Peer Review and Reflective Teaching Practices: An Effective Mechanism for Quality Enhancement in Higher Education

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Abstract. Quality education and teacher accountability are predominant issues generating apprehension in higher education. Traditional methods of evaluation are giving way to more contemporary methods. One technique that is being implemented in many universities throughout the world that provides feedback and improves pedagogical approaches is a formative and collaborative process known as peer review of teaching (PRT). Review of the literature included 34 studies which identified five themes that offered pros and cons regarding the viability of PRT in teacher evaluations. A matrix table was created on additional 27 studies on the SWOT (Strength, Weakness, Opportunity and Threat) analysis framework. Four factors were derived from the SWOT framework that indicates PTR as a positive strategy in higher education.

Keywords: Peer review, observation, reflection, peer feedback, content-mapping, SWOT matrix

Introduction

Global concerns and mounting pressures on institutes of higher education to offer quality teaching have fixated attention on the evaluative process of teaching among all stakeholders in higher education. Government regulations are forcing universities to become increasingly focused on the quality of education (Klopper & Drew, 2013), as evaluated by accumulated quantitative data, while parents and students are more concerned about the maintenance or upgrading of education standards. Quality education can be defined as the ability to use pedagogical procedures that allow students to master the learning outcomes. The IMHE Guide for *Foster Quality Teaching in Higher Education Policy and Practices* identifies three essential interdependent levels to foster quality education. These include the institution-wide level, programme level and individual level in which the programme level is of paramount importance. However, teachers need the autonomy and control of their practice. According to Murray and Grant, 1998, this control is seemingly neglected (Murray & Grant, 1998). Developments in the scholarship of teaching and learning

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have seen the change in focus from an information transmission approach to a quality learning approach. This means that the emphasis on facts and mastering information has given way to active forms of learning, which requires students to understand subject materials deeply and engage in making meaning (Hutchings, 1996).

Similarly, there is a need to change the traditional method of teacher evaluation from the reliance of results from student rating forms completed at the end of the course to a more collegial design. These rating forms have validity, but also limitations. Teaching is a complex, multifaceted scholarly activity and the universally customary student rating forms are not germane to the students who are asked to complete these evaluation forms at the conclusion of the course (Stein, Spiller, Terry, Harris, Deaker, & Kennedy, 2013). There is no one method of evaluation that is capable of measuring this intellectual work (Bentin & Cashin (2012; Brent & Felder, 2004; Chism, 2007) and institutions of higher learning are cognizant that feedback to faculty must be substantive and instructional. However, most institutions lack the knowledge of executing this feedback (Ismail et al., 2012). Researchers argue that the evaluation practice should contain accountability criteria. As such, peer review and tailored evaluation interventions are increasingly proposed as alternatives to improve the evaluation process and teaching quality (Murray & Grant, 1998) partly due to its ability to demonstrate accountability (UTDC, 2004). Gravestock (2011) contends that summative peer reviews of teaching are utilized for advancement, tenure, and reappointment. Interestingly, Safavi et al. (2013) report that 96% of the faculty surveyed in their study would benefit from more value-added feedback rather than student evaluation forms. Peer review of teaching (PRT) may include the observation of lectures and tutorials, course materials, monitoring on-line teaching, teaching philosophy, examining curriculum design and the use of student assessments (Hatzipanagos & Lygo-Baker, 2006). The essence of peer review is about furthering the development of faculty members through expert input based on knowledge and understanding although it can be used as part of performance appraisal and tenure portfolios (Kohut, Burnap & Yon, 2007). It also sharpens individual skills such as the ability to observe and to be critically reflected on the dynamics and social context of teaching (Peel, 2005).

Chapter Overview

The main purpose of this review is to map past studies on peer review in higher education. Secondly, the review attempts to highlight research gaps and issues within the literature on peer review and SWOT (Strength, Weakness, Opportunity, and Threat) analysis. Thirdly, the feasibility of PRT is analyzed using the SWOT analysis approach. It is hoped that at the end of this review paper, the SWOT would provide an objective and critical perspective of the PRT concept as a whole.

We begin with an introduction to SWOT and then the significance of peer review of teaching (PRT) towards teaching and higher education. This is followed by the purpose of this research and the problems identified with peer review and the SWOT literature. A description of the procedures to identify resources and studies,

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the keywords applied as well as the inclusion and exclusion criteria is also documented. Subsequently, research documenting the benefits, opportunities and challenges in implementing peer observation, giving and receiving feedback as well as reflective practice within an institution was content-mapped to derive themes that will help focus the review towards the formation of the SWOT matrix for PRT. The strengths, weaknesses, opportunities and threats that surface from conducting PRT will be derived through textual narrative synthesis and the outcome of the analysis will be reported. This chapter closes with a short discussion on the implications of applying SWOT analysis to peer review.

SWOT Analysis: Historical Origins and Brief Description

Historical Origins

In this chapter the authors examine the SWOT (Strengths, Weakness, Opportunities and Threats) Analysis Framework to analyze the feasibility of implementation for PRT. Ironically, instructional theory for education is based on empirical data to determine best practices. These determinations dictate instructional procedures and assessment measures for all educators. However, with regard to educational research on SWOT there are no academic references or theoretical foundations (Chermack & Kasshanna, 2007) to support the origin of SWOT analysis. Controversy exists over the real history of SWOT but the literature indicates that historically, SWOT's association with organizations and strategic planning dates back to 1957 (Clardy, 2013). SWOT was originally named SOFT (Satisfaction (good in the present), Opportunity, (good in the future) Fault, (bad in the present) Threat (bad in the future)) and assumed a prominent role in business undertakings through Albert Humphrey who, while working for the Stanford Research Centre, conceived the SWOT analysis in the early 1960s. Haberberg (2002) reported that at the same time SWOT was instituted by Harvard academics. The basic framework of the original SWOT table and its use is illustrated in Table 1.

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Table 1. The basic two-by-two matrix of SWOT analysis developed by the Harvard Business School

	Strengths	**Weaknesses**
Opportunities	Achieve opportunities that match the strengths	Overcome weaknesses to attain opportunities
Threats	Use strengths to reduce vulnerability to threats	Prevent weaknesses to avoid susceptibility to threats

Note. Adapted from "The Use and Misuses of SWOT Analysis and Implications for HRD Professionals," by T. J. Chermack and B. K. Kasshanna, 2007, *Human Resource Development International, 10,* p. 387. Copyright 2007 by Routledge, Taylor & Francis Group.

In 1982 Weihrich's modification of SOFT included internal factors of strength and weakness to the existing external factors. A different source credits Learned, Christenen, Andrews and Guth being responsible for the SWOT analysis framework from their research of the analysis of case studies in the Harvard Business School (Chermack and Kasshanna (2007) Apparently, the SWOT framework was first described in detail in the late 1960′s by Edmund P. Learned, C. Roland Christiansen, Kenneth Andrews, and William D. Guth in Business Policy, Text and Cases (Irwin, 1969).

Brief Description of SWOT

Although SWOT has been used extensively in health education and social work education researches (Sharma, 2005; Westhues, Lafrance & Schmidt, 2010) as well as the original intended purpose, to undertake revisions to a business undergraduate curriculum (Kuiper & Thomas, 2000) and formulating strategies for vocational education (Lee, Lo, Leung & Ko, 2000), the use of SWOT analysis in higher education is not highly published. The conclusions drawn from the Kuiper and Thomas (2000) and Lee et al. (2000) studies demonstrates that the SWOT model helps the principle stakeholders in a program to identify their expertise that could pose as strength or opportunity and the shortcomings within the internal and external environment that could pose as a weakness or threat. By recognizing the areas that they lack expertise, strategies can be developed to overcome weaknesses and thus, increase the overall efficiency and efficacy of the planning process (Kuiper & Thomas, 2000). The SWOT analysis can be applied at an organizational level to identify organizational strengths and weakness in implementing a program from the viewpoint of the faculty members and students. This enables an environmental analysis of the opportunities (i.e., changes in government policy, technological advancement and transformation of social patterns) and threats (i.e., economic recessions) that could influence the implementation and practice of an educational program (Lee, Lo, Leung & Ko, 2000).

SWOT and Higher Education Evaluation

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Although the SWOT is acknowledged as an established method for the formulation of strategies (Dyson, 2004) by simplifying complex issues into manageable tasks, there is no provision of clear strategic direction on how to use the opportunities for future development while maintaining strengths (Helms & Nixon, 2010). While there is truth to this statement, the SWOT analysis is a first-level investigation of internal and external environments that could favor or work against new concepts such as PRT. The direction of the peer review program and its opportunities for development lies closely with the objective of the program and the needs of faculty members. On an individual level, faculty members have complete autonomy in determining steps to proceed after identifying their strengths, weaknesses, opportunities and challenges in teaching. Nevertheless, there may be an overlap in the categorization of SWOT variables as peer review progresses (Helms & Nixon, 2010). For instance, strengths that are not maintained become weaknesses while opportunities that are developed may become a weakness or threat. Alternatively, threats that are acted upon efficiently may become opportunities.

To summarize, the synthesis of SWOT is a quick and easy method that could help faculty members build on the strengths and opportunities gained from peer review as well as eliminate the weakness and threats posed by peer review to their own unique circumstances. Although it has its issues, the simplicity of its design allows an easy grasp of the four essential components needed to evaluate the feasibility of projects such as peer review programs. Researchers need to bear in mind that the success of peer review programs greatly depends on the depth of analysis on the institutional environment and its influence on peer review. Weaknesses and threats such as the implications of peer review as well as the lack of standardized and valid peer review instruments that are published can be overcome. Higher education administrators need to exercise their responsibility by providing faculty members with the assurance and support necessary to ensure the improvement of teaching and learning through high-quality feedback.

