

A Review of Teaching Methods - Lecturing and Facilitation in Higher Education (HE): A Summary of the Published Evidence

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Abstract

Several studies have documented that teaching methods in HE (generally involves work towards a university or college level education), are the most important aspect of a curriculum. This is because they serve as an interface between the learners and the philosophy of the curriculum. It is, however, difficult to define how knowledge is conceptualized and in what way it influences the choice of effective teaching methods in HE.

A literature search using the major databases – Medline, PubMed, EMBASE, CINAHL, JSTOR, PsycINF, and Web of Science – was carried out. This research aimed to focus on two important dimensions: lecturing and facilitation, within the same learning and education process, rather than challenging and demanding it, concerning their roles in teaching and learning. This paper shows that in many areas of teaching and learning, the positivist notions of knowledge are not always sufficient or appropriate. The latter has been conceptualized as a ‘banking’ model of learning, where the teacher is an expert and a storehouse of knowledge and this is transmitted (deposited) to the student over time who ‘banks’ this knowledge. The same considerations apply to teaching and learning, with respect to many areas of ‘academic’ courses, which require the students to explore values. This is where facilitation can be considered an important approach to learning. The context for much of this might be conveyed through a lecture, but to enable the students to develop a deeper understanding and to reflect on their own values, dialogical approaches to learning are needed. It will ensure that the issues are discussed and explored through interaction and the sharing of perspectives, views, and values through which new understandings (learning) can emerge.

Keywords: Teaching methods, lecture, facilitation, higher education, critical review.

Teaching is often considered to be an activity which enables students to learn. It applies to both the arts and sciences. As Centra (1993) argues, teaching is an intellectual process that ‘produces beneficial and purposeful student learning through the use of appropriate procedures’ (p.42). Jarvis (2002) argues that the process of teaching involves ‘the transmission of knowledge/theory, or the teaching skills - it was an instrumentally rational activity’ (p.40). Teaching methods are an integral part of the teaching environment within HE (universities and colleges). It is, however, difficult to examine how knowledge is

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conceptualized, and how this influences the choice of teaching method, what ‘effective teaching’ should look like, and most importantly, how it should be done (Braskamp & Ory, 1994). Braskamp and Ory highlight that ‘effective teaching is the creation of situations in which appropriate learning occurs; shaping those situations is what successful teachers have learned to do effectively’ (p.40). There is, however, still a huge debate regarding different teaching methods in terms of the choosing of an appropriate method for ‘effective’ teaching.

It has been argued that effective teaching methods are often determined by the integration of nature and skillful teachers/tutors (inter-professional), as well as appropriate means of communication, which is often considered a key competence for those professionals who intend to engage in teaching in HE institutions (Health Professions Council, 2007; Department of Health, 2004; Howe, Champion, Searle, & Smith, 2004; Egnew & Wilson, 2010). The topic of teaching methods, especially with those methods as common and commonly appreciated as lecturing and facilitation, has been explored before by many others, but such methods have not yet been reviewed critically in the light of the available empirical and conceptual evidence. Therefore, this review examines two important teaching methods, namely ‘lecturing’ and ‘facilitation’, with the aim of providing some practical and/or theoretical implications for the improvement of teaching and learning in HE institutions.

Methodology

A literature search using the major databases - Medline, PubMed, EMBASE, CINAHL, JSTOR, PsycINFO, Web of Science, and Physics Education Research - was carried out, examining two important teaching methods, namely lecturing and facilitation, and exploring their roles in teaching and learning at HE institutions. 7461 references were initially identified, which were then reduced to 101, once duplicate references were removed (compared to a Google search, i.e. 6,850,000 using ‘free’ terms). Once relevant articles had been identified, I adopted Sandelowski and Barroso’s (2007, p.51) process of excluding papers at different stages, i.e. checking through the titles, abstracts, and reading full articles, including checking the bibliographies and author citations. In addition to this, a literature search was carried out to see what previous analysis had been undertaken in relation to lecturing and facilitation.

