for them and following their work or by helping them on what to do next. Findings showed that some students were concerned with meeting the tutors' expectations and doing a good job in order not to let the tutor down. As one student stated, "as we didn´t want to disappoint our tutor we worked even harder." This is corroborated by the tutors and other students:

> In PLE, the role of the tutor is not to direct but to guide. He/she should make students believe that they can do even better. The tutor also plays an important role in keeping teams motivated and identifying strategies to overcome the difficulties. (Tutor)

> I provide feedback to students every time there are milestones (the students want to know how well they are doing. They want to know tutors' opinion). (Tutor)

> Our tutor was very important in the group. She was always very careful with our work. She usually gave us two deadlines, so that we could send her the report first before delivering the final one. And this way we tried to avoid mistakes in the final report …. (Student)

Formative assessment and continuous feedback processes play an important role in PLE, as students are provided with several opportunities to improve their work and are able to discuss results with teachers and tutors (Powell, 2004; Sadler, 1998; Yorke, 2003). Students recognize the value and benefit of feedback received during the tutorial sessions, group presentations and midterm reports, which allow them to improve their performance and set out new strategies for achieving the learning outcomes in a more effective way (Fernandes, Flores, & Lima, 2012). As the students themselves highlighted,

> In PLE, feedback was very important because we had the opportunity to do better the next time. After submitting the projects' preliminary report, we received corrections of our work by lecturers and tutors and we were able to improve the next report as we had understood our mistakes. I think we learn a lot with our mistakes. (Student)

> The tutor played an important role by providing feedback in regard to the projects' milestones. She tried to make sure that we kept up with the deadlines, so we would first send her our report in order to get a first impression of its quality and only then we would submit it. (Student)

Although tutors agreed that their role could make a positive impact on student motivation, especially with first year undergraduate students, who usually deal with problems concerning academic failure and early drop-out rates, they also recognized that it is very difficult to find strategies to motivate students when they

are unmotivated. During the interviews, some tutors shared their experiences on how they tried to motivate their teams:

> At the middle of the semester I had an individual talk with each team member. The goal was to concentrate on each single person in the team and try to motivate them and get a commitment from them. The sense of responsibility is very important. (Tutor)

> At a certain moment, I had to make them believe that the choice they had made was the best one. Even if that decision could limit the project, it was important to support that decision and make them think that this was a great solution. (Tutor)

Students' opinions are also in accordance with these perspectives. They refer that the tutors' role is mainly associated with the tasks related to monitoring the project and facilitating cooperation amongst team members. However, an interesting finding arising from the data concerning the tutors' role in PLE points to difficulties in managing students' expectations in regard to the teachers' role both as a tutor and as a lecturer (van Hattum & Vasconcelos, 2008). Tutors refer that students often show some distrust in regard to the teams in which the tutor is also a course lecturer, as students argue that these groups will benefit in terms of the technical support which the tutor can provide them. This possible bias was also present in some of the students' suggestions for further improvements in PLE experiences, as they stated that no tutor should be a course lecturer in order to guarantee consistency in the tutorial task (Veiga Simão et al., 2008). Similar findings were also presented by a study carried out by Larsson (1983), for instance, as research showed that teachers' acts were sometimes restricted by the students' expectations and conceptions of teaching. This was often the case with students participating in tutorials, as they usually expected teachers to make use of their authority as subject matter experts and "correct" or "clarify" students' doubts (Dahlgren, Castensson & Dahlgren, 1998). Thus, it is possible to assume that students' expectations can somehow influence teachers' performance and the ways in which they look at their own role as a tutor or lecturer.

Skills for Effective Tutoring

In regard to the main skills required of a tutor, the semi-structured interviews carried out with the tutors involved in PLE showed that the kind of attitude to adopt in regard to the team was of key importance. This in is line with earlier work which has pointed to the tutor's perspective as a facilitator of the students' learning process (Das, Mpofu, Hasan, & Stewart, 2002; Groves, Rego, & O'Rourke, 2005; Dolmans, Wolfhagen, Scherpbier, & Van Der Vleuten, 2001). The skills and attitudes include willingness to listen, showing interest and concern, enjoying contact with students, being nice, honest and open with students. Besides these competencies related to the affective domain, which are essential to deal with teamwork, the tutor should also be concerned with challenging students to go

further in research and enhance deep learning. Students identified tutor availability, along with project management and interpersonal skills, as the most important skills required to be a good tutor in project-based approaches (Veiga Simão et al., 2008). Evidence shows the importance of the pedagogical and relational dimensions of the teaching and learning process (Hargreaves, 1998), pointing, once again, to the need for specific training.

> Our tutor tried to understand if there were problems in the team. I noticed that concern. I think that a tutor has to be someone who is good at personal relations. (Student)

> Each tutor has his/her own way of working and dealing with the team. It is up to you and your team to try to take the best out of him/her. For example, if a tutor is good at preparing presentations, you should use the best of that and learn from him/her … If another tutor is good at something else, then use that in the same way, etc. (Student)

> What we expect from a tutor is that he/she gives us ideas, challenges us, and is also demanding. (Student)

According to Johnston and Tinning (2001), the tutor should question, probe, challenge and encourage critical reflection by group members thus creating greater awareness and understanding of individuals' own beliefs, values and assumptions. This requires specific competencies and training for teachers in charge of this role. In fact, when asked about their professional backgrounds and prior experience in group dynamics and facilitation of learning, most of the tutors identified this gap as one of the major weaknesses to develop effective tutorials (Veiga Simão et al., 2008). As one tutor stated:

> My main difficulty as a tutor was the lack of training on what to do. As a tutor, if there had been a meeting at the beginning of the semester discussing a set of topics related to tutorials, I think it would have been very useful. (Tutor)

This quote illustrates the need to foster greater dialogue amongst tutors and create opportunities for them to interact and exchange experiences, focusing upon their own practices. Self-reflection and feedback from peers are important to enhance a better perception of tutors' self-efficacy (Hansen, 2004). For instance, a group of researchers involved in problem-based learning in medical education were interested in knowing when tutors should intervene and contribute appropriately to group discussion (Lee, Lin, Tsou, Shiau, & Lin, 2009). They carried out a study which investigated the specific scenarios during group tutorial sessions that prompted or motivated tutors to participate in the group discussion.

The authors videotaped tutorial discussions and tutors were later shown the tapes and were asked to explore their intentions and analyze the episodes in which they had intervened in the discussions. These findings provided valuable insights for the improvement of the tutor's role within problem-based learning and also

provided important material to build a framework for training future tutors (Lee et al., 2009). Similar activities can be developed amongst tutors in order to develop facilitative skills and to foster personal and professional development.

Difficulties and Challenges of Tutoring

In regard to the difficulties and challenges of tutoring, most tutors feel that they are not well prepared in terms of pedagogical knowledge and practice to face the challenges of the "new" reality of Higher Education (Bireaud, 1995). Greater training and opportunities for professional development are needed in order to work within a student-centered perspective. The tutors' role is one of the issues to be taken into account. Evidence from tutors showed the importance of training for tutorial tasks:

> As an engineering teacher, I think that training in areas such as communication skills, teamwork, project management, problem solving, learning styles, etc. would be very helpful to perform the role of the tutor in a better way. (Tutor)

Along with the need for adequate training, tutors argue that the more active role played by tutors in the project also has strong implications for their workload (Fernandes, Flores, & Lima, 2009b; Alves, Moreira, Lima, & Sousa, 2009). Although the overall evaluation at the end of the project has been considered positive, both by faculty and tutors, the latter are aware that PLE takes a great deal of their time. The project coordination team works as a team project and tasks are distributed amongst faculty and tutors. However, the workload associated with this kind of student-centered approach requires a much more demanding role from the faculty. Some of them only become aware of this when they actually get involved in PLE. This is the case of the lecturer who participated for the first time in PLE:

> I have never thought that PLE would involve so much work! It is a pity that people who usually criticize this kind of approach to learning are not aware of the workload which it entails. People have no idea whatsoever! (Tutor)

