


# Discourses and Practices in Teaching Methods and Assessment: Insights From an Early Career Academic

SAGE Open  
January-March 2015: 1–6  
© The Author(s) 2015  
DOI: 10.1177/2158244015573371  
sgo.sagepub.com  


Deepak Gopinath<sup>1</sup>

## Abstract

Translating the purposes of education into practice is particularly challenging for those who are new or have recently entered academia. By reflecting on my first years of teaching in higher education, I discuss two key aspects of my teaching practice: shifts in choice of teaching methods and a critique of different forms of assessment. Through the discussion, I argue that a teacher needs to be reflective on both these aspects and that such reflection needs to be carried out so that the student develops into a “self-directing,” “self-monitoring,” and “self-correcting” individual. At the end of the discussion, the relevance of a “project-based learning” approach starts to become significant in taking my pedagogical practice forward.

## Keywords

education, social sciences, academics, curriculum, educational measurement and assessment, higher education, teaching

## Background

Following Bernstein’s (1975) division of the education environment into “curriculum” (epistemological considerations), “pedagogy” (techniques used by teachers to achieve teaching objectives), and “evaluation” (setting out the standards for assessment), Bates (2005) talks of the importance of contextualizing knowledge and, particularly, of how it presents challenges for teachers amid increased mobility of students who bring along with them unique sets of norms, ideas, and values underpinning the purposes of education. This would therefore require one not only to position and analyze shifts in teaching methods in relation to contemporary debates on the changing nature of “knowledge” but also to understand how one might facilitate the development of the student into a “self-directing,” “self-monitoring,” and “self-correcting” individual through adequate assessment methods (Gregory, 2002; Heron, 1974, p. 1).

Based on my experience in the initial years of academic teaching, I reflect on how I: (1) positioned and analysed shifts in teaching methods in relation to contemporary debates on the changing nature of ‘knowledge’ and how it influenced ‘learning processes’; (2) offered a critique of different forms of assessment that I employed. By so doing, I discuss at the end of this paper, how my initial years of teaching experience has given me insight on the importance of developing instructional methods that has parallels with a ‘Project-based learning’ approach, where learners are more autonomous, take on increased responsibility in their learning (Tassinari 1996; Wolk 1994; Worthy 2000), and thereby

able to fit learning around their capabilities (Moursund 1998; Grant 2002).

## Teaching Methods

Initially, I relied on a teacher-centric method, “lecturing,” which focused on teachers as the “deliverer” of knowledge and the student, the “recipient.” To start off the discussion, I will talk about a particular module in the undergraduate degree in the town planning program that was looking at how cities were planned across Europe. As this was my first go at this module (and the fact that this was my first year in teaching), I started organizing the contents of the module under different lecture headings; for instance, Week 1 would look at “different systems of planning across Europe,” Week 2 on the “planning system in the UK,” and so on. As a result, lecturing or a teacher-centric approach was seen as the “best way” in the delivery of lectures for the whole module.

The perceived advantages of a “teacher-centric” approach helped strengthen my case for adopting lecturing as a key method of teaching. First, within the higher education sector, “teaching” and “research” are the two broad career paths, not

<sup>1</sup>University of Dundee, UK

## Corresponding Author:

Deepak Gopinath, Lecturer, Town and Regional Planning, School of the Environment, University of Dundee, Ground floor, Tower Building, Perth Road, Dundee DD1 4HN, Scotland, UK.  
Email: d.gopinath@dundee.ac.uk



“learning.” So when one takes up a “teaching” career, there is an implicit assumption that he or she is capable to “teach” a group of students who are there to “learn.” Such an assumption in some senses legitimizes a hierarchical relationship, with teachers at the “top” and “students” at the bottom. As a result, there is a tendency particularly in new lecturing staff to adopt a didactic method of teaching where students are told what to learn rather than given an opportunity to learn for themselves. Second, lecturing is a preferred teaching method because it are considered to be an “efficient” medium of instruction especially for large classes (Lammers & Murphy, 2002; Young, Robinson, & Alberts, 2009).

Personally, I felt that it had the potential to cover substantial amount of teaching material within a relatively short period of time allotted per module in an academic calendar. Although aware that it is an “efficient” teaching method, I started inquiring whether lecturing is really effective. Such concerns have, particularly, emerged because although lecturing can be quite effective in delivering facts or “information,” it does not effectively enable a student-centered thinking process or bring about a change in the behavior of students because students are regarded as “passive listeners” (Bligh, 2000; Lammers & Murphy, 2002).

To find out more on how students perceived my use of teacher-centric methods, I used feedback forms to explore whether there were what Ramaprasad (1983) refers to as gaps between “actual outcomes” and “desired outcomes” (Poulos & Mahony, 2008). I built on the standard assessment form that was used for evaluating my teaching observation and handed out feedback forms to my students. I saw this as “an opportunity for learning and for encouraging an orientation towards learning goals” (Knight & Yorke, 2003; Poulos & Mahony, 2008, p. 144). To my relief, the feedback was generally good and included a range of comments, for instance, (a) Some of my students noted that I first gave them a structure of my presentation before going into detail and which students felt were useful in following through the whole lecture and (b) others felt that my voice delivery in a calm and composed manner made them felt at ease while listening to the lectures. On the whole, the feedback during the course of the module is a useful way to understand how I or the “teacher” was delivering lectures. But I knew that something more needed to be done. I realized that I need to shift the focus from “me” to the “students.” As a result, I started looking for ways to develop a student-centered approach in addition to the standard “lectures.” This meant a re-examination of the values underpinning both teacher-centered and student-centered teaching methods.

The purpose of education underpinned by Enlightenment values such as “instrumental rationality” (that the choice of right methods would result in the achievement of desired outcomes) and “universality” (that the same methods can be applied in different contexts) dominated the educational system well until the 1960s (Jarvis, 2002). Such values underpin the adoption of teacher-centric methods. But given the nature of institutional arrangements required for such training, it

has met with the criticism of being an elitist project (O’Hagan, 2001; Smith, 2001), for instance, as Jarvis (2002) notes, a flawed assumption of the learning process underpinned by Enlightenment values such as “instrumental rationality,” that if the method is right then any teacher can achieve the desired ends. Although the focus is on the choice of the “right” education methods and because the teacher is the only person who can “rightly” use such methods in pursuing “desirable” outcomes, this system of education again points to a teacher-centric approach. This would mean that irrespective of who the teacher is and what the mix of students might be, if the “right” methods were followed, then desired objectives would be achieved.

However, there is (and has always been) an alternative tradition, a student-centric approach to learning. For instance, Socrates (469-399 BC) argues that one can learn only by questioning what he or she sees or hears because human nature is neutral at birth. Although the teacher is involved in the learning process by interacting with a number of students, his or her role is one of being “in authority” rather than being “an authority”. The teacher is merely there to lead students to discover what they want to know for themselves. As a result, student-centric methods (that started to gain popularity particularly since the 1960s) do not assume that the learning process is “linear” where the teacher is seen as someone who can deliver quantifiable “ends” after the period of the learning experience. On the contrary, education is regarded in the student-centric approach as a process of developing “reflective” learners who continue to learn well after the formal teaching period ends (Jarvis, 2002).

Having developed an understanding of the advantages of a student-centric approach, I ended up trying two things in the remainder of the module. First, I divided my lecture time into two parts: The first hour was devoted to the delivery of lecture material, and following a 10-min break, I provided reading materials (mostly journal articles and/or pages from reports) to my students. It was made clear at the start of the second hour that students had to critically evaluate the reading material within a time period of about 20 min and be able to summarize what they found interesting and why, and how that understanding related to what was taught until now.

There were mixed reactions to this experiment as this has not been included into lecture sessions before. From my side, I tried as far as possible to fit the role of a facilitator (who would jot down the key points on the blackboard) in a discussion rather than as a lecturer. Now I also anticipated that if I would merely invite answers from the whole group of students, then only a few would participate and the rest would remain as passive listeners. So, I organized the class into four to five groups with each group containing three to four students. And I also prepared three to four different materials for the reading sessions. As a result, each group had a copy of all the materials while each student in that group had a different reading material.

After the allotted reading time of 20 to 30 min, I drew a table on the blackboard with as many columns as the number of groups and as many rows as the number of reading materials. I then invited discussion on each reading material that I had circulated from each group (in no specific order). The interesting lesson was that once the “active” students got involved in the discussion, the passive students possibly observing the empty boxes on the table in the blackboard slowly started to get involved, sometimes agreeing with their colleagues and, in other instances, offering alternative viewpoints. This was a very useful exercise, and it amazed me how much my students can get involved in a discussion, particularly those who were rather quiet during my lectures. However, the students were still “passive” in the sense that they were seated and responded to the tasks within a short time frame.

Building on this exercise, I wondered whether I could get them to talk about specific teaching content to the student audience as a whole, rather than me delivering the content. In addition to giving the students a week’s preparation time, I provided them with new material including land-use-related maps from countries across Europe and asked them to deliver a presentation on how town planning is carried out across Europe—with each group talking about particular contexts with reference to both text-based as well as map-based information they had gathered. This was a very useful exercise in that students assumed a sense of “responsibility” of the teaching content that was provided to them. I guess this was possible because I had asked them to assume the role of “planning officers” from different countries across Europe and who had to teach colleagues from elsewhere as to what town planning is all about from where they come from.

The above examples demonstrate that I started to appreciate a more student-centric approach rather than rely on a teacher-centric position. The adoption of a more student-centric approach also signals a re-examination of the purposes of education. One of the paradigms with regard to the purposes of education is of the teacher as an “expert” and as someone who conveys “truths” and engages in a process of delivering “answers” to ignorant students. The knowledge gained in such a process is what Plato refers to as *a priori*—all knowledge is already known and that new knowledge cannot be acquired (Cooper, 2001). As a result, the methods used in the learning process are “teacher-centric.” The other paradigm with regard to the purposes of education is on the “co-creation of knowledge” (Gregory, 2002) where both teachers and students are engaged in the process of constructing and interpreting what they learn. It is within this paradigm underpinning a student-centric approach that I have started to move into. In this student-centric approach, the purpose of education is to facilitate the development of the student into a “self-directing,” “self-monitoring,” and “self-correcting” individual (Gregory, 2002; Heron, 1974, p. 1).

To conclude, I have now started to see shifts in my teaching methods, which has been possible because I focused on

reflecting on my teaching experience. The importance of reflection in teaching and learning has been captured in many scholarly works over the last three decades (Schon, 1983, 1987, 1990; Van Manen, 1977). As a reflective practitioner, the teacher needs to recapitulate if the adopted teaching methods were what he or she would have preferred if put in the same learning situation (O’Reilly, 1999). I hope to build on this “reflective” nature in my teaching philosophy to help me evaluate the effectiveness of my teaching methods in the future.

## Assessment Techniques

In the following section, I develop a critique of different forms of assessment by evaluating “what is being examined (the content)” and “why,” and how it relates to curriculum quality. This evaluation draws on a critique of assessment methods from the literature and how it links to my experience of having used different forms of assessment. Thus, the overall question, “How do I now see the scope and relevance of various forms of assessment in a range of teaching contexts?” Rather than making a claim that one form of assessment is better than the other, I have come to realize the range of advantages and disadvantages in different forms of assessment. And it is the development of this understanding that I will be discussing in the rest of the writing.

When I started my job as lecturer in 2009, I gradually began to recognize that assessment is an important aspect of education that affects teachers, students, and the institutional frameworks that offer and/or regulate the delivery and quality of education. For teachers, it offers a way of reflecting on the choice and quality of their teaching styles and methods; for students, assessment reflects an important yardstick of academic achievement, and the pursuit of rigorous assessment procedures legitimizes the qualifications awarded by educational institutions (Merricks, 2002). Although being aware of these functions served by assessment methods in general, I was also conscious of some of the challenges of how students’ works were examined. For instance, when teachers carry out an assessment of student learning, there is in some sense an element of subjectivity within the teachers’ judgment—of how he or she chooses to assess a student’s work and why. Because subjectivity can impact the student either positively (motivate) or negatively (de-motivate), it is vital that “assessment processes are valid, reliable and fair” (Haines, 2004, p. 31; Wakeford, 1999).

With some of these challenges in mind, I was faced with the task of marking coursework submissions or what can also be referred to as carrying out a summative assessment. As the word suggests, “summative” assessment is carried out at the end of a course/module delivery. Grades, marks, and/or awards are the usual outputs of this assessment and are made in response to works carried out by students such as written exams, dissertations, or coursework projects. The key purpose of a summative assessment is to measure student achievement

at the end of the teaching period (Merricks, 2002). This form of assessment is seen as a recognized and accepted measure of a student's ability and plays a decisive role in his or her progression toward a higher degree or suitability for a particular job. For instance, in one of the first undergraduate modules that I had marked, the submission requirements were made available to students at the start of the module. In addition, the teaching outcomes of this module were also made known to students at the start of the module. For example, at the end of the course, students will be able to both objectively describe (by using standard terms such as scale, function) as well as subjectively evaluate (by taking into consideration the needs of communities/users) the built spaces we live in. However, as Ramsden (1992) rightly points out, the focus for teachers is on pursuing the teaching outcomes, while for students, the assessment shapes the learning outcome. This is something I did not give much thought at the time especially, in what Biggs (2003) notes, as to "how students think they will be assessed" (p. 140).

Another challenge in carrying out summative assessment is to understand the basis for assessment—norm-referenced or criterion-referenced. Norm-referenced assessment refers to comparison of students with each other and arranging them in a ranking order. It is a measure of performance in relation to others. Cohen, Manion, and Morrison (2004) explain it as follows:

for example a commercially produced intelligence test or a national test of reading ability that has been standardised so that, for instance, we can understand a score of 100 is of a notational "average" student and that a score of 120 describes a student who is notionally above average. (p. 328)

A norm-referenced assessment is hence a qualifying or a selection tool and not a measure of how a student has performed. Criterion-referenced assessments on the contrary measure a student's performance against a set of pre-determined criteria. It does not compare a student's performance to other students but measures whether the prescribed outcomes of a course have been achieved. I have enjoyed developing such pre-determined criteria and letting students know early on, and this has helped me in the marking of various coursework. This, I think, is important because learning outcomes vary by module and so does the coursework requirements.

A second type of assessment that I use in my teaching is formative assessment. This type of assessment is used by teachers to convey to students the "urgent actions" that need to be taken (Haines, 2004) so that relevant student skills are formed at the right period in the learning process. Some of these "urgent actions" include, for instance, (a) reminding the student of the need to correctly list the sources of information when writing reports and (b) the need to develop a habit of wide-reading, over and above the list of books recommended by the tutor. For instance, as part of another module that I teach, my students were due to leave for fieldwork to Europe

as part of their coursework, and a senior colleague of mine who was involved in this module felt that the current group of students were quieter than usual and as a result was concerned whether they would make the best use of the trip by actively engaging with policy officials and other important people. As a result, I realized that two "urgent actions" needed to be taken: (a) First, to ensure that students were more familiar with policy documents within the European context and (b) second, to remind them of the need to get into the habit of asking questions as well as in striking conversations with policy officials.

Key policy documents were identified and individual chapters handed out to students in advance of the formative assessment. It was made clear that the assessment would not count toward the final coursework and that each student had to explain to the whole class the topic they had been assigned to. During that process, I evaluated the strengths and weaknesses of each individual student who made the presentation as well as of those who were raising questions. It was really interesting to see how many students who were rather shy in the usual sessions came out confidently to talk about their respective topics. Since this was the first time I had used formative assessment, at the end of the session, rather than point out individual strengths and weaknesses, I summarized the key action points. I also told them that their individual assessments will be filed and will be discussed at a later formative assessment on an individual basis.

Now, I have started to realize that different forms of assessment including summative and formative have their own strengths and weaknesses, and one is not intended to replace the other. For instance, there are advantages in using summative assessments in that it leads to an award or a certificate and is accepted and essential for progression to further study or a job. However, summative assessments have certain weaknesses as well, for instance, that it lacks flexibility in meeting the needs of diverse learners and learning routes. However, formative assessments have certain advantages: It focuses on skill development rather than attainment/knowledge of subject matter and allows for adapting teaching to the needs of the student. Having said that, formative assessments have a few disadvantages, for instance, that it has a degree of subjectivity involved and therefore can lead to bias.

Thus, one can argue that choice of assessment methods is an important component of our teaching strategy because "what we choose to assess and how shows quite starkly what we value" (Knight, 1995, p. 14; Merricks, 2002). Assessment defines pass and fail, identifies an individual's strengths and highlights weaknesses, measures achievements and progress, and if undertaken correctly, facilitates further learning. In addition to choice of assessment methods, there is also a need to appreciate the varied purposes of assessment, that is, "to discriminate between students" at the degree level, on one hand, and "to establish competence at autonomous research study" at the doctoral level, on the other hand (Haines, 2004,



p. 9). In many ways, such an inquiry falls within my passion of being an “effective” teacher, and in the three areas, Bernstein (1975) divides the education environment into curriculum (epistemological considerations), pedagogy (techniques used by teachers to achieve teaching objectives), and evaluation (setting out the standards for assessment).

## Conclusion

This paper by contributing to existing literature on ‘student centred’ pedagogy in general, discussed some of the interesting challenges when engaging with two key aspects of education: teaching methods and choice of assessment. At one level, key lessons were learned with regards to teaching methods and assessment. Firstly, I now understand the advantages of a student-centric approach over a teacher-centric approach and thus am working towards more of the former and less of the latter in my teaching. For instance, in one of my undergraduate modules on property development that I have modified recently, there are three parts, two of which are student-centric (student-led seminars, and interactive, discussion of ideas in studio) and one is teacher-centric (lectures). Secondly, I have realised the importance of more formative assessments in the overall assessment mix. For instance, in another of my undergraduate modules on urban design, rather than having one, final summative assessment (as was done previously), there are now two formative assessments through the teaching period as well as a final summative assessment.

Having said that, two challenges further remain. For instance, I still do not fully understand how/whether academic success of students increased with shifts in the learning environment that occurred in my initial years of teaching although I have started to appreciate certain key characteristics of the learning process for instance, that students need to be active learners and that they should be able to tailor the learning experience around their strengths. This is where I think drawing on the Project-based learning approach will be helpful to take my pedagogical practice forward. Project-based learning is an instructional method where learners by being more autonomous set out to solve real problems (Boud and Feletti 1997; Sonmez and Lee 2003; Savery 2006; Tatar and Oktay 2011) in collaboration with others by collecting and sharing data/information (Duch, Groh and Allen 2001; Duch 2007). Assessment techniques using a PBL approach and in particular to understand the nature of academic success of students in using the approach is something I would like to explore. For instance, Nowak and Plucker (1999) talk of setting out different scenarios (based on a number of incomplete, unstructured real life problems) for students to work on. And then, how students respond to these scenarios could be captured by what Morsund (2005) refers to as different levels of achievement such as ‘emergent’, ‘limited’, ‘developing’, ‘capable’, ‘strong’ and ‘exceptional’. Such typologies of levels will be helpful to capture patterns of aca-

demic success and can be used in shaping the learning outcomes of curriculum units.

Finally, at the end of my initial years of teaching, I am not entirely clear how to engage with the notion of knowledge that a teacher could use in the learning process. For instance, Bates (2005) talks of the importance of contextualizing knowledge, the need to “directly” engage in understanding and negotiating difference rather than rely on “empathy” or “tolerance,” and while evaluating student performance on the basis of “established” or “truths,” to be critical as to whose interests, particular knowledge forms serve. Also, others such as O’Reilly (1999) argue that an effective teacher is one who can describe multiple dimensions of knowledge. For instance, in describing a city, a teacher presents population data to talk about a city, uses photographs to communicate what city life might look like, or, further, takes students to various parts of a city so that they experience city life first-hand. And further, there is also discussion on how knowledge by analogy or comparison (Tuske 2008) can be used to be an effective teacher, for instance by turning up on time for the lectures and/or by being honest when things have not gone as planned. Again here, the Project-based learning approach provides a useful insight that knowledge is for the students to generate and that role of the teacher is merely that of a facilitator or a ‘metacognitive coach’ (Gallagher and Stepien 1996:21; Nowak and Plucker 1999).

As I now tread the next leg of my academic career, I would like to develop further my understanding of ‘Project based learning’ and explore how it might be implemented in my pedagogical practice.

## Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

## Funding

The author(s) received no financial support for the research and/or authorship of this article.

## References

- Bates, R. (2005). On the future of teacher education: Challenges, context and content. *Journal of Education for Teaching*, 31, 301-305.
- Bernstein, B. (1975). *Class, codes and control: Towards a theory of educational transmissions*. London, England: Routledge.
- Biggs, J. (2003). *Teaching for quality learning at university: What the student does*. Buckingham, UK: The Society for Research into Higher Education and the Open University Press.
- Bligh, D. A. (2000). *What’s the use of lectures?* San Francisco, CA: Jossey-Bass.
- Boud, D., & Feletti, G. I. (1997). What is problem-based learning? In: D. Boud & G. I. Feletti (Eds) *The challenge of problem-based learning*, p.3-4. London: Kogan Page.
- Cohen, L., Manion, L., & Morrison, K. (2004). *A guide to teaching practice* (5th ed.). New York, NY: Routledge.

- Cooper, D. E. (2001). Plato. In J. A. Palmer (Ed.), *Fifty major thinkers on education: From Confucius to Dewey*, p.10-13. New York, NY: Routledge.
- Duch, B. J. (2007). Problem-based learning. University of Delaware, accessed from <http://www.udel.edu/pbl/>
- Duch, B. J., Groh, S. E., & Allen, D. E. (2011). Why problem-based learning? A case study of institutional change in undergraduate education. In: B. J. Duch, S. E. Groh, & D. E. Allen (Eds.) *The power of problem-based learning*, p.3-11. Sterling, VA: Stylus.
- Gallagher, S. A., & Stepien, W. J. (1996). Content acquisition in problem-based learning: depth versus breadth in American Studies. *Journal for the Education of the Gifted*, 19, 257-275
- Grant, M. M. (2002). Getting a grip on project-based learning: theory, cases and recommendations. *Meridian: A Middle School Computer Technologies Journal*, 5(1), 1-17
- Gregory, J. (2002). Facilitation and facilitator style. In P. Jarvis (Ed.), *The theory and practice of teaching*, p.98-113. London, England: Kogan Page.
- Haines, C. (2004). *Assessing students' written works: Marking essays and reports*. London, England: Routledge.
- Heron, J. (1974). *The concept of a peer learning community, human potential research project*. Guildford, UK: University of Surrey.
- Jarvis, P. (2002). The Socratic method. In P. Jarvis (Ed.), *The theory and practice of teaching*, p.90-97. London, England: Kogan Page.
- Jarvis, P. (2002). Teaching styles and teaching methods. In P. Jarvis (Ed.), *The theory and practice of teaching*, p.28-38. London, England: Kogan Page.
- Knight, P. (Ed.). (1995). *Assessment for learning in higher education*. London, England: Kogan Page.
- Knight, P., & Yorke, M. (2003). *Assessment, learning and employability*. Maidenhead, UK: Open University Press.
- Lammers, W. J., & Murphy, J. (2002). A profile of teaching techniques used in the university classroom: A descriptive profile of a US public university. *Active Learning in Higher Education*, 3, 54-67.
- Merricks, L. (2002). Assessment in post-compulsory education. In P. Jarvis (Ed.), *The theory and practice of teaching*, p.191-204. London, England: Kogan Page.
- Moursund, D. (1998). Project-based learning in an information-technology environment. *Learning and Leading with Technology*, 25(8), 4.
- Moursund, D. (2005) ICT-assisted Project-based learning, Part 7: Assessment, accessed from [pages.uoregon.edu/moursund/PBL/part\\_7.htm](http://pages.uoregon.edu/moursund/PBL/part_7.htm)
- Nowak, J. A., & Plucker, J. A. (1998) Do as I say, not as I do? Student assessment in problem-based learning. Accessed from [methodenpool.uni-koeln.de/problembased/AssessmentinProblemBasedLearning.htm](http://methodenpool.uni-koeln.de/problembased/AssessmentinProblemBasedLearning.htm)
- O'Hagan, T. (2001). Jean-Jacques Rousseau. In J. A. Palmer (Ed.), *Fifty major thinkers on education: From Confucius to Dewey*, p.55-59. New York, NY: Routledge.
- O'Reilly, D. (1999). In conversation with Donald Schon. In D. O'Reilly, L. Cunningham, & S. Lester (Eds.), *Developing the capable practitioner: Professional capability through higher education*, p.9-15. London, England: Kogan Page.
- Poulos, A., & Mahony, M. J. (2008). Effectiveness of feedback: The student perspective. *Assessment & Evaluation in Higher Education*, 33, 143-154.
- Ramaprasad, A. (1983). On the definition of feedback. *Behavioural Sciences*, 28, 4-13.
- Ramsden, P. (1992). *Learning to teach in higher education*. London, England: Routledge.
- Savery, J. R. (2006). Overview of problem-based learning: definitions and distinctions. *The Inter-disciplinary Journal of Problem-based Learning*, 1(1), 9-20.
- Schon, D. (1983). *The reflective practitioner: How professionals think in action*. New York, NY: Basic Books.
- Schon, D. (1987). *Educating the reflective practitioner: Towards a new design for teaching and learning in the professions*. San Francisco, CA: Jossey-Bass.
- Schon, D. (1990). *The reflective turn: Case studies in and on educational practice*. New York, NY: Teachers College Press.
- Smith, R. (2001). John Locke. In J. A. Palmer (Ed.), *Fifty major thinkers on education: From Confucius to Dewey*, p.45-49. New York, NY: Routledge.
- Sonmez, D., & Lee, H. (2003). Problem-based learning in science. ERIC Clearinghouse for Science, Mathematics and Environmental Education, ERIC Digest ED-SE-03-04, 1-2.
- Tassinari, M. (1996). Hands-on projects take students beyond the book. *Social Studies Review*, 34 (3), 16-20
- Tatar, E., & Oktay, M. (2011). The effectiveness of problem-based learning on teaching the first law of thermodynamics. *Research in Science & Technological Education*, 29(3), 315-332
- Tuske, J. (2008). Teaching by example: An interpretation of the role of *Upamāna* in early Nyāya philosophy. *Asian Philosophy*, 18, 1-15.
- Van Manen, M. (1977). Linking ways of knowing with ways of being practical. *Curriculum Inquiry*, 6, 205-228.
- Wakeford, R. (1999). Principles of assessment. In H. Fry, S. Ketteridge, & S. Marshall (Eds.), *A handbook for teaching and learning in higher education*. London, England: Kogan Page.
- Wolk, S. (1994). Project-based learning: pursuits with a purpose. *Educational Leadership*, 52(3), 42-45.
- Worthy, J. (2000). Conducting research on topics of student interest. *Reading Teacher*, 54(3), 298-299.
- Young, M. S., Robinson, S., & Alberts, P. (2009). Students pay attention! Combating the vigilance decrement to improve learning during lectures. *Active Learning in Higher Education*, 10, 41-55.

## Author Biography

**Dr. Deepak Gopinath** is Lecturer in Town and Regional Planning in the School of the Environment at the University of Dundee. Deepak's overall research interest is in conceptualising wellbeing. In particular, he is interested in exploring actual/perceived abilities and barriers faced by individuals/groups in a range of urban contexts, when faced with the question, how to be socially/spatially mobile to pursue particular notion(s) of wellbeing? The topics through which he currently examines the inter-linkages between wellbeing and mobility are: (1) poverty and place; (2) educational pathways and vulnerability.