With large quantities of information available in relation to teaching methods, this paper is limited to the best substantial theories and accepted principles, using the following criteria for inclusion:

- (a) Articles related to teaching methods lecturing and facilitation in HE institutions published since 1974 were sought, with special reference to academic and research policy contexts, on the assumption that more recent evidence would have greater applicability to the current context;
- (b) Studies published in English, regardless of the location of the research site (conducted in both the English and non-English languages);

- (c) In addition, the author reviewed some abstracts from key journals to cast a wider net to increase methodological rigor, including the search functions of Google, and relevant databases utilized, to search for the keywords ‘teaching methods’, ‘lecture’, ‘lecturing’, ‘facilitation’, and ‘higher education institutions’, in order to ensure that statements were not missed.

Though this paper did not employ any specific quality selection criteria, I utilized the following criteria as a checklist for the selection of the relevant articles (adapted from Huth 2009, p. 251):

- Statement of problem with relevant question or hypothesis
- Presenting of the relevant evidence
- Usefulness of the evidence
- Significance of findings
- Assessing the answer’s validity in the face of conflicting evidence
- Conclusion

Findings

The following three key themes emerged as a result of the review of relevant literature:

- Lecturing – ‘to go on’
- Facilitation – ‘a dynamic process’
- Factors (environmental, social, and psychological) - influencing teaching methods

These themes were not mutually exclusive, but overlapped and contained contradictions.

Lecturing – ‘to go on’

Lecturing, in lay terms, means ‘to go on’, usually at some length, about an issue to a willing or unwilling listener. But in educational terms, to lecture means ‘a particular type of educational encounter in which a teacher transmits information to a number of students’ (Williams, 2002, p.3; also see Quinn, 2000, p.337). The essence of lecturing is to enable students to gain information, disseminate knowledge, generate understanding and develop interest in a particular subject (Brown, 1978). Al-Modhefer and Roe (2009, p. 45) conducted an empirical study of 300 students’ view of an effective lecturer and found that five key characteristics were considered to be important for an effective lecturer: clear and effective speaking, an emphasis on exam topics, stimulation of students’ interest, linking theory to practice, and well-structured presentation. Similarly, Al-Modhefer and Roe (2009) carried out a study to examine associated biomedical tutorials among nursing students in a large class ($n = 300$), and they noted that the most effective teaching involves: tutor provision of all questions and answers, tutor presentation of problems, and sharing with students both individually and in group settings. In this respect, one can argue that the interactive component between the students and tutor is considered to be an effective means of teaching and learning. However, it has been greatly debated among scholars whether lectures are the best means of imparting knowledge in HE institutions

(Al-Modhefer & Roe, 2009, p.42). At one end of an effective/ineffective continuum, lectures can be passive, outdated, rigid, one-way and ineffective routine knowledge transmission (Al-Modhefer & Roe, 2009, 2010; Biggs & Tang, 2007; McIntosh, 1996). But on the other hand they can be structured, well-planned and challenging learning events which trigger students to come out of a passive stenographic role (Fry et al., 2003). Cohen, Manion, Morrison, and Wyse, (2010) argues that ‘teachers are largely the agents of, the implementers of, major decisions taken elsewhere’ and the role of teachers in decision-making is rather democratic, using students’ ideas in amalgamation with their own classroom role (p.15). Al-Modhefer and Roe (2009) further note that students should be encouraged ‘to start a learning process that will continue for the duration of their professional lives’ (p.43). It is therefore some patterns of interaction which trigger learning, and these could be informal, formal or semi-formal (Cohen et al., 2010, adapted by Oeser, 1966): teacher-led sessions; the lecture-discussion; active learning; active learning/independent planning; task-centered learning, and independent working (bureaucratic learning). It has been argued that these interactions would make teaching, teaching methods and the teaching/learning environments more productive.

Medlicott (2009) states that effective lecturing should be reflected in the design aspect. This has an economic benefit, in that the time of only one teacher is needed, and only one, albeit large, teacher space needs to be provided (Quinn, 2000; Race, 2000; Williams, 2002). Further advantages are motivation of students, helping students to make sense of concepts and views from various sources, and the complementing of written information, or even the provision of up-to-date research not yet available in textbooks (Brown, 1978; Quinn, 2000; Race, 2000; Williams, 2002). From Hartly’s (1989) point of view, effective teaching fulfills four major principles: the integration of learning activity in teaching is important as learners will learn by doing; repetition, generalization and dissemination are important notions; reinforcement is considered a cardinal motivator for learning; and learning is helped when the objectives and purposes of learning are clear. Race (2000) also states that surface, rather than deep, learning is the resulting impact of lectures (also see Race & Walker, 2003; Fry et al., 2003). Quinn (2000), however, opposes the view that lecturers are not resource-efficient, claiming that often learning does not take place during lectures and does not therefore result in knowledge acquisition and transmission.

Several authors (Bastick, 1995; Tootoonchi, Lyons, & Hagen, 2002; Mohidin, Jaidi, Sang, & Osman, 2009; Al-Modhefer & Roe, 2009, 2010; Williams, 2002; Sajjad, n.d.) back up effective teaching as a means of integrating teaching methods (teaching-centered approaches), and the characteristics of the teacher (knowledge, experience and personal attributes). Bastick (1995, p.x) attempts to see it as an intellectual form of ‘technical skills, professional competence and professional attitude’, in practice. Both Schon (1987) and Price (2004) strongly argue that once there is an integration of ‘knowledge’ and ‘competence’, this makes teaching methods more effective. Smyth (cited in Boud & Miller, 1996, p.53) describes it as a process of ‘(re)construction’, meaning ‘how might I do things differently?’ (See Table 1).

There are, however, some cynical views of lecture methods in HE. As Williams (2002) notes, a significant criticism of lectures is the ‘passive role often adopted by students,

Table 1. Lecturing as an appropriate method of teaching

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| <ul style="list-style-type: none"> • Stimulation to create ideas as factual material can be delivered in a direct and logical manner (McCarthy, 1992); • Appropriate to teach large classes (Al-Modhefer & Roe, 2009); • Opportunity for students to ask for clarifications at the end of the lecture; and • Efficient and economic approach (Bligh, 1998; Al-Modhefer & Roe, 2009) • Teacher may be 'role model' for students' learning; and • Students develop listening and note-taking skills (Kochkar, 2000, p.345) |
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with them sitting and taking copious notes, sometimes verbatim' (p.4). This reinforces the idea that students can be taught all they need to know (Race, 2000; Ramsden, 2003; Williams, 2002), and equates with the concept of 'pouring new ideas into an empty brain' (Al-Modhefer & Roe, 2010, p.365). In this particular context, it is questionable 'how effective a learning strategy the lecture is, when it is well-established that adults respond best to teaching that relates to their own pace of learning, and within their own context and experience' (Knowles, 1990; Williams, 2002, p.4). Therefore, Al-Modhefer and Roe (2010) note that effective teaching is a combined form of more than one factor, for example, socio-economic, cultural, political, environmental, and organizational aspects of the curriculum, as well as instructional choices of teachers or educators (also see Turpen & Finkelstein, 2009).

Similarly, it has been argued that poor and ineffective lectures have many shortcomings, including the potential for 'teacher bias and boredom' (Quinn, 2000; Williams, 2002, p.4). These should not be used as criticism of lectures as a teaching method, because they relate more directly to the actual skills of the teacher (lecturer) than to the teaching method itself. Williams (2002) suggests that:

'The learning taking place, however, using this (lecture) teaching method is questionable; at its best, it can motivate learners and help them to make sense of a variety of competing views, but at its worst, it can support the ethos of learner as a passive empty vessel' (p.4).

Some criticisms of lecturing methods have been summarized in Table 2.

Facilitation

Facilitation is an interactive learning process. Burrows (1997) defines facilitation as 'a goal-oriented dynamic process in which participants work together in an atmosphere of genuine mutual respect, in order to learn through critical reflection' (p.401). This concept fits well with the understanding of facilitation highlighted in the literature (Johnston and Tinning, 2001) which is seen as having its basis in a 'humanistic approach to learning' which helps students to learn through shared and interactive learning (Rogers, 1983; Regmi, 2009, p. x). Jarvis (2002, p. 80) argues that:

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Table 2. Criticisms of lecturing methods

- Passive, no interactivity and one-way traffic (Weinstein, 1988; McIntosh, 1996);
- Not appropriate methods for changing attitudes, and may not be a useful approach to analyse, synthesise and reflect ideas and experience (Al-Modhefer & Roe, 2009; Bligh, 1998; Price, 2004);
- Limited learner participation and less rapport-building;
- Not able to transmit the wonder and excitement – facts and figures of scientific discovery (Sokolove, 1998, cited in Al-Modhefer & Roe, 2009, p.42); and
- Difficult to cope with a wide diversity of ability/heterogeneous groups (Bligh, 1998).

‘Humanistic education and pragmatic constructivism assume(s) that learning is a recovery of or remembering (of) that which we already know. Some believe that this inner knowledge is lost in the plethora of what we are told we should know and from a tendency, it would seem, to forget what we know.’

In Rogers’ (1983) view, the notion of a humanistic learning approach is to enable learners to gain a deeper self-understanding (also see Regmi, 2009). This concept led Rogers towards the learner-centered approach to learning.

It has been further argued that the role of the teacher in this process is considered to be ‘as a facilitator of learning rather than (a) transmitter of information’ (Johnston & Tinning, 2001, p.161; Quinn, 2000). It is also very important to ensure that a conducive environment is created, in which the learner feels able to share and be listened to attentively (Murrell, 1998; Regmi, 2009). Jarvis (2002, p.80) further notes that facilitation is a process of ‘reawakening our talents and (the) store of unconscious wisdom’, to help learners to realize their capacity to learn. Several authors (Biley & Smith, 1998; De Grave et al., 1995; Williams, 2002, p. 5) note that the facilitator is seen as ‘central to the learning process’ which may be either constructive or destructive.’

The advantages of facilitation relate very closely to the principles of adult learning (Regmi & Regmi, 2008). First, facilitation provides relevance of the learning to the learners by building upon their own experiences - ‘reality of practice’ (Quinn, 2000; Rogers, 1983; Tuohig & Oleson, 1995; Wilkinson et al., 1998). Second, using ‘critically analyzing and reflecting’ on personal experience, the learner will be able to contextualize and internalize the learning, with the ‘whole experience being about thinking, feeling and developing insight’ (Durgahee, 1998; Welsh & Swann, 2002; Williams, 2002), resulting in deep learning (Biley & Smith 1998; Johnston & Tinning 2001). Third, the process of learner-centered facilitation brings individual learning styles (Murrell, 1998), and finally, this enables the learner to be ‘an active participant’ with their own pace of learning (Durgahee, 1998; Quinn, 2000; Rogers, 1983; Welsh & Swann, 2002; Wilkinson et al., 1998). From this point of view, one can argue that that facilitation can be a very important component of lecturing because learning in this way can have a consciousness-raising, em-

powerment) effect, for e.g. exploring the changing role of women in society could give rise to students developing more of a feminist perspective.

It has however brought some pitfalls. As Quinn (2000, p.56) highlights, the disadvantages of facilitation include the 'lack of empirical evidence available to support its claims' (effectiveness). Potentially, the emphasis on facilitation can '(devalue) intellectual aspects of learning', such as knowledge and facts, which have an important role in human development and understanding (p.56). Facilitation needs to take place in either a one-to-one or small group setting, and is therefore time-consuming for teachers - and in general it is difficult to cover a set syllabus when the learner has control over the learning (Williams, 2002; Fry et al., 2003). Other important disadvantages are that, firstly, despite all the rhetoric about the development of a 'partnership-like' relationship between student and facilitator, there are inevitable inequalities, especially when the facilitator also takes on the role of assessor (Murrell, 1998). As Fry et al. (2003, p.112) point out, facilitation is rather a process of 'interpersonal skills, which can prove far more difficult to learn.' Secondly, it may well be that facilitation is now welcomed by all learners, and there may be an expectation that the role of the teacher is to teach (Williams, 2002). Fry et al. (2003, p.113), however, note that in the process of facilitation, the agreement of a 'working relationship' between learners and teachers is critical. Williams and Horobin (1992, p.43) consider this process to be creating a 'we culture'. Williams (2000) states that learners do not always accept a self-directing role, and can view this as a soft option for the teacher, which can be complex due to the lack of understanding by the facilitator, who may see their role as inactive rather than leading to the employment of active facilitation skills (also see Durgahee, 1998).

As a result of the work of Rogers on learner-centered learning, it is seen as a collaborative venture between teacher and student in terms of creating a safe and trusting environment conducive to learning (Quinn, 2000). Roger (2002, p. 80) further points out that the facilitation process often 'seeks to understand the frame of reference of self and the other, to reflect on how knowledge is derived from experience through (an) implicit and explicit theoretical lens.' In the same vein, Williams (2002, p.6; also see Jarvis, 2002) considers the role of the facilitator to be to empower participants to learn. The key aspect of facilitation relates closely to adult learning theory, in that it works from the position that for learning to take place, the teaching must be appropriate and relevant (content, context and consistency), based on the learners' experiences, and learner-centered and reflective (Quinn, 2000, pp.52-53).

Factors influencing lecturer and facilitation methods

It has been widely recognized that teaching and learning do not operate in a vacuum, free from the values and norms of their working context (Williams, 2002; Al-Modhefer & Roe, 2009, 2010). Instead, they are required to fulfill their function within a given situational context with a variety of environmental, social and psychological influences impacting on their choice of teaching method (Reece & Walker, 2003; Fry et al., 2003; Quinn, 2000). Environmental influences may include the availability of particular resources, such as suitable teaching rooms, and the appropriate skilled teachers, equipment

and teaching aids (Williams, 2002). As Williams states, the teacher may be forced into adopting the lecture method when they are faced with large groups of students and a limited amount of teachers and rooms. The facilitation method, in contrast, would require the teacher to break the learner group into small numbers, 'to supervise a group of students working outside what supervisor might perceive to be his or her own area of expertise' (Fry et al., 2003, p.112).

Alongside environmental factors, socio-political factors further impact on the choosing of appropriate teaching methods (Williams, 2002). Learners often expect to receive lectures, and to learn from a teacher who is wise and knowledgeable (Durgahee, 1998; Wilkinson et al., 1998; Biley, 1999). This can make teaching methods such as facilitation unpopular with the students, who might prefer to receive teaching through more traditional methods such as lectures (Murrell, 1998; Biley, 1999). In Merriam and Caffarella's (1991) view social learning theory considers that people learn from observing other people, and such observations take place in a social setting.

In the 21st century, teaching is being evolved and is developing to become outcome-based with a focus concerning 'what is actually being learned'. It will also be able to foster the deeper understanding required for contemporary practice (Welsh and Swann, 2002). Teaching methods such as facilitation in practice will be necessary if the 'knowledgeable doer' called for by educators, health professionals and policy-makers is to become a reality (Quinn, 2000).

Williams (2002, p.9) therefore notes that 'the increasing body of research evidence relating to effective teaching practice based on adult learning theory should ensure that this renewed interest by universities in providing good quality teaching would result in the adoption of appropriate teaching methods independent of the resource pressures' (also see Regmi & Regmi, 2008). These teaching methods in the context of professional education should include facilitation by teachers of small groups and one-to-one encounters, both in the university and practice setting. As Al-Modhefer and Roe (2009) argue, to be an effective teacher, 'lectures need to be explored and applied to practice situations, grounded (...) in the assessment and discussion that students have to engage in' (p.42). Davies et al. (2000) and Wynne, Brand, and Smith. (1997) state that creating appropriate content and context for learning would make teaching more effective in practice. However, counter-pressures to this are the high visibility and accountability of the lecture method, which fills up timetables so that courses can be seen to exist and lecturers to be gainfully employed (Race, 2000), and the resource-intensiveness of alternative teaching methods. Several authors (Race, 2000; Williams, 2002; Exley and Dennick, 2004, cited in Al-Modhefer and Roe, 2009, p.43) argue that effective teaching 'provide(s) a focus, challenge(s) assumptions and beliefs', highlighting significant aims to motivate learners.

Similarly, psychological influences play an important part in the determination of the teaching methods employed. These psychological influences can be within the teacher or the student (Fry et al., 2003; Reece & Walker, 2003). There may be a temptation for the teacher to lecture students because they enjoy lecturing, or because they had to endure them so their learners will also suffer (Race, 2000). Equally the contrasting situation may

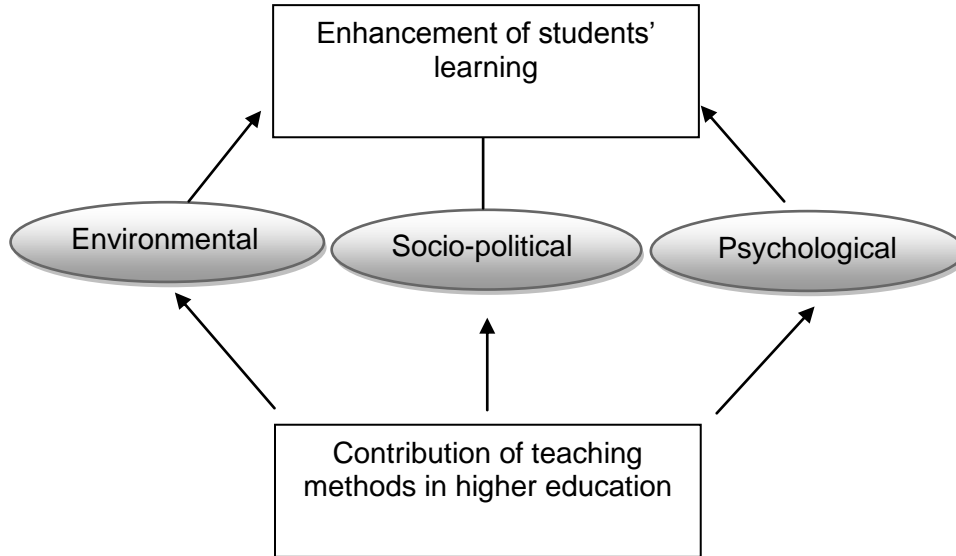
be that the teacher does not like the focus of ‘all eyes’ on them, which is inherent in the lecture situation (Race, 2000; Williams, 2002), or they may have been inspired to provide learners with a more positive learning experience than they themselves had. The practice of teachers is determined by their personal theories of teaching and learning (Johnston & Tinning, 2001; Williams, 2002). The teacher’s belief about how learners learn using the best approach to teach or facilitate, and the nature of the relationship between the learner and the teacher, will have an impact (Al-Modhefer & Roe, 2009, 2010).

In some cases, the relationship between learners and teacher is paramount, while others will remain separate or avoid contact due to some previous negative experience during their schooling (Quinn, 2000; Regmi, 2009; Regmi & Regmi, 2008). Jarvis (2002) therefore argues that effective learning will take place ‘when there is flexibility for different forms of knowledge to be engaged with using different methods of teaching and facilitative relationships as appropriate’ (p.87).

In the light of these psychological influences, one can argue that ‘teaching methods and curriculum philosophy should be flexible enough to adapt to the needs of individual learners’ (Williams, 2002, p.11; also see Reece & Walker, 2003; Fry et al., 2003). Williams (2002) further argues that a variety of teaching methods is likely to be a better approach than the dogmatic adoption of all lectures or no lectures. It has also been argued that in many practices, learning from one another, i.e. a team/sharing approach, has been considered a strong approach - for example, traditionally, medical practice has been argued to be a single ‘odd man out’ approach as medics often claim themselves to be experts and do not want to learn from other professions, but recently this field has changed. Peyton (1998, p.x; also see McKimm & Jollie, 2003) pointed out that these days, healthcare practice becomes:

‘Less relian(t) on a particular individual’s knowledge base or skill but rather on a team approach...which includes representatives of all health professions... Doctors must be prepared to teach and learn, not only within their own profession, but also across (all) disciplines.’

The ‘self’ in learning is a ‘hallmark of humanistic psychology’ (Tennant, 1997, p.12), as this approach claims that learning always integrates with learners’ feelings, freedom, motivations and choice. Some argue that learning could be considered a ‘form of actualization’ (Sahakian, 1984, cited in Merriam & Caffarella, 1991, p.133). Svinicki (1998, cited in Al-Modhefer & Roe, 2009, p.45) highlights that effective teaching involves the ‘internalization of new information into existing mental schemata; creating new memory networks, or reorganizing old networks to fit the new information.’ In the light of the issues or challenges explored and discussed in the paper, the author has highlighted some important aspects (Table 3) and the factors to enhance effective teaching (Figure 1).

Figure 1. Factors to enhance students learning**Table 3. Effective teaching methods**

- Enables learner interaction and participation;
- Consider the content (who, what you teach), and context of learning - environmental, social and psychological aspects in education;
- Showing concern and respect for students;
- A commitment to encouraging student independence;
- An ability to improvise and adapt to new demands;
- Using teaching methods and academic tasks that require students to learn thoughtfully, responsibly and co-operatively;
- Students and teacher share talking (conversation);
- Giving the highest quality feedback on students' work; and
- A desire to learn from students and other sources about the effects of teaching and how it can be improved.