The lack of institutional support is also pointed out as a constraint due to all the effort put into the project, especially in regard to tutors' tasks and duties:

> There is no support. It is up to you as a teacher and your good will, otherwise you cannot be a tutor. The tutor's role is not recognized in terms of teaching hours. Besides this, I think PLE approaches are not valued – we spend a lot of time reviewing students' reports and giving feedback and nobody sees that. In order for things to work better, we need more time to prepare and to reflect. (Tutor)

Tutors also mention the problems which they face when trying to keep the balance between their teaching and research activities. In this respect, it is important to note that most of the current performance appraisal models implemented amongst higher education institutions tend to value less the teaching activity in detriment to

research (Fernandes & Flores, 2012). In the United Kingdom, for instance, several studies suggest that teaching and learning was undervalued in UK higher education and that promotion policies emphasized performance in research rather than in teaching (Ramsden & Martin, 1996; Parker, 2008). Also, the results of a report developed by the Higher Education Academy (2009), based on information from 104 higher education institutions, demonstrated that the inclusion of teaching in promotion criteria is inconsistent and often absent. By and large, academics believe that teaching is not recognized to the same extent as research. Because the research role is the traditional conception of what academics do, it is most often seen as having greater value and higher status (Parker, 2008; Young, 2006). This perspective emphasizes the products of academic research – published papers, reports, and presentations. Therefore, it is necessary to create and ensure the appropriate conditions for academics' professional development and recognition of their teaching performance. In this sense, performance appraisal should be considered as a strategy to stimulate their professional development rather than an attack to their professionalism (Cousins, 1995; Day, 1992).

CONCLUSION AND DISCUSSION

Findings of this study highlight the importance of the tutors' role to support and monitor student learning and enhance student and teacher motivation. As Powell and Weenk (2003) suggest, making the transition from lecturer to project tutor is not simple. However, students and tutors evaluated PLE, in general, as a positive approach to enhance students' learning and increase their motivation. Most of the tutors in this study were satisfied with PLE and they mentioned that it had encouraged them to be more engaged with students. However, they recognized that their role was, in fact, very demanding. Their practice was mainly based on their own teaching experiences and their ability to "learn by doing," which has been facilitated by their active involvement in several PLE experiences over the past few years.

However, some critical areas were identified such as the need for more training to fulfill the tutors' role as well as the lack of institutional support and recognition of the tutoring process. In regard to training of tutors, the participants addressed the importance of sharing and discussing ideas and practices amongst colleagues as a strategy to overcome some of the difficulties faced during the process. Thus, opportunities for professional development are a key feature for the success of tutoring within PLE and in other settings. However, training itself may not be the answer to all of faculty's uncertainties in order to become effective tutors. As Haith-Cooper (2000) has demonstrated, based on a literature review of the lecturers' role in problem-based learning within health education, no amount of training will change beliefs. Staff development activities must be understood in order to develop a broader understanding of students' learning process, with special focus on the "new" roles and duties that teachers must respond to when involved in project or problem based approaches. Faculty also claimed greater institutional support. They need more time to step back from their teaching tasks

and reflect on their professional practice. For instance, more opportunities to do research on teaching and publish can lead to the recognition of improved practice. Besides this, organizational policies and procedures that encourage and reward teaching and continuing education are also required (Johnston & Tinning, 2001).

In regard to the tutors' role, the participants recognized the need for more interaction between tutors and the importance of clarifying and making the tutors' role explicit to students, so that both tutors' and students' expectations can be met. The idea of creating reflective practice groups amongst PLE teachers involved in tutoring seems an interesting and appropriate strategy to implement as they may prepare themselves more effectively through the exchange and reflection based upon their own experience, as suggested by Johnston and Tinning (2001). This strategy is more likely to prepare faculty to meet the demands of problem-based learning than traditional forms of staff development (Johnston &Tinning, 2001). In this sense, collaboration, along with the valorisation of teaching, is an essential strategy for the improvement of tutoring practices in order to foster high quality teaching and learning in higher education.

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