Reconceptualisation of approaches to teaching evaluation in higher education

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The ubiquity of using Student Evaluation of Teaching (SET) in higher education is inherently controversial. Issues mostly resolve around whether the instrument is reliable and valid for the purpose for which it was intended. Controversies exist, in part, due to the lack of a theoretical framework upon which SETs can be based and tested for their content validity. In this paper, based on Bigg's 3P model of teaching and learning, three approaches to teaching evaluation were derived, namely, (i) student presage focused, (ii) teaching focused, and (iii) learning focused. Each approach adopts a particular belief about knowledge, perception of teaching, and a distinctive focus of teaching evaluation. We argue that the adoption of a learning focused approach to teaching evaluation is necessary in SET development as this will provide feedback for all parties involved in teaching and learning (the teachers, the administrators, and the students) about what each party needs to do to achieve the intended learning outcomes.

Introduction

The issue of student feedback is ubiquitous, yet is often the subject of controversy. Since the 1920s when the first formal collection of student feedback was introduced in higher education (HE) in Purdue University, the topic has been one of the most frequently studied and controversial in the literature of HE. Theall and Franklin (2001) succinctly stated that “few issues in higher education are as sensitive, divisive, and political as faculty evaluation” (p. 45). Tensions are created with regards to the purpose of Student Evaluation of Teaching (SET) (for review, see, Darwin, 2010) as well as the reliability and validity of SETs.

Much of the focus of arguments about the “improve-prove” function dichotomy (Barrie, 2001) of SETs was paid to teaching as an end in itself, and assumed a correlation existed between student ratings and student learning. However, findings from intensive investigations of SETs over the last two decades have provided contrary evidence (Carrell & West, 2010; Galbraith, Merrill, & Kline, 2012; Kember & Leung, 2009; Pounder, 2007; Schuck, Gordon, & Buchanan, 2008; Zabaleta, 2007), that is, there were low or even no correlations between SET scores and student learning. More recently, it was found that teachers receiving higher SET scores tended to excel more at contemporaneous student achievement (teaching to the test), but harm the follow on achievement of their students (Carrell & West, 2010). Carrell and West further concluded that high SET scores were actually associated with lower levels of deep learning. These empirical studies, therefore, have challenged the content validity of SETs.

Findings from studies on SETs have found evidence both for and against the reliability and validity of SETs. On the one hand, multiple section studies such as of Marsh (1984, 1987, 2007), Cohen (1981, 1982), and McKeachie (1996, 1997) have found that there were
correlations, though not significant, between SET scores and some measures of student achievements such as a common final examination. SETs, therefore, were considered to be “quite reliable” and “reasonably valid” instruments to evaluate university teaching (Marsh, 1987, p. 369). On the other hand, many studies have challenged the widely accepted validity of SETs (for review, see Pounder, 2007). Dowell and Neal (1983, p. 462), for example, observed “student ratings are inaccurate indicators of student learning and they are best regarded as indices of ‘consumer satisfaction’ rather than teaching effectiveness”. The search for evidence of invalidity for the use of SETs continues to this day. Arguments have been advanced that SETs were influenced by student related factors such as their perceptions of teaching or their maturity (e.g., Aleamoni, 1981; Crumbley, Henry, & Kratchman, 2001) or by teacher related factors such as the appearance, likeability, and popularity of the teachers (Boysen, 2008; McNatt, 2010).

As research on teaching evaluation in general, and the use of SETs in particular, was with the subject of continual questioning, the underlying problems in evaluation were revealed to be more complex than the simple improve-prove function of SETs or the valid-invalid/reliable-unreliable dichotomy surrounding SETs suggested (Theall, 2010). The main problem, as several researchers (Barrie, 2001; Barrie, Ginns, & Symons, 2008; Edström, 2008; Kolitch & Dean, 1999; Saroyan & Amundsen, 2001) argued, lay in the “fragile foundation” (Darwin, 2010) in the development of the instrument. Teaching evaluation systems, particularly SETs, “reflect a range of variables including implicit and explicit beliefs about what constitutes quality teaching or learning in particular contexts, and hence what is important to be measured. Beliefs about who should do the measurement and what the measurement might mean” (original emphasis) (Barrie, et al., 2008) the theoretical basis for SETs and how they relate to both the established theoretically sound models of teaching and the new ideas emerging from the research on university teaching deserve more attention (Barrie, 2001; Burden, 2008; Darling-Hammond, Wise, & Pease, 1983).

3P model of teaching and student learning

One way to unpack the “hidden” assumption about teaching in any teaching evaluation instruments is from conceptual framework or models of teaching and student learning, such as the Presage Process Produce model originally developed by Dunkin and Biddle (1974), and further developed by Biggs and colleagues (1987, 1993; 1993), and by Prosser and Trigwell (1999). Dunkin and Biddle (1974) contended that presage factors (referring to the characteristics of the teachers and to the characteristics of the teaching environment) fed into process factors (referring to teaching learning activities in classroom), and which in turn produced the product (referring to students’ increased subject matter competence and attitudes). Although Dunkin and Biddle’s initial model of classroom based teaching has assisted the understanding of the causative relationship and the interaction between students, the teaching context, and students’ achievements, it was criticised because of the uni-directional nature of this very interaction (Biggs, 1993; Biggs & Moore, 1993). From a constructivist perspective, which argued that knowledge was constructed internally and was tested through interaction with the outside world, Biggs
(1993) developed a systems model of teaching and learning to describe a cycle of events (Figure 1), in which student characteristics (student presage), teaching context (teaching presage), and student learning processes (process) were continuously interacting to result in learning outcomes (product).

The theoretical understanding about teaching and learning in Bigg’s 3P model provides a useful framework for the understanding of different approaches to teaching evaluation. Three approaches to teaching evaluation were derived, namely, (i) student presage focused, (ii) teaching focused, and (iii) learning focused. Each approach adopts a particular belief about knowledge, perception of teaching, and distinctive focus of teaching evaluation.

**Student presage focused evaluation**

![Figure 2: The student presage focused approach to teaching evaluation](image)
The student presage focused approach to teaching evaluation conceptualised teaching as the process of transferring a teacher’s knowledge to students (Biggs & Moore, 1993). The approach was rooted in positivism and hence knowledge was viewed as decontextualised, existing externally to the knower (Brown, Collins, & Duguid, 1989). Teachers were seen as information providers. Differences in learning outcomes were explained by the differences in students’ characteristics, such as students’ motivation (Biggs & Moore, 1993), since learning was viewed to be on the shoulders of the students alone. If students did not learn, it was because they were incapable, or unmotivated, and there was nothing wrong with the teaching (Biggs & Tang, 2007). As a result, teachers and administrators assumed that they were not accountable for any deficiencies in student learning.

Figure 2 captures the understanding of teaching and the focus of teaching evaluation underpinning the student presage approach. The directional flow proceeded from the teaching context, identified mainly as the teacher’s content knowledge, to the students and to their learning outcomes. Therefore, in this approach, an evaluation of the teaching system would exclude instruments designed to gain students’ feedback for teaching since teachers were understood to have no responsibility if students did not learn. In Arreola’s (2007, p. 18) words, a SET was unnecessary and invalid, because “students, by definition, would not have the teacher’s content expertise and would thus not be qualified to make any sort of evaluative statements or conclusions concerning the teacher’s competence”. Examples for the existence of this approach came from very limited student rating instruments available, one of which was the Student Instructional Rating System Form designed and used by Michigan State University in the 1960s (Marsh, 1987, p. 381). The Form was designed with 30 items: the first 24 items were concerned with the characteristics of the teachers, and the remaining six items with student’s background, including items concerned with student motivation to do the course, or overall GPA (grade point average). Collecting data on students’ characteristics, therefore, to some extent, was seen as a way of measuring the effectiveness of teaching.

The 1960s were a turning point with respect to the paradigm shift from the view of teaching as the transmission of information toward a view of teaching as facilitating learning (Theall, 2010). However, this shift did not fully occur until late in the twentieth century. During the transitional stage from instruction paradigm to learning paradigm (Barr & Tagg, 1995), SETs were increasingly seen as an important channel for teachers and administrators to gain feedback about the quality of teaching and learning.

**Teaching focused approach**

The teaching focused approach, as seen in Figure 3, was underpinned by an understanding about teaching as transmitting teachers’ understandings to students (Arreola, 2007; Biggs & Moore, 1993). In this approach, teaching was seen as a process of providing a teaching context conducive for students. Learning, from this perspective, was seen as a function of “what the teacher is” and “what the teacher does” (Biggs & Tang, 2007, p. 17). The straight line in Figure 3 represents an assumption about teaching that was based on an understanding that responsibility for learning came from the teaching
context related factors, of which characteristics of the teachers such as their personality and approaches to teaching, played important roles. Differences in learning outcomes were explained by the differences among teachers, or the “missing of essential skills” (Biggs & Moore, 1993). In other words, if learning did not occur, it was the teachers’ fault due to their lack of content knowledge and teaching skills. Therefore, the teachers and their teaching were “to blame”, and modifications of their teaching skills were required. Accordingly, the teaching focused approach to evaluation defined teaching tasks in terms of the capacity to carry out detailed, and in most cases, pre-determined instructions (Biggs & Moore, 1993). Measures of teaching were associated not only with measures of a teacher’s content knowledge, but were extended to measures of a repertoire of specified techniques for delivering the pre-determined content. An instrument to evaluate teaching, such as SETs, was considered valid if it accurately identified a teacher’s deficiency in teachers’ characteristics and/or teaching skills. The dotted line in Figure 3 is indicative of a feedback’s loop, from the students to the teaching context.

The teaching focused approach, as described above, takes one of the two main forms of feedback: (i) feedback from students’ observation of the teaching context, and (ii) feedback that was mediated through the students’ perception of such a context. The former had its roots in behaviourism, in which learning was seen as a change in observable behaviour that occurred as the result of experience (Eggen & Kauchak, 2006). To make learning happen, the teacher “tells, shows, models, demonstrates, and teaches the skill to be learned” (Palincsar, 1998, p. 347). Driven by behaviourism, SETs especially in their early days were usually comprised of items which asked what students thought “of their teachers and how they feel about him as a personality” (Smalzried & Remmers, 1943, p. 363). Support for the measures of teaching to be the measures of a teacher’s personal traits came from studies that found “statistically significant average correlations between the traits and overall evaluation” (Feldman, 1986, p. 139). As a result, “teachers’ predispositions”, that is, what the teacher brings to the teaching situation (Abrami, d’Apollonia, & Rosenfield, 2007) were the main focal points in the development of SETs. Students were asked to evaluate teachers’ general characteristics that were not necessarily
associated with teaching. In the Student Description of Teaching Questionnaire designed by Hildebrand in the 1960s and 1970s, there were items that asked students if the teacher “were friendly toward students” (Item 23) or “varies the speed and tone of his/her voice” (Item 34) (Marsh, 1987, p. 387).

The second form of student feedback that was mediated through students’ perceptions of teaching context about teaching came from the realisation that student perceptions would determine their approaches to learning, and affect their learning outcomes (Marton, Hounsell, & Entwistle, 1984; Ramsden, 2003; Trigwell & Prosser, 1996). Thus, from a phenomenographic perspective, collecting student feedback on teaching needed to be done through the investigation of “student’s perception of the usefulness of teaching behaviours in helping them learn” (Barrie, 2001, p. 11). Barrie further argued that SET items of “The instructor clearly stated the objectives of the course”, or “The lecturer spoke clearly” (item bank, cited in Lally & Myhill, 1994, p. 80) could be paraphrased as “The objectives of the course were clear to me” and “I found the lecturer’s speech easy to understand” (emphasis added), to reflect students’ interpretations of what was said. Although in Barrie’s proposed items students were asked to evaluate how useful their teachers’ teaching were for them, the subject of the evaluation remained what the teacher does.

An approach to teaching evaluation with a focus on teaching presage factors reflected an assumption that standards of professional knowledge and practice could be developed and assessed, and that their enforcement would ensure competent teaching and subsequently lead to high quality learning outcomes (Darling-Hammond, et al., 1983). Indeed, teaching skills are necessary for teachers to be successful in teaching. However, when teaching is making learning possible (Ramsden, 2003), being successful in teaching needs to take into account students’ learning. As a result, an approach to student evaluation of teaching which places the onus on “surface aspects” of teaching (Pratt, 1997) needs to shift to the evaluation of the “substance” of teaching, that is, the students learning outcomes that were informed by their approaches to learning.

**Learning focused approach**

The learning focused approach to teaching evaluation (Figure 4) was based on constructivism and phenomenography. In this approach, the teacher’s responsibility was to create teaching/learning activities to help students construct their own knowledge. This focus implied a view of teaching that was not just about facts, concepts and principles to be covered and understood, but also was about clarifying “what it means to understand content in the way that is stipulated in the intended learning outcomes, and what kind of teaching/learning activities are required to achieve those stipulated levels of understanding” (Biggs & Tang, 2007, p. 19). The view of learning contained in this approach was aligned with the social cognition perspective, which regarded learning as a change in an individual’s mental structures and processes that might or might not result in an immediate change in behaviour (Eggen & Kauchak, 2006). Students, according to this view of teaching, were seen as ‘co-producers of learning’ (Barr & Tagg, 1995), the
transformation of participants who were encouraged and empowered to engage effectively
with the complexity of the outside world. The understanding about teaching which
underpinned this approach was aligned with two student-centred conceptual categories
identified by Kember (1997), (i) facilitating critical thinking, and (ii) enabling conceptual
change.

In focusing on what the students should be able to do as a result of the teaching, the
responsibility for learning did not reside in the students alone, nor in the teachers and
their teaching alone, but in all involved (Biggs, 1993). Restating the needs for a paradigm
institutions which took responsibility for learning in order to produce learning (original
emphasis). They further argued that students, teachers and the institution all have to take
responsibility for student learning, even though none is in complete control of all the
variables. Evaluation of teaching, therefore, instead of focusing on the act of teaching,
should focus on student learning as the “consequences of those actions” (Abrami, et al.,
2007).

Examples of SETs with focus on student learning included Student Assessment of
Teaching and Learning (SATL) (Ellett, Loup, Culross, McMullen, & Rugutt, 1997), and
the National Survey of Student Engagement (Kuh & Hu, 2001) in America, or its
Australasian version (ACER, 2011), in which students’ approaches to learning and student
learning outcomes were measured as indicators of effective teaching. The National Survey
of Student Engagement, in particular, was designed with items that map into seven
outcome measures, one of which is the participation in higher order forms of thinking or
the development of general forms of individual and social development. Recently,
Kember and Leung (2009) developed a SET which was grounded in principles of
excellent teaching, and was designed to identify “relative strengths and weaknesses in
teaching so that appropriate remedial action can be identified” (p. 352). Accordingly,
several items in their SET have reflected a change in the understanding of teaching, for
example, “I found the course challenging”, or “I have become more willing to consider

Figure 4: Learning focused approach to teaching evaluation
different point of views” (Kember & Leung, 2009, p. 348). These proposed SET items suggested a reconsideration of placing the students and their learning at the centre of teaching evaluation. Although the construction of Kember and Leung’s (2009) 49 item SET had not yet moved fully from a teaching presage focused approach, it signalled a transition to evaluate teaching that moved beyond “what the teacher does” to “what the student does”.

Figure 4 details an approach to teaching evaluation with a focus on student learning. The dotted lines represent the flow of student feedback on teaching: students’ approaches to learning and learning outcomes feed back to the student presage and the teaching presage factors. Student evaluation of teaching instrument, therefore, became the student evaluation of learning, providing feedback for teachers, administrators and students themselves about what each party needs to be done to achieve the intended learning outcomes.

Table 1: Reconceptualisation of approaches to teaching evaluation

<table>
<thead>
<tr>
<th>Components</th>
<th>Student presage focused</th>
<th>Teaching presage focused</th>
<th>Student learning focused</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belief about knowledge</td>
<td>External to the students</td>
<td>External to the students</td>
<td>Internal to the students</td>
</tr>
<tr>
<td>Perception of teaching</td>
<td>Imparting information</td>
<td>Transmitting teachers’ understanding</td>
<td>Facilitating critical thinking, and enabling conceptual change</td>
</tr>
<tr>
<td>Purpose of the evaluation</td>
<td>Not necessary or punitive (if used at all)</td>
<td>Accountability and improvement of teaching</td>
<td>Enhancing learning and learning outcomes</td>
</tr>
<tr>
<td>Focus of the evaluation</td>
<td>What the student is</td>
<td>What the teacher is and What the teacher does</td>
<td>What the student does and What the student has achieved</td>
</tr>
</tbody>
</table>

Conclusion

Derived from Biggs’s 3P model of teaching and learning, approaches to teaching evaluation have been reconceptualised. Three approaches to teaching evaluation (summarised in Table 1) were discussed namely, (i) student presage focused, (ii) teaching focused, and (iii) learning focused. While the first two approaches are underpinned by teacher centred conceptions of teaching, the learning focused approach is underpinned by student centred conceptions of teaching which are regarded as more desirable to bring about change to teaching practice due to their focus on the students and their learning (Akerlind, 2004; Entwistle & Walker, 2002; Fox, 1983; Kember & McNaught, 2007; Ramsden, 1992). Thus, to improve the teaching evaluation practices and hence to enhance student learning, a learning focused approach to teaching evaluation is a way forward as it provides feedback for all parties involved in teaching and learning, the teachers, the administrators, and the students about what each party needs to do to achieve the intended learning outcomes. Student factors and teaching context are inclusive in this approach, but these should be surveyed in term of their relationship with what the student does and achieves.
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References


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