Source: Ramsden, 2003; Svinicki, 1998; Michael, 2006; Williams, 2002; Biggs & Tang, 2007; Dancy & Henderson, 2007

Limitations

There are some methodological limitations in this paper:

- assessing the internal validity for many of the studies is difficult as 'little information is provided on the research and sampling design' to those selected articles for the paper (Liu, Hotchkiss, & Bose, 2008, p.12);

- there is a risk of publication bias, with both peer-reviewed and non-reviewed papers which report positive results being more likely to be published (Regmi, Naidoo, & Pilkington, 2009);
- though the author adopted analytical procedures to standardize the review using quality review criteria, including iterative review/analysis process - this paper is not a comprehensive review of the topic, as the author argues that review articles are sometimes handled differently than empirical research manuscripts in terms of process, contents, contexts and consequences. Rather, it seeks to provide sufficient information to raise awareness of some important teaching methods that exist in the current provision of HE; and
- in addition, time and resources were severely constrained in this study as it was not externally funded.

Discussion

In this paper, we found that in many areas of learning, particularly in relation to professional education and development in HE, positivist notions of knowledge (which arguably lend themselves to lecture approaches) are not always sufficient or appropriate. The latter has been conceptualized by Friere (2001) in the 'Pedagogy of the Oppressed' as a 'banking' model of education: the teacher is the expert and retains knowledge and this is transmitted (deposited) to the student over time who 'banks' this knowledge. The problem is that professional knowledge and many professional decisions are 'messy' because they have to take into account the perspectives of different participants (students/users, relatives, other professionals), but also important considerations in relation to the law, ethics, cultural expectations, professional standards, and national and local policies etc. The professional/student is confronted by an array of competing values (some or all of which are equally valid). Frequently, professional decisions mean making a professional judgment. How, then, does the student develop 'knowledge' which helps to inform such decisions and judgments? What teaching and learning approach might be appropriate?

The same considerations apply to teaching and learning in respect of many areas on 'academic' courses which require students to explore values. For example, issues around health inequalities, issues related to ethnic minorities, politics etc. This is where facilitation can be considered an important approach to teaching and learning. The context for much of this might be conveyed through a lecture, but for students to develop deeper understanding, and to reflect on their own values, dialogical approaches (Mezirow & Associates, 1990; Shor & Freire, 1987; Mezirow, 2000) to learning are needed where the issues can be discussed and explored through interaction and sharing of perspectives, views and values, out of which new understandings (learning) can emerge. Similarly, a plethora of teaching and learning techniques have been widely used in many educational disciplines including physics education research (PER). In 1998, Hake used this method (PER) to examine the use of pedagogical innovations in teaching undergraduate physics courses, and he revealed that interactive engagement methods, as opposed to traditional lectures, would always be linked to better student performance (Hake, 1998). One of the primary methods of interactive engagement used among 6,000 students at the University of Colorado was 'Peer Instruction' (Mazur, 1997). According to Mazur (1997), peer edu-

cation was considered a pedagogical method, often used in large-scale teaching, where lecturers stop lecturing every 15-20 minutes (approximately) to ask questions of the students in order to get their views, responses, and understanding of the subject matter. This approach would also help students to, not only think about the possible responses, but also to test themselves about their understanding with their peers. Therefore, Mazur (1997) and Crouch, Watkins, Fagan, and Mazur (2007) strongly believe that such a process would enhance students' learning ability though conceptual and traditional, technical understanding (also see Turpen & Finkelstein, 2009).

I argue that Mazur's style of peer instruction would equally apply in many social science fields. Promoting such a dialogue in a learning environment is where facilitation comes in. Facilitation can be viewed as more than a set of technical skills that are applied to promote discussion. Effective facilitation also requires emotional intelligence on the part of the facilitator as well as an awareness of the power dynamics within the classroom (Brookfield, 1995). A conceptualization of facilitation has been advanced by Harvey et al. (2002), which tries to promote better understanding of what activities are associated with facilitation. This paper has also highlighted that depending upon the content and context of learning, the methods must be teacher-centered (lecturing), or student-centered (facilitation), or all shades in between. Therefore, teachers need to be trained about the complexities of teaching and learning in practice. It is therefore 'important to remember that what the student does is actually more important in determining what is learned than what the teacher does' (Sheull, cited in Biggs, 1993). The paper concludes that the adoption of effective teaching methods, employing learner-led or learner-centered approaches, more interaction between the students and teachers, as well as the inclusion of adult learning as a relevant platform to analyze teaching methods, would all have important implications for the HE experience.

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