Contemporary Approaches to the evaluation of Teaching in Higher Education

An extensive online search of peer review literature from numerous databases such as Taylor and Francis Online, Elsevier, EBSCOhost, Education Resources Information Center (ERIC), Emerald, J-STOR, SpringerLink, SAGE Journals Online, ProQuest, MetaPress and Wiley Online Library was conducted until July 2012. Additional references were searched to support this review. Initial search terms used were peer review of teaching, teaching evaluation and SWOT.

In this review paper, the term *peer review of teaching (PRT)* is used to differentiate studies on peer review using observation and evaluation techniques from peer review studies associated with student learning and journal publications. This review paper defines peer review of teaching in line with Kinchin (2005), who describes it as an intentional observation process in which a university faculty member attends a co-worker's teaching session with the aim of providing feedback by being a 'critical friend'. The peer review concept and process is in reference to The Peer

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Review Model by Gosling (2002). This model proposes that peer observation is necessary as a prelude to a discussion about teaching through shared experiences. This provides the opportunity for faculty members to mutually reflect or self-reflect. The outcome of peer review should be a complete analysis of teaching methods and constructive feedback about teaching performances and learning materials need to be communicated post-observation for the mutual benefit of the reviewee and reviewer. The advantage of discussing spontaneous feedback through peer-shared perception lies in establishing an equal relationship status between the reviewee and reviewer (Gosling, 2002; Bramschreiber, 2012). The model by Gosling (2002) clearly focuses on formative peer review, which emphasizes academics' professional development. Hubball & Clarke (2011) identify reciprocal benefits for both the reviewer and the reviewee. Both gain professional development through reflecting on professional knowledge base which permits both parties to polish their expert skills. This chapter intends to focus on collaborative and formative peer evaluations rather than summative peer review, which tends to be audit-like (Kinchin, 2005).

A problem encountered in the literature search is a lack of recent PRT literature, even among Western literature, with most relevant studies on peer review programs conducted in the late 1980s to early 1990s (Freiberg, Waxman & Houston, 1987; Odell and Ferraro, 1992; Hanson, 1993). Newer researches (Bingham & Ottewill, 2001; Kohut, Burnap & Yon, 2007; Bell & Mladenovic, 2008; Kell & Annetts, 2009) were located by including specific search terms related to peer review such as peer observation, peer feedback and reflective practice.

The selection criteria for inclusion in this review are: (a) featured peer review research that emphasized professional development among faculty members (i.e., formative peer evaluation), and (b) empirical or conceptual studies ranging from the year 2000-2012. Exceptions were made for some earlier studies with the condition that it provided theoretical background or features pioneer studies on peer review implementation within higher education. Peer review research with the purpose of performance appraisal for promotion in human resource, industries and financial entities were excluded. There were no limitations placed on the geographical location of the studies as there are relatively few studies focusing on peer review for teaching performance development from the Asian perspective. Moreover, there is limited research published in the area of peer review, particularly in high impact journals.

Research on the SWOT Analysis Framework

The literature search yielded research gaps within peer review in higher education. A matrix table was created based on past literature within the last 12 years. The themes and variables within the literature were derived from content-mapping of peer review literature. Key information such as the authors, year of publication, research participants and instruments used, research variables, results and general conclusion were analyzed, classified and mapped against the matrix. A total of 60 studies were reviewed and out of this, 34 studies focused on peer review of teaching. There were 7 studies associated with the SWOT framework while the remaining 19

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studies addressed general peer review issues for the introduction and problem statement.

Table 2 (listed in the Appendix) shows a tally of 34 peer review studies which were included in this review. Out of 34 peer review studies, only 27 studies were selected for inclusion in the matrix table based on the content-relevance to the SWOT components. Among the 27 studies, there were 6 mixed methods studies, 7 qualitative studies and 2 quantitative studies. The remaining 12 studies were unable to be classified according to type as they consist of reviews or reflective publications. In addition, 3 studies were identified to be conducted in a multi-disciplinary setting while one study on peer review took place cross-culturally. Approximately 9 studies utilized some form of instrument such as the PARF, SPRAT, mini-PAT, behavior or observation checklists, Likert-scale questionnaires, video recordings and personal narratives.

Traditional Evaluation VS Contemporary Evaluation

Present Day Shifts and Reforms in Education

Traditionally, student survey forms which usually include a rubric checklist and an average of four to five open-ended questions were the primary form of evaluation of a faculty's effectual instruction. This overall end-of-term performance rating was to provide the appropriate feedback to guide retrospective improvements. According to Malik (1992) these forms lack the depth of evaluation to adequately critique the multidimensionality of the teaching process and teaching is not valued as scholarship. In 1994 the American Association of Higher Education (AAHE) conducted a national study on peer review teaching, believing that information gained from a peer review evaluation could be used in both summative and formative models of evaluation.

An examination of peer review trends shows that peer observation is a recent development in UK universities after its successful introduction during the past 20 years in the United States and Australia (Lomas & Kinchin, 2006). As PRT is a relatively new practice in higher education, there was much difficulty locating highly publicized research detailing PRT performance as compared to peer review associated with research journal publications. Prior to this, PRT itself is not dominantly practiced in higher education institutions due to several issues. Today emphasis is placed on both formative and summative evaluation approaches for teacher assessment. Peer review offers formative per review and summative peer review even though there is no one agreed upon definition or construct for the term 'formative.' According to Dunn and Mulvenon (2009) the ambiguity of defining constructs could reflect on the dearth literature on this topic.

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Challenges for Implementing Peer Review

Firstly, a shift in the view and beliefs about teaching is needed since there is more to teaching than just technique. The course design, instructional delivery, type of assignments and student assessment criteria are reflections of the teacher's perception about the study field and its associated meaning. Reviewers must be open and receptive to the various forms of pedagogy in different disciplines. Thus, teaching is scholarly work and peer review has the capability to capture the overlooked scholarly aspects of teaching (Boyer, 1990, p.23). The problem is that Glassick (2000) reported that the definition of scholarship was vague and imprecise to many of the faculty and up to this present time this terminology continues to be disputed.

Secondly, faculty members have the tendency to be too enclosed within the field of study and too focused on technique (Boyer, 1990, p. 24). Shulman (1995) purported that discipline based evaluation arguing that "the basis for our intellectual communities" and the faculty within the same discipline due to similar experiences and similar content knowledge. Therefore, there is a need to revise assumptions that valuable input on teaching improvements can only come from peers within the same field. This can be overcome by engaging in cross-disciplinary talk that could bring new perspectives from discussion, debates, and exchanges.

Thirdly, a main concern among faculty a member is about who is qualified to be a reviewer as there is a fear of biased observations. One method of addressing this challenge is to have more than one independent reviewer. In addition, Hanson (1993) addressed faculty members' concerns about subject expertise in a peer review program by having a subject specialist evaluate a group of faculty members in their pilot study. The evaluation revealed that the feedback from non-specialist appraisers were equally reliable and valid as feedback from subject specialists (Hanson, 1993).

Another issue that confronts PRT is the fact that the evaluation is based primarily on the component of class room teaching.

The next concern deals with self-reflection. Although reflective practice is internationally accepted as a professional competency for teachers, there is a lack of awareness among faculty members in higher education on what reflective practices involve (Hammersley-Fletcher & Orsmond, 2005). There is insufficient emphasis on the process of reflective activities, which involves knowledge about the action and self to create enhanced meaning (Brockbank & McGill, 1998) and how enhanced meaning is recreated through the interplay of social and personal knowledge, along with experiential and conceptual insights (Kolb, 1984). The role of peers in altering understanding and enhancing self-awareness and the misconception about reflection as an individualistic activity need to be impressed upon to faculty members. Having a deeper understanding on the role of peers as 'helpers' who provide the 'critical energy' needed for change (Brockbank & McGill, 1998), and their ability to contribute to their colleagues' professional development can encourage peer review practice in higher education. Another benefit of the peer review process, according to James, McInnis and Devlin (2002) is the cost and time effectiveness of implementing peer assessments while integrating effective new technologies.

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Apprehension of Faculty with PRT

One concern among faculty members is about what and how they will be assessed in PRT. Questions such as what is the criterion of good teaching, who are qualified reviewers, and is the observation a true representative of the course instruction have plagued implementation of Peer Review. Furthermore, the anxiety of having a colleague looming in the classroom for the purpose of critical feedback can be daunting to many individuals (Bedore & O'Sullivan, 2011; Farrell, 2011).

Having established protocols and guidelines on the basic criteria which constitutes good teaching could be beneficial to set expectations, as demonstrated by Ramsden (1992; 2003) who identified 13 characteristics of what constitutes good teaching from a teacher's perspective. The criteria are:

1. a desire to share the love of the subject
2. ability to make the material stimulating and interesting
3. a facility to engage with students at their level of understanding
4. capacity to explain materials plainly
5. a commitment to ensure clearly what has to be understood and reasons for this
6. ability to demonstrate concern and respect for the students
7. a commitment to encourage student independence and experiment
8. the ability to improvise and adapt to new demands,
9. to promote active and cooperative learning through teaching methods and academic tasks
10. ability to use valid and fair assessments
11. desire to provide high quality feedback to students
12. capacity to emphasize key concepts and focus on students' current and future understanding
13. demonstrate the desire to learn from others about ways to improve teaching.

Nonetheless, Nicholls (2001) warned that faculty members should be aware of the fine distinction between 'teaching competence' (i.e., efficiency and effectiveness) and 'cognitive understanding' (i.e., content and academic competence). Thus, caution must be practiced when evaluating peers because teaching criteria defines only a part of 'teaching competence'. Primarily, effective teaching criteria function as guidelines to provide clear specifications on the vision and mission of the institution to drive educational practice rather than benchmarks for teaching performance. Faculty members need to be given autonomy on the interpretation and presentation of good teaching in their respective classroom.

Themes for PRT Implementation

The stages of the literature selection process are shown in Figure 1. Content mapping of the literature yielded five themes that were judged as important in determining the feasibility of PRT which are:

1. Benefits of Peer Review in Developing Faculty Members

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2. Barriers to Peer Review of Teaching
3. Weakness: Lack of Published Literature on Standardized and Validated Peer Review Instruments
4. Possible Threats to Teaching Practice
5. Opportunities: Expansion of Peer Review of Teaching and Prospects for Professional Development

The studies classified under these five themes were then further analyzed using content analysis to narrow down the themes to fit in with the four components of SWOT matrix. Five studies were categorized under 'Benefits of Peer Review in Developing Faculty Members' and four studies were classified under 'Barriers to Peer Review of Teaching'. Four studies on existing peer review instruments were included to demonstrate a weakness in peer review literature, which is the lack of published standardized and validated peer review instruments for higher education. Six studies were categorized under the theme 'Possible Threats to Teaching Practice'. Under the 'Opportunities' component, the literature was further divided into two subthemes: the 'Expansion of Peer Review of Teaching' with two studies and 'Prospects for Professional Development' with six relevant studies. The content mapping of the literature is shown in Table 3.

Effects of Peer Review

On Faculty Development:

Educator peer review (EPR) supports and increases faculty development. According to Steinert, 2000, any activity that proposes to intensify or improve or assist faculty in their job description is considered faculty development. The review of literature mostly shows a wide range of positive outcomes for the development of faculty members as a result of practicing peer review. Among benefits cited in the literature include the confirmation of existing teaching practices and motivation for faculty members to teach from a different perspective (Hanson, 1993), the development of assurance to instruct and learn about teaching, change in educational perspectives (Bell and Mladenovic, 2008), the development of collegiality, respect for the approaches of colleagues (Quinlan & Akerlind, 2000), and integration of tutors into the department (Allen, 2002).

Formative peer evaluation with feedback has the ability to give the faculty and its members the responsibility for self-monitoring, autonomy over their work and to practice self-regulation (Al Qahtani, Kattan, Al Harbi and Seefeldt, 2011). Faculty members will be able to improve teaching practice by identifying and remediating any weakness, as well as identifying and building on strengths. The value of peer review and supportive feedback was also substantiated by Freiberg, Waxman and Houston (1987) who found that teachers who received feedback from colleagues and supervisors in addition to attending a two-hour seminar to discuss with their peers about instructional strategies to improve their classroom performance

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benefitted the most from the peer review program. A four-year longitudinal study on 160 teacher trainees by Odell and Ferraro (1992) further revealed that 96% of the cohort valued the peer feedback and emotional support provided by their mentors, which in turn, motivated them to continue teaching after four years.

On Pedagogy

The positive effects of peer review of teaching was presented in a study by Carroll (1980), who reviewed thirteen studies that used observation of teaching in tutor training. This research found that twelve studies, with the exception of Haber in 1973, showed statistically significant positive changes in teaching behaviour due to training (Carroll, 1980). Dalgaard's (1982) research captured the teaching performance of tutors before and after training on video. The tutors viewed their videos with an experienced colleague, and a questioning technique was used to help them to self-evaluate and set objectives in teaching. This study showed that the training group received significantly higher final teaching scores from trained raters than the control group after considering initial differences in teaching skill. The tutors also highlighted the usefulness of videotapes in the training session. Video has the advantage of providing irrefutable evidence of teaching improvement and also helps focus feedback on upon specific behaviors (Brinko, 1993). Nevertheless, videos could be biased if only a portion of teaching performance is recorded. Moreover, peer feedback will only be effective if videos are reviewed immediately after the teaching session to reduce the feeling of detachment from the videotaped self (Brinko, 1993).

Due to the beneficial results of peer reviews on pedagogy, teaching communities are evolving in higher education known as "teaching commons" (Huber & Hutchings, 2005) in which innovative scholarly inquiry ideas are shared through questioning and self-reflection. The acquisition of new pedagogical awareness and understanding was manifested in improved student learning. These commons could conceivably apply the 'design thinking' model as portrayed by Lugmayr, Stockleben, Zoo, Anzehofer and Jalonen (2014).

On Reflection

It is not sufficient for faculty members to only act based on peer observation and feedback as a means to affect positive changes in teaching practice (Peel, 2005; Ryan & Ryan, 2012)). Teaching is multifaceted and thus, improved teaching competence depends on individual perceptions, individual reflective ability, and the use of personal insights, as well as engaging in wider literature and policy documentation (Peel, 2005). Faculty members are also increasingly expected to fulfill the role as 'reflective practitioners' who learn optimally when given the opportunity to collaboratively construct knowledge with peers about teaching problems that are related to their own experience (Quinlan & Akerlind, 2000). However, there exist multiple definitions of reflection and often multiple interpretations. Thus, they are

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expected to provide high-quality feedback for enhancing teaching and learning as a result of this reflection. In addition, conducting cross-unit peer review is a good strategy to faculty members to explore teaching and learning in a professional and focused manner with colleagues from other disciplines (Bingham & Ottewill, 2001). Reflective actions are expected to be undertaken by both the reviewer and the reviewee

Faculty members are provided an opportunity to collaboratively share ideas and increase their understanding about each other's unit. Internal discussions also bring a greater sense of ownership in comparison with an externally imposed quality system (Bingham & Ottewill, 2001). Giving faculty members the ownership of peer review provides them with the independence and flexibility needed to enhance teaching quality through the review process (Kell & Annetts, 2009). Identifying their own areas of focus rather than responding to externally determined criteria ensures that the peer review program is content relevant to their team (Bingham & Ottewill, 2001).

Training of Reviewers

Reviewers are trained for peer reviews on teaching activities. Peer means "a person of equal standing." In higher education the term 'peer' applies to faculty and colleagues of equal or different ranks who make summative and formative evaluations. There exists a difference in perception of peer review by teaching rank as experienced faculty members viewed PRT to be formative and useful for personal and professional development while junior faculty members viewed it as summative and audit-like (Kell & Annetts, 2009). Thus, the training of reviewers is crucial to prevent peer review from being too appraisal-focused. In addition, faculty members who are trained and experienced in observation techniques and giving feedback will be viewed as more competent, accurate and insightful of their own capabilities (Kohut, Burnap & Yon, 2007). Besides establishing trust and credibility in the reviewers, other notable findings to enhance positive perceptions about the reliability and validity of the review process include giving oral and written reports about alternative teaching methods and suggestions for improvement (Kohut, Burnap & Yon, 2007).

A tutor development program that was developed based on the peer observation model by Bell and Mladenovic (2008) also demonstrated the importance of learning through observation and providing junior faculty members with training on supportive and non-judgmental feedback. It focused on preparing tutors to teach and the topics include excellent tutoring, icebreakers, lesson planning and setting expectations, resources and suggestions about common areas for improvement, giving in-class assessment feedback and strategies to gather and use teaching feedback. The findings reveal that 94% of tutors found the program helpful and 88% said that they would alter their teaching style as a result of peer review. Moreover, tutors in this exercise found that peer observation was still useful after one year and recommended it to new tutors (Bell & Mladenovic, 2008).

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How to Create a Successful Peer Review Programme Design

The benefits of peer review towards professional development and the quality of teaching can be fully gained provided the following attributes are present in the design of the peer review program:

1. a clear, straightforward and transparent overall structure
2. the engagement in professional discussion and debate among participants
3. a focus on the development of teaching and learning to upkeep motivation and
4. commitment towards the peer review process and
5. the willingness to consider confounding factors such as emotional stability and
6. conscientiousness towards engagement in professional development activities.

Impediments to Implementing PRT

Three obstacles were identified for implementing and practicing peer review of teaching. Atwood, Taylor, and Hutchings (2000) identified the root barriers for peer review practice. These include: (a) fear; (b) uncertainty about what should be reviewed, and (c) how the process is reviewed. Fear is a natural phenomenon when teaching and research is subjected to peer review. The reluctance of faculty members to employ peer review to improve teaching could stem from fear of being reviewed by peers and the potential impact of critical feedback on faculty members' relationships (Lomas & Nicholls, 2005).

A survey among Science faculty members and administrators revealed that there was uncertainty about the fairness of the review process (Atwood, Taylor & Hutchings, 2000) and the possibility of the review being potentially biased (Kell & Annetts, 2009). Hanson (1993) suggested that faculty members can overcome this issue by having reviewers provide feedback from additional resources other than observation records, such as teaching portfolios. In addition, reviewers could also evaluate different competencies through different methods. Teaching styles are viewed as personal and thus, it is proposed that learning should be the measure of teaching effectiveness response (Atwood, Taylor & Hutchings, 2000). As for the structure of the review process, it was recommended that the faculty members outline the nature of the class, the learning goals, their intellectual understanding of the topic, and focus on the reviewer's response (Atwood, Taylor & Hutchings, 2000). Faculty members also worry about the lack of time to conduct peer review (Kell & Annetts, 2009). All these factors play a role in contributing to a lack of enthusiasm among faculty members to participate in peer review.

Weaknesses of PRT: Lack of Published Literature on Standardized and Validated Peer Review Instruments

A gap in the research literature identified the paucity of the peer review literature and the limited amount of published works on peer review of teaching instruments

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that are validated and tested. This could pose an issue to researchers who would like to investigate the effectiveness and efficacy of peer review on teaching practice. So far, only Magno (2012) has succeeded in trialing and testing the Peer Assistance and Review Form (PARF), tailored for peer assessment in higher education.

A review of available literature on designing and developing peer review assessment instruments resulted in the identification of two studies (Archer, Norcini & Davies, 2005; Archer Norcini, Southgate, Heard & Davies, 2008). One was conducted in a medical care setting and the other was a study conducted by Magno (2012) in a higher education setting. There exists a clear necessity for more research in the standardization and validation of peer review instruments. The research by Archer, Norcini and Davies (2005) investigated the use of the Sheffield Peer Review Assessment Tool (SPRAT) among 112 pediatricians in-training. The SPRAT assesses six areas which target good clinical care, maintaining good medical practice, teaching and training, assessing and appraising, relationships with patients, and working with colleagues. The SPRAT was found to be a reliable and valid tool for assessing doctors as part of quality assurance procedures in training programs. Archer, Norcini, Southgate, Heard, and Davies (2008) later evaluated the use of the Peer Assessment Tool (mini-PAT), which was modified from the SPRAT. It was implemented among 553 Foundation clinical trainees from across UK. The assessment areas of the mini-PAT are the same as SPRAT after the removal of nine irrelevant items that were appropriate for the SPRAT. The mini-PAT consists of 16 questions and was analyzed in a pilot research study with the trainees' clinical performance and rated against a six-point scale on two occasions. The validity of the internal structure was analyzed using factor analysis while a multiple linear regression was performed to examine sources of bias. High inter-item correlations ($r = 0.98$) were found and it was concluded that the mini-PAT was a valid method of collating feedback from colleagues to reliably assess clinical trainees. Although the SPRAT and mini-PAT were developed for peer assessment within the healthcare sector, the development process and the validation of the instruments was well-documented as reference for other peer review instrument developers.

Nevertheless, an increase of published PRT literature will not be possible if the reluctance to engage in PRT remains a fixture in the mentality of faculty members. Such reluctance can be attributed to the lack of consensus of effective teaching within the faculty (Cavanagh, 1996). Faculty members also lack the confidence that their peers will be able to understand their teaching perspective and thus, provide them with an objective performance feedback. Moreover, the absence of a professional culture that acknowledges the benefits and philosophy of conducting peer review could work against efforts to promote peer review culture in higher education (Cavanagh, 1996).

The Peer Review Instruments in Higher Education

Although most higher education institutions are encouraged to develop instruments tailored according to institutional needs, it is essential to provide sufficient evidence

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through research about the efficacy and effectiveness of peer review in professional development as a way to promote peer review culture as a norm.

As mentioned earlier, the only published peer assessment instrument located within a higher education context was created by Magno (2012), a faculty member of the Counseling and Educational Psychology Department at the De La Salle University in the Philippines. The Peer Assistance Review Form (PARF) was created based on a systematically combined professional practice and learner-centered framework. The validity and reliability of the rubric were determined using the classical test and item response theories. The classical test theory (CTT) views data as a combination of the true score and error. The standard CTT methods of determining reliability is through test-retest, split-half and Cronbach's Alpha (internal consistency) while some validity measures are the construct validity, face validity and content validity. Alternatively, the item response theory proposes that an individual's probability of correct key responses is a result of their latent trait or ability and the influence of item parameters (i.e., degree of difficulty and item discrimination). The items in PARF reflect learner-centered practices with four domains anchored on Danielson's Components of Professional Practice principles - planning and preparation, classroom environment, instruction, and professional responsibility. The PARF was pilot tested on 183 higher education teachers in the Philippines. Participants were observed by two raters in their class and the concordance of both raters is established across the four domains with high internal consistency of 0.98. The results of the Magno (2012) study highlighted three perspectives on assessing teaching performance: (a) a need to inculcate professional responsibility in areas of research and continuing education programs for higher education, (b) the high reliability of an instrument with item consistency across multiple raters, and (c) the importance of communicating expectations set for teaching to higher education faculty members.

Nevertheless, an essential point highlighted by Kohut, Burnap and Yon (2007) in regards to the development of peer review instruments is that it has to be flexible to accommodate a wide range of teaching styles and effective teaching characteristics. An example would be the use of narrative, which is often used in combination with other forms such as check-lists, videos and self-analysis (Kohut, Burnap & Yon, 2007).

Applying the SWOT framework

A textual narrative synthesis of the findings from 27 empirical and conceptual studies involved pairing up research that were similar in content, and compartmentalizing them into peer review factors that meet the requirements of the SWOT factors (Refer to Figure 1). Peer review factors that were perceived to bring benefits to faculty members in terms of personal and professional development were categorized as *strengths*. The accessibility of resources and internal environments within the university that limit the implementation of peer review was classified under *weaknesses*. External influences that could obstruct faculty members teaching duties either as a result of peer review or other confounding factors were categorized

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under *threats*. Last but not least, factors that provide faculty members the opportunity to broaden their perspective outside of their discipline in addition to opening up pathways for awards and promotion were categorized under *opportunities.*

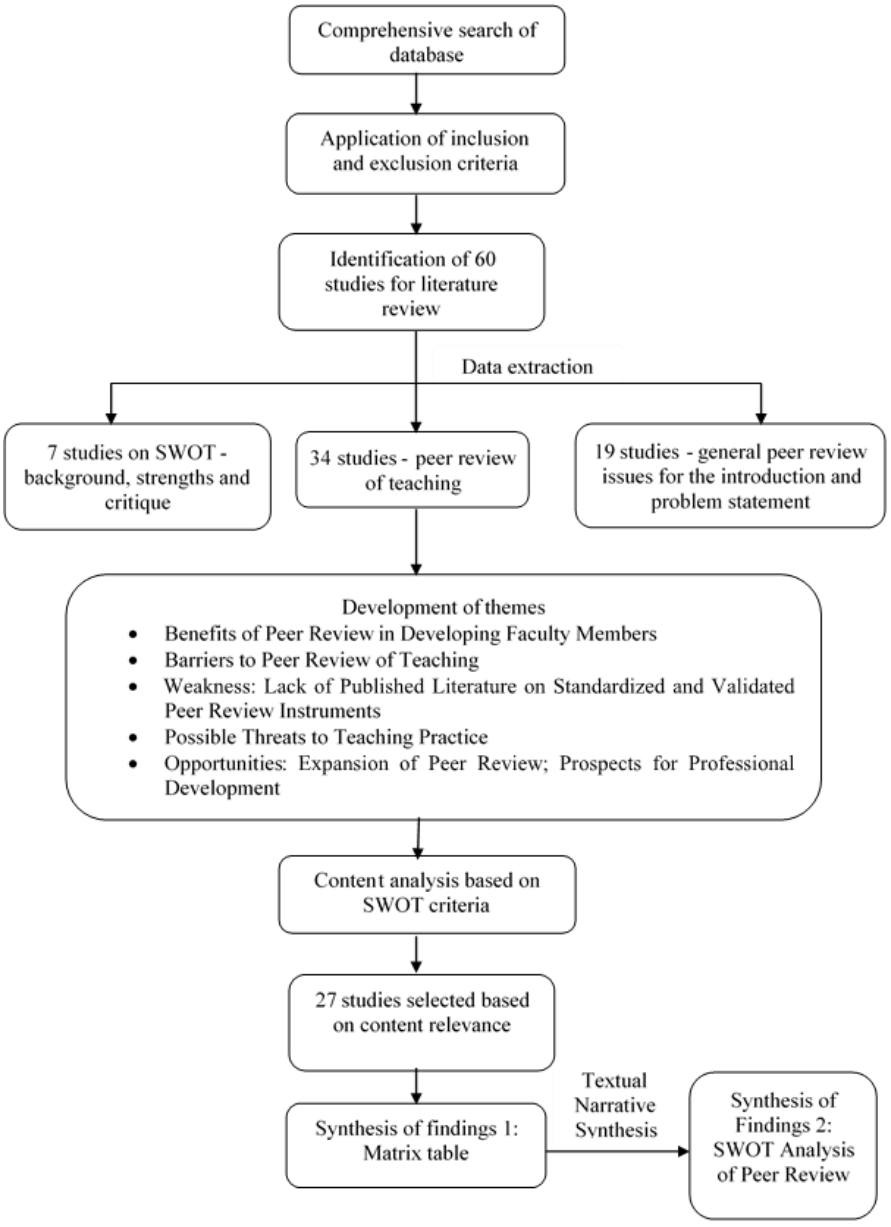

Figure 1. Stages of the Literature Selection Process

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The SWOT Framework on PRT – Threats

Threats of Peer Observation on Teaching Practice

The major threats of peer review to teaching practice identified by Hutchings (1996) include issues with publicizing teaching practice, establishing standards of good teaching practice, issues with dividing limited time for peer review and teaching responsibilities as well as selecting the right methods and reviewer to assess teaching performance. This is supported by research that shows that the reliability and validity of feedback from non-specialist reviewers is persistently questioned although proven otherwise by Hanson (1993). Some faculty members may prefer having expert feedback in addition to peer feedback due to concerns that their peers might be too inexperienced to provide valuable feedback (Bell & Mladenovic, 2008). However, some unit coordinators feel reluctant to offer evaluation to faculty members as they are worried that it may be intrusive and intimidating. Moreover, expert observation is a one way approach and less economical in time and efforts (Bell & Mladenovic, 2008).

The communication of constructive and sensitive feedback also needs to be dealt with carefully. Shortland (2010) reveals that the positive impact of constructive feedback is influenced by the individual's subjective interpretation. For instance, when constructive feedback that was given with the intention of highlighting different approaches to teaching is inferred as a discouragingly critical comment, teachers may become defensive and adverse to change (Cosh, 1998). Shortland (2010) demonstrated that the provision of adequate training in giving feedback is essential to prevent a backfire in the purpose of conducting peer review.

Threat of Intrusiveness

Other aspects of peer observation that may deter faculty members from engaging in peer review include the possibility that peer review is invasive and could be a threat to academic freedom (Keig & Waggoner, 1994). Complaints about the pulling of ranks and undercurrents of power gains are among some issues dogging peer review practice (Kell & Annetts, 2009). In addition, those in power might attempt to exert inappropriate influences on teaching. However, the mere presence of a peer should be no threat to academic freedom since faculty members have the right to determine the teaching content and process (Keig & Waggoner, 1994). Nevertheless, the faculty members may be concerned that what is reviewed may not be representative or generalisable since the evaluation is based only on a snapshot of an individual's teaching performance (Hanson, 1993). Another concern among the faculty members is that they may be expected to conform to a national or institutional representation of effective teaching through peer observation (Peel, 2005). Thus, they will need to perform in a way which enables them to obtain recognition for competence

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in teaching. Upon legitimizing their teaching status, they will have more time to concentrate on their research activities.

Hammersley-Fletcher and Orsmond (2005) reported concerns among academics about the confidentiality of the peer observation process, the difficulties in giving and receiving criticism, the potential negative impact on relationships between faculty members and nervousness about peer observation. There are still uncertainties regarding the extent to which the peer review process and its outcomes that can be made public (Hammersley-Fletcher & Orsmond, 2005). Hanson (1993) outlined the importance of providing guidelines on peer review procedures to address concerns about confidentiality issues, the provision of quick and timely verbal and written feedback as well as the code for appraising teaching.

Threat of Accuracy Factors

The accuracy of peer evaluation could also be influenced by confounding factors. The knowledge that one is being observed may lead some faculty members to prepare better for that teaching session to enhance their teaching evaluation. Anxiety issues or unforeseen health problems could also result in the distortion of teaching quality (Hanson, 1993). Faculty members may be at risk of experiencing change fatigue during post-review if there are constant changes made (Hammersley-Fletcher & Orsmond, 2004). This could initiate resistance to changes, which are viewed as management issues and considered time consuming (Hammersley-Fletcher & Orsmond, 2004). Furthermore, peer observation of teaching is not always viewed as enhancing overall developmental initiatives although its effect is more evident in individual development (Hammersley-Fletcher & Orsmond, 2004).

Threat of Communication Breakdowns

Reviewers and reviewees need to establish an open relationship for honest reflections to occur as this will greatly influence the sense of vulnerability felt by both parties (Hammersley-Fletcher & Orsmond, 2005). The authors also mention that faculty members may experience anxieties with regard to giving feedback and how colleagues might receive a criticism. There is still a tendency to view critical feedback in a negative light, seeing it as criticism rather than a developmental issue. Thus Hammersley-Fletcher & Orsmond (2005) suggests critical feedback must be presented constructively in a way that will lead to new understandings and improved practice. Any feeling that judgments are being made will act to detract the benefits of the peer review and reflection process. This paper reports that a slight distancing (i.e., reviewers do not observe someone within their own teaching team) may have some advantages for giving critical feedback (Hammersley-Fletcher & Orsmond, 2005). From a financial perspective, the running of a peer review program is not without added costs. Administrators in higher education institutions need to factor in the additional expenses for the short-term and long-term strategic planning of such programs (Kumrow & Dahlen, 2002).

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The SWOT Framework on PRT: Opportunities

The opportunities for peer review can be divided into two aspects, which include the expansion of peer review of teaching and prospects for professional development.

The Expansion of Peer Review

The expansion of peer review has high potential since there are increasing demands for peer review programs that can accommodate faculty members from various disciplines in order to meet institutional needs (Quinlan & Akerlind, 2000). However, multi-disciplinary peer review requires a greater level of organization and collaboration (Quinlan & Akerlind, 2000). On the other hand, formative peer assessment activities occurring within disciplines are likely to be viewed by faculty members as more relevant and directly transferable to their teaching practice (Jenkins, 1996). Discipline-based peer collaboration results in greater identification with fellow participants through the perception of greater similarities. It also reduces the possibility of losing the changes in practice and philosophy over time due to the lack of support from colleagues. Such advantages operate strongly where the focus is to change faculty beliefs about teaching and learning, rather than simply addressing teaching proficiency (Jenkins, 1996).

Quinlan and Akerlind (2000) investigated the possible reasons that contributed to a higher success rate in peer collaboration in Private University's Mechanical Engineering Department as compared to State University's History Department. Using a comparative study design, the contextual factors found to contribute to this finding are: (a) the nature of the discipline, (b) the institutional structure and (c) departmental and individual faculty. The nature of the discipline was the main factor influencing the level of peer collaboration. A comparison across both disciplines shows that the Engineering faculty members in Private University worked better with their peers because they are accustomed to working collaboratively in laboratory research groups and conducting research discussions in which they are mutually engaged. Alternatively, historians naturally engage in individualistic research with sole authorship, where there are no established norms of shared inquiry and collaborative conversation about works-in-progress. In effect, teaching is already a public activity in the Engineering Department as faculty members had to comply with external benchmarks that anchor and prompt discussions about teaching and learning. In addition to that, the nature of the study field as well as the demands of the working industry will shape teaching and its curriculum (Quinlan & Akerlind, 2000).

The differences in institutional structure also affected the acceptance of peer review policies. The hierarchical nature of decision-making within State University and the inequity between different faculty generations created a climate of distrust and lack of ownership over decision-making (Quinlan & Akerlind, 2000). This top down management approach (i.e., moving from department head to the appointment of faculty leaders) is in marked contrast to the bottom-up approach at Private

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University where Engineering faculty members are assured of their autonomy and control.

Differences in departmental and individual faculty also contribute to the acceptance of peer review and collaborative teaching activities (Quinlan & Akerlind, 2000). The Engineering Department has a strong tradition of strength and expertise on education issues and thus, the faculty leaders were already experienced in leading others in thinking and articulating their thoughts on teaching and learning. On the other hand, the History Department has never been involved in any of the national or local educational reforms. Thus, the environment and peer support has important implications for the success of peer review and collaborative teaching activities.

Possibilities of Professional Development

Reflective Practice.

Peer review has positive implications for professional development as evidenced by Wubbles and Korthagen (1990), who collected data on a Dutch pre-service teacher education program based on reflective teaching. This program lasted 4.5 years and this study found that reflective practitioners tend to be more open to innovation. Peer review and reflection process will take faculty members beyond the point of being a subject specialist who reflects on only content. Self-reflection and reflection on peer feedback could help faculty members understand and relate learning and teaching philosophies in addition to the cultural factors that influence it (Wubbles & Korthagen, 1990). Hanson (1993) supported this findings by concluding that peer review provides the opportunity to self-reflect and make action plans based on the information gathered from multiple sources (i.e., students and colleagues).

There is potential for development in the area of peer review that incorporates reflective practice. Transformatory changes as a result of reflection in peer review can occur not only at an individual level but also at an institutional level. Smith (2009) investigated the use of reflective practice in a transnational peer review program for new faculty members in offshore campuses. Faculty members who are teaching offshore for the first time will find themselves experiencing cultural differences in the environment, climate and syllabus contents (Smith, 2009). They often have to question the foundation of their teaching, learning and assessment practices. Thus, faculty members will benefit from focused and reflective discussions with experienced colleagues in the main campus. The outcome of such discussions will result in perspective transformations, which will lead to the improvement of teaching practice (Smith, 2009). Additional benefits to transnational peer review are to help students acclimatize to instructional methods from abroad as well as to assist transfer program students to adapt faster to a foreign education system and increase learning quality.

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Teaching Portfolios

The potential of PRT can be expanded by using peer review to develop teaching portfolios. FitzPatrick and Spiller (2010) reviewed the scholarship of teaching portfolios and found that portfolios were developed with a variety of objectives such as reflection and professional development, evidence for promotion and as a component of higher education certification programs. Portfolios are increasingly regarded as a means of implementing quality assurance in tertiary education by higher education management (FitzPatrick & Spiller, 2010). Teaching portfolios are still not widely used despite being first-order evidence for teaching awards as demonstrated by Van Note Chism (2006). Van Note Chism (2006) discovered that only 14% of 144 teaching award programs in the United States requested the submission of documentation and reflection from nominees in the form of portfolios. Additionally, this study also found that peer review was explicitly requested by only 20% of award programs.

Conceptually, professional teaching portfolios are visual representations of teachers and should mirror their teaching philosophy, values, and reflection on their teaching and learning growth in a collegiate environment (Hurst, Wilson & Cramer, 1998). Teaching portfolios are also a good method to systematically present teaching credentials and competencies (Knapper & Wright, 2001). However, the experience of compiling documentation for teaching portfolios can be emotionally draining as demonstrated in a narrative study by FitzPatrick and Spiller (2010). This study was conducted on tertiary teachers in New Zealand, who compiled a teaching portfolio as a component for the postgraduate certificate in teaching. The findings reveal that teachers experienced uncertainty about the requirements and evidence required for a multi-purpose portfolio. There were mixed reactions towards exploration of the self, with some teachers finding the portfolio process upsetting. Some teachers felt anxious and angry at different times but others were able to realize and affirm the self as a teacher (FitzPatrick & Spiller, 2010).

Retrospectively, peer review provides an advantage to the development of teaching portfolios by breaking up the self-evaluation process and the evidence compilation process. Peer review helps determine the direction of the portfolio such as for personal development or institutional purposes (i.e., promotion and appraisals). It enlightens the workload by having teachers focus on teaching, reflecting and working towards improving teaching practice with the aid of peer feedback during peer review. The supporting documents acquired through peer review such as feedback reports, lesson plans, recommendation letters, photographs or videos can be included in the teaching portfolio.

The SWOT Framework on PRT: Strengths

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Additional Data to Supplement Student Surveys

The literature yielded several justifications for PRT as an essential part of faculty members' development. Firstly, peer review is able to make up for the limitations of student evaluation as a measure of teaching performance. Although student evaluations are tangible evidence of teaching effectiveness (Bernstein, 2008), pedagogy that cannot be assessed by students such as depth in subject knowledge and the integration of research into teaching can be evaluated by peers within the faculty (Cosser, 1998).

Self-Knowledge

PRT that includes the component of self-reflection has the ability to promote self-knowledge among faculty members (Brockbank & McGill, 1998). Subsequently, self-knowledge will lead to transformatory learning. Transformatory learning allows change to take place to improve teaching quality and enables faculty members to create meaning in the changes (Brockbank & McGill, 1998).

Peer Collaboration

Teaching is an activity which is difficult to learn alone and is largely mastered through experience. With the exception of faulty in Schools of Education and Institutes of Teaching and Learning, few other programme faculty have formal teacher training. Peer collaboration and review are needed especially when faculty members are attempting to explore new pedagogy to improve student learning experience (Hutchings, 1996). Peer review was developed as a strategy to demonstrate professional responsibility and accountability (Al Qahtani, Kattan, Al Harbi and Seefeldt, 2011). This was spurred on by the media and public, who have become increasingly critical in passing judgments on teaching. Peer review puts the faculty in charge of assuring the work quality of faculty members and at the same provides faculty members with ownership over their teaching (Kell & Annetts, 2009).

Peer review in teaching provides an opportunity for cross-cultural peer collaboration, especially for faculty members in universities with offshore campuses (Smith, 2009). Exchanges in teaching instruction with colleagues in the main campus help faculty members to adapt to a new teaching climate and environment and can initiate professional discussions across disciplines and cultures to innovate teaching practices (Smith, 2009). The potential of developing teaching portfolio for professional development or institutional purposes as well as the emotional issues associated with documenting teaching practice were also highlighted (FitzPatrick & Spiller, 2010; Van Note Chism, 2006; Knapper & Wright, 2001; Hurst, Wilson & Cramer, 1998). Peer review makes the compilation of portfolio documentation easy by making the teacher evaluation process a collaborative effort. Peer feedback helps faculty members evaluate themselves from another perspective and can be used to guide self-reflection.

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What are the Threats to Peer Review in the SWOT Framework?

As demonstrated in the SWOT matrix (see Figure 2), there are four aspects of peer review that are viewed as a major threat towards faculty members and teaching practice regardless of the discipline.

1. *The effect of expansion in academic roles on faculty members*. Faculty members will be expected to take on the role of reviewers and reviewees in addition to their normal teaching and research activities (Hutchings, 1996).
2. *Time limitation and time management issues*. This may result in peer review being abandoned if faculty members are unable to cope with enacting peer review plans and the reviewer roles (Hutchings, 1996).
3. *Threats to academic freedom* (Keig & Waggoner, 1994). Some faculty members will feel that their integrity and freedom to teach as well as make decisions is threatened when there are attempts to exert external influence on teaching by institutional authorities.
4. *Fear of having to conform*. Some faculty members may perceive peer review to be an external influence that will lead them to conform to institutional or national teaching standards (Peel, 2005).

Three similarities were noted in the studies on PRT. Firstly, the positive effects of peer review on professional development often surpass the issues and concerns about the peer review. For instance, the ability of peer review to encourage transformation in educational perspectives and practice as well as reassure faculty members of their ability to instruct and learn (Bell & Mladenovic, 2008) is prioritized over apprehension of academic freedom and reliability of peer feedback. Similarly, the role of peer review in helping faculty members develop responsibility and autonomy over their own work (Al Qahtani, Kattan, Al Harbi & Seefeldt, 2011) may also be prioritized over the impact of peer evaluation on working relationships. Moreover, the weaknesses and threats of peer review can be overcome by building on the strengths and opportunities in addition to using counter-measures to evaluate faculty members needs and address concerns based on faculty members input (i.e., bottom-up approach).

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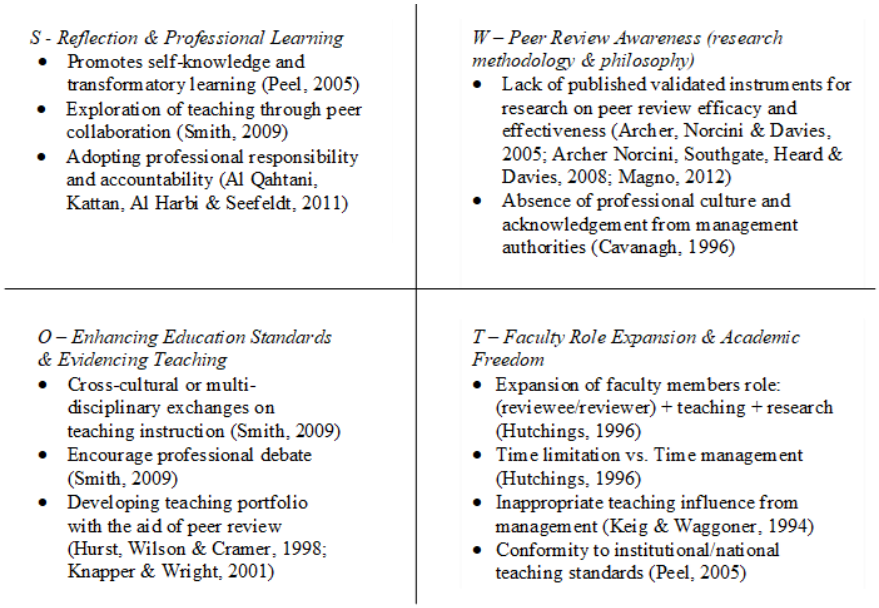

*Figure 2.*SWOT analysis of peer review of teaching in higher education. Adapted from Learned, Christensen, Andrews and Guth in 1965 as cited in "The Use and Misuse of SWOT Analysis and Implications for HRD Professionals," by T. J. Chermack and B. K. Kasshanna, 2007, *Human Resource Development International, 10,* p. 387. Copyright 2007 by Routledge, Taylor & Francis Group.

Secondly, there is inadequate published literature on peer review assessment instruments for teaching performance evaluations. Although the concept of PRT is not completely new, it is not extensively practiced in higher education institutions and thus, the development of validated peer review instruments may not receive the needed attention. Although qualitative researchers may argue that peer review is subjective, efforts to inculcate peer review culture has to start by showing ample evidence of effectiveness and efficacy of peer review instruments in assessing teaching practices. This is supported by Flay et al. (2005) who outlined several criteria for the selection of effective interventions such as rigorous research design, high quality of program implementation under optimal conditions (i.e., sufficient resources and well-trained reviewers) and naturalistic conditions (e.g., higher education institutions), demonstration of good control over confounding factors and evidence of program effectiveness through follow-up studies. When the credibility and rigor of peer review research is established, faculty members will be reassured about the reliability and validity of teaching performance feedback through the use of established and proven instruments.

Thirdly, cross-cultural and multi-disciplinary peer review still merits further investigation although the prospect is promising with the globalization of higher education. The study by Smith (2009) has shown how peer review can stimulate

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reflection and professional debate to advance education quality among colleagues from different campuses while Quinlan and Akerlind (2000) shows that it is possible to collaborate across disciplines in peer review. However, faculty members must carefully reflect on the contextual factors and nature of the discipline that could affect the success of peer review.

Despite the fact that there are possible weaknesses and threats of peer review as illustrated by the literature, peer review is still a viable option for professional development. Faculty members need to build on the strengths of peer review that encourages reflection and learning, overcome the limitations of lacking sufficient published instruments for research and awareness of peer review; exploit the opportunity of engaging in cross-cultural or multi-disciplinary exchanges and developing teaching evidence as well as overcome time management issues associated with the expansion of academic roles and threats to academic freedom.

The SWOT Framework: Lessons Learned

Five conclusions were drawn based on the review of literature on peer review programs in Western countries as well as the strengths, limitations, opportunities and threats within the peer review process. Firstly, the findings demonstrate that peer review is a solid strategy to kick-start transformational reforms within an institution by encouraging faculty members to observe and reflect on teaching performance in addition to identifying areas for improvement with the aid of colleagues as supported by Bell and Mladenovic (2008). Secondly, there is a thin boundary between consensus and conformity in conducting peer review. Although faculty members need to be in agreement on teaching criteria that constitute effective teaching, there is also a danger of conforming to nationally accepted standards of teaching for the sake of gaining the necessary teaching competency. This conclusion is in tandem with the research by Peel (2005). Thirdly, it is possible for higher education institutions to implement peer collaborative reviews across disciplines and cultures albeit three factors must be taken into consideration: the nature of the discipline, institutional structure as well as departmental and individual faculty as mentioned by Quinlan & Akerlind (2000).

Fourthly, the peer review process has the potential to ease the anxiety and anger among faculty members who are developing teaching portfolios by making the evaluation process a collaborative effort. Subsequently, supportive documentation accumulated through peer review can be included in their teaching portfolio. This conclusion is in line with FitzPatrick and Spiller (2010), who showed how frustrating the evaluation process can be on an individual level. Fifthly, faculty members need to be armed with sufficient training on time management to fit in their additional peer review roles as well as a firm foundation on observation skills and giving feedback. This is in line with Kell and Annetts' (2009) research which highlighted lack of time as a major factor in preventing peer review from remaining in practice. The conclusion is also supported by studies (Kohut, Burnap & Yon, 2007; Bell & Mladenovic, 2008; Shortland, 2010), that demonstrate greater satisfaction with

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feedback received from reviewers who are trained in various peer review skills. In addition, higher education institutions need to step up efforts to acknowledge the benefits of peer review towards teaching, create awareness on how peer review functions within their faculty and provide assurance that changes in teaching practice need not occur immediately. Higher education authorities also need to address issues pertaining to academic freedom and feedback validity.

This review also managed to capture the essential components for an effective peer review program such as: (a) tailoring the program according to the faculty's needs to provide a sense of ownership, (b) a clear and transparent structure to the peer review program with detailed briefings before the actual review, (c) utilization of flexible instruments to accommodate different teaching modes, (d) instilling trust among peers as a pathway for honest, constructive and critical feedback, (e) adequate training in observation skills and the competency to give and receive feedback, and (f) provision of oral feedback sessions to engage in professional debate and written feedback for teaching portfolio.

What is in the Future for SWOT and PRT?

There were difficulties in categorizing peer review factors into the four quadrants of SWOT based on the review findings as there is a possibility of overlap in categories. Despite this, future researchers may want to validate the current SWOT analysis of peer review or develop their own SWOT of PRT with this review as a guide. An important note for researchers would be to consider applying a bottom-up approach to study the institutional environment before designing a peer review program. This would better enable them to tailor the contents based on the faculty's requirements and address concerns about peer review. Besides higher education, the use of the SWOT of peer review can be further explored in a clinical teaching environment such as in medical schools and hospitals. On an individual level, SWOT analysis can be used by faculty members or clinical teachers to guide self-reflection during peer review sessions. On a collaborative level, the SWOT can provide a basis to encourage the faculty to discuss their personal strengths, weakness and limitations in a secure and supportive environment. It also provides the opportunity for the faculty to exchange ideas about teaching practice. Another aspect of peer review that should not be overlooked is the role of student behavior, which could act as a strength or weakness to faculty members. Student behavior is a good indicator of the personality and culture within a class, which can affect classroom progression and peer review outcomes (Carter, 2008). For example, class domination by certain groups of students, the level of voluntary subject preparation and classroom homogeneity or heterogeneity can have positive or negative effects on classroom progression.

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Conclusion

The findings of this review from the current body of research have clear implications for faculty members and trainers in higher education management, particularly when teaching is regarded as scholarship. The synthesis of PRT literature using the SWOT matrix is highly relevant as a starting point in the strategy to encourage faculty members into becoming reflective practitioners. It is a useful method to create awareness on the strengths, weakness, opportunities for development and threats to teaching practice before designing and implementing peer review programs in their respective institutions. The findings are also beneficial to higher education management who are looking into ways to promote professional responsibility and accountability among the faculty. Peer review is a collegial commission that is useful as it provides the opportunity to interact with peers, learn and adopt new teaching practices where relevant and re-establish control over teaching and learning. The findings also seek to reaffirm that high quality of teaching can be achieved by ensuring favourable teaching environment, social support and resources are provided by higher education management (Henard, 2009).

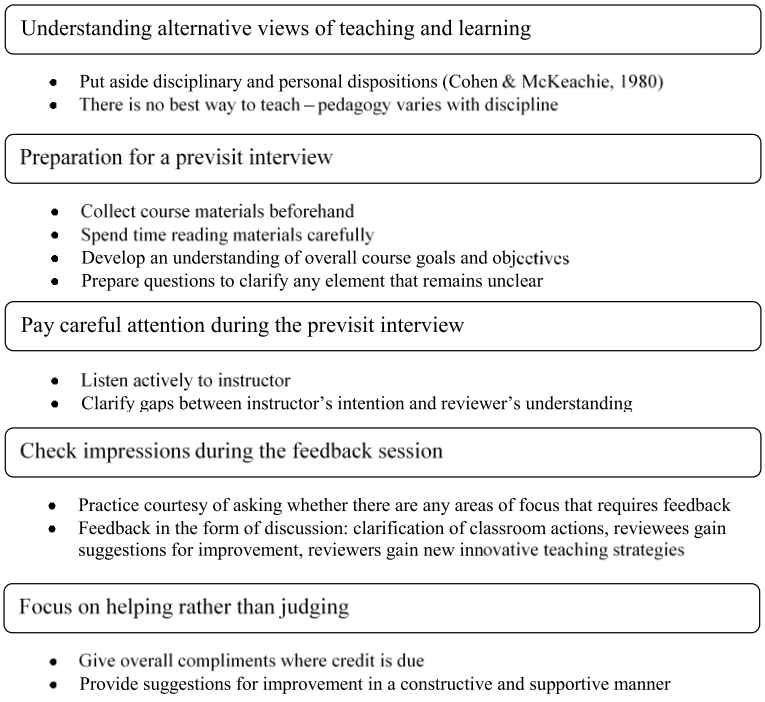

Figure 3. Summary of five strategies to enhance peer review experience Adapted from "Five Steps to Becoming a Better Peer Reviewer," by V. K. Carter, 2008, *College Teaching, 56,* p. 86 - 87. Copyright 2008 by Routledge, Taylor & Francis Group.

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In order for PRT to be successful, research indicates that the challenges to peer review teaching be eradicated and the programmes must be well designed with a systematic approach. It is extremely important that there is a belief among all participated faculty that peer review is valuable and leads to benefits in establishing a community of learning. Presently only 40% of universities in United States are utilizing classroom observation by peers. The possibility of bias and potential unfairness remains a serious concern.

There are five strategies that are recommended by Carter (2008) to implement peer review in a sensitive and supportive manner (See Figure 3). These five strategies operate on the assumption that each reviewer will employ professional and academic judgments to fairly evaluate the instructional abilities of colleagues. However, reviewers are not always objective as pointed out by Lomas and Nicholls (2005). Carter's (2008) strategies require reviewers to put in an effort before the actual assessment by collecting, reading and understanding course materials beforehand. Reviewers are advised to seek clarification in response to concerns about the inaccuracy of assessing teaching practice based on a single observation. An advantage of Carter's strategies is that it does not exclude faculty members who do not possess formal teaching qualifications or have alternative views of teaching. It also advocates positive reinforcement through compliments, which should be given where credit is due during feedback. The strategies recommended can be included as part of the curriculum for future peer review training sessions or faculty development programs.

While reviewing the literature on PRT it became apparent that certain themes emerged in order for the PRT to be successful to benefit student learning. The following five issues were consistent in most of the literature:

1. A clear and concise framework in which faculty can give input. Benefits of peer evaluation increase with the faculty takes ownership of the process. The guidelines should have sufficient clarity of instruction such that there would be effective interrater reliability. he question then becomes: *Are all participants cognizant of the peer review process and has it become community property? Does the process create a culture of accountability, empowerment, confidence, and trustworthiness? Will there be opportunities to critique and improve the framework?*
2. There are variations in lesson presentations and instruction. The peer review must understand that in order for course objectives to be met there are multiple modes of delivery. The question then becomes: *Will this form of instruction result in the acquisition of data or skills to meet the instructional goal.* (
3. Use multiple methods of feedback. Both formative and summative assessment should be used. The question then becomes: Is the feedback realistic, appropriate, positive, and effective. Is feedback being presented in a timely manner and will it include constructive criticism as well as motivate and build self-esteem?
4. All aspects of scholarship should be peer reviewed. Even though teaching is the most common element in PRT, there are other areas of scholarship that should be reviewed. This could include curriculum development, research, assignments, and assessment design are critical scholarly facets, as well as supervising dissertations. The question then becomes: *Does the curriculum and types of*

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assessment meet standards and create a life-long critical thinker. What contributions are being made to the field?

5. The peer review process is reciprocal. The reviewer gains insight to his/her own teaching while analyzing through mutual collegial respect. The questions then become: *What have I witnessed that are some weaknesses that can be [1]improved in my teaching? What modes of delivery would enhance my course instruction?*

Peer review presents a collective sharing of different knowledge bases and different experiences making it a constructive tool for all areas of professional development. However, peer review should not be only one form of valuation. As previously stated there also is validity in student survey as well as focusing on student reactions and responses during the observation period. Student surveys, the traditional method of evaluation, are composed of limited and personal views. Interestingly, to supplement peer evaluation using the SWOT framework student responses can take on a more scholarly approach by teaching them self-SWOT analysis. According to Addams and Allred (2013) teaching students a career self-SWOT analysis gives them a tool to identify weaknesses and strengths and conduct honest-self-inspection. This ability to conduct accurate introspection may generalize to other aspects of evaluation including an objective and accurate assessment of their professors which can be used in conjunction with PRT.

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Appendix: List of Peer Review Studies

Table 2 *Tally of 34 peer review studies quoted in the literature according to themes*

Themes	**No. of studies**
Benefits of Peer Review in Developing Faculty Members	14
Barriers to Peer Review of Teaching	4
Weakness: Lack of Published Literature on Standardized and Validated Peer Review Instruments	4
Possible Threats to Teaching Practice	11
Opportunities:	
(i) Expansion of Peer Review of Teaching	2
(ii) Prospects for Professional Development	7

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Table 3 C*ontent mapping of past literature on peer review of teaching*

No	Themes	Authors	Year	Objective	Participants	Instruments	Variables	Results	Conclusion
1	Benefits of Peer Review in Developing Faculty Members	Carroll, J. G.	1980	Present a critical analysis of empirical research on training outcomes	Teaching assistants	-	Cognitive outcomes, attitudes	Majority of the studies (13) demonstrated significant positive changes in behavior due to training	Training outcome: Enhanced teaching attitudes, achievement, and ratings of instruction Most training programs provide a specialized range of teaching skills
2		Dalgaard, K. A.	1982	Examine the effects of peer observation and training on behavior and teaching quality	Tutors	Video of teaching performance	Teaching attitudes	The training group received higher final teaching scores Videotaping was the most useful aspect of training Questioning technique used helped setting objectives and self-evaluation	Peer observation and training had positive effects on teaching behavior and improvement of teaching quality
3		Brinko, K. T.	1993	Extrapolate feedback giving practices to improve teaching	-	Literature on obtaining feedback in education, psychology and organizational behavior	Who – feedback source and recipient	Peers, the self, experts (credible, knowledgeable, well-intentioned) and subordinates.	Feedback practices were reviewed based in theoretical literature. There is a need to strengthen feedback literature with empirical studies. Allowances must be made for individual differences in
							What – information given to recipient	concrete and specific data, sandwich negative feedback between positive comments, creates moderate cognitive dissonance for change	

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							How – mode of feedback	Variety of modes: verbal, written, statistical, graphical, behavioral, structured/unstructured	feedback giver and recipients. More research needed in motivation for feedback-seeking behavior
4		Peel, D.	2005	Presenting a conceptual framework for PRT (technical development, classroom techniques, personal growth and changes)	-	-	Learning by doing (Kolb, 1984) Meaning in the process	Teaching competency depends on perception, reflective ability, personal insights, literature engagement, policy documentation	PRT - a transformatory instrument Self-reflection: essential to complement peer observation in preparation for change
5		Al Qahtani, S., Kattan, T., Al Harbi, K., & Seefeldt, M	2011	Reflecting on educational peer evaluation	-	-	Rationale, methods, uses of peer evaluation: formative and summative	Constructive criticism: improve weak areas, amplify strength Multiple resources can be utilized: observation is most common	Formative peer evaluation: helps develop responsibility, the power to be in charge of their own work and to practice self-regulation Important for junior members as a part of teaching improvement before tenure and promotion review Improves teaching Barriers to Peer Review of Teaching quality and link with faculty development programs

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6	Barriers to Peer Review of Teaching	Atwood, C. H., Taylor, J. W., & Hutchings, P.A.	2000	To identify the root barriers to PRT	Chemistry faculty members from 7 US universities	-	Rationale for PRT, perceived barriers, results and impact, future directions	Rationale for PRT: Encourages self-improvement Provides recognition of teaching Alternative to bureaucratic accountability	Perceived barriers for PRT: Fear, uncertainty in fairness of process, personal nature of teaching styles Students need time to acclimatize to new methods of instruction for a fair teaching evaluation
		Hanson, J.	1993	Develop and implement peer observation scheme	284 faculty members in Bournemouth University	Effective Teachers Behavior checklist	Giving feedback, immediacy of feedback and follow-up action, validity and utility of feedback	Concerns about validity of non-specialist feedback, which is equally valid and reliable as subject specialist feedback Satisfaction with feedback validity, comments were useful	Unfairness of peer review can be overcome by obtaining feedback from multiple sources besides observation records and expert opinions.
8		Lomas, L. & Nicholls, G.	2005	To examine the introduction of PRT in a pre-1992 UK university	-	Peer review documents, archived records, interview transcripts, direct observation of intervention, participant observations and	Faculty members perception of PRT, opposition to PRT, managing PRT, changing culture	-	Non-objectivity of reviewers, fear of review process, critical feedback, impact on faculty members relationships, unfairness in one-session assessments

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						institutional reports			
9		Kell, C., & Annetts, S.	2009	Assess the perceptions about PRT concept and clarify issues about the review process	20 faculty members	Group discussion data transcript	Perception of terms, reflection about existing PRT process,	Newer faculty members perceive PRT as audit-like Senior faculty members perceive PRT as beneficial for personal and professional development	Lack of time, biased review, pulling of ranks Ownership of the peer review process encourages the faculty to engage in PRT
10	Weakness: Lack of Published Literature on Standardized and Validated Peer Review Instrument	Archer, J. C., Norcini, J., & Davies, H. A	2005	To investigate the feasibility of SPRAT among paediatricians-in-training	122 paediatric senior house officers and middle Grades (three tertiary and five secondary UK hospitals)	SPRAT	Good clinical care, maintaining good medical practice, teaching and training, assessing and appraising, relationship with patients, and working with colleagues	83% of doctors in needed four raters to achieve a reliable score (if the intent was to determine that scores were satisfactory)	SPRAT is a feasible tool to: Inform high stake decisions Provide feedback to doctors' personal development plans
11		Archer, J., Norcini, J. Southgate, L., Heard, S., & Davies, H.	2006	To design, implement and evaluate the mini-PAT to assess clinical trainees	553 foundation trainees from 12 Deaneries in England, Wales and Northern Ireland	mini-PAT	Good clinical care, maintaining good medical practice, teaching and training,	High inter-item correlations (r = 0.98)	mini-PAT is a valid method to collate peer feedback to assess trainees

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							assessing and appraising, relationship with patients, and working with colleagues		
12		Magno, C.	2012	Constructing a peer review rubric applicable for use in higher learning institutions	183 teachers in Manila, Philippines	PARF	Planning and preparation, class environment, instruction, and professional responsibility	High reliability (overall internal consistency = .98) Concordance validity of two raters (ω=.47, p<.01)	Three highlights of study: Professional responsibility Merits of multiple rater instrument The need to communicate expectations
13		Cavanagh, R. R.	1996	To reflect on discussions and debate around the AAHE Peer Review of Teaching program	-	-	Definitions, reluctance about faculty peer review, prospects and strategy for peer review	-	Reluctance towards peer review is instilled by: Lack in confidence of colleague's ability to understand faculty standards of teaching The absence of professional culture that acknowledges the wisdom of peer collaboration in teaching
14	Possible Threats to	Shortland, S.	2010	Explore a case study of ten developmental peer	-	Guidelines for peer observation,	-	Two themes discovered:	Feedback: based on interpretation of events and

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	Teaching Practice			observations within UK higher education		checklist forms		Difficulty in gaining student engagement Lack of integration between class population	perceptions of observation rationale and higher education environment Constructive feedback may be interpreted as critical, evaluative, judgmental, threatening, painful, competitive or personal Shared nature of feedback does provide participants with learning and development opportunities
15		Hutchings, P.	1996	Review current developments of the peer review of teaching (PRT), the rationale behind the developments, issues raised by peer review, and prospects for the future.	-	-	-	-	Five issues with PRT: Going public with teaching Establishing standards Identifying the appropriate peers Finding the right methods and strategies Time limitations
16		Keig, L. & Waggoner, M. D.	1994	To discuss factors that discourage peer evaluation	-	-	Academic freedom, fairness	Subjectivity, time factors and values within faculty can act as incentive or	Peer observation – invasive and challenging,

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								discentive according to context	inappropriate influences by those in power The freedom to choose teaching process and content
17		Hammersley-Fletcher, L., & Orsmond, P.	2004	To evaluate two systems of peer observation in a post-1992 university	Academics from the Law Faculty and School of Science	Observation advice, report back forms, self-evaluation form (Science)	Context of observation process, the outcomes, the realities of two alternative models	Factors essential for peer review: Open and honest relationship Assurance of confidentiality	Professional development, changes in teaching change fatigue, resistance, difference in perception towards outcome of observation
18		Hammersley-Fletcher, L., & Orsmond, P.	2005	Reporting the reflective practice conducted by two schools through interview data	Five reviewers and four reviewees from two schools	-	Reviewer-reviewee relationship and the effect on reflective practice, engagement in reflection	Slight distancing between reviewer and reviewer could increase feedback objectivity Quality of peer review depends on the thoroughness of observer feedback The timing of peer observation: sufficient time for teachers to reflect and act Majority of reviewees tend to view feedback negatively	Understanding of reflective process is limited within the set interpretation of vulnerability issues and anxiety in giving and receiving feedback
19		Kumrow, D. & Dahlen, B	2002	Examining the effectiveness of peer review to evaluate teachers	-	-	Purpose, process, benefits, effectiveness,	Teachers are supportive of peer review but must be included in the design, development	Additional costs of implementing peer review need to be further investigated

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							problems, future of peer review	and implementation for continued acceptance	
20	Opportunity: Expansion of Peer Review of Teaching	Quinlan, K. M., & Akerlind, G. S.	2000	To investigate the effect of contextual factors on departmental peer collaboration	Private University: 7 faculty members, State University: 7 discussion sessions (20 members in first session, 12 members in subsequent sessions)	-	Nature of discipline, institutional structure, departmental and individual faculty factors	Factors for receptive peer collaboration: Established collaborative work pattern, an agreed set of external standards, history of educational reforms, an issue to be addressed, autonomy in faculty governance, self-confidence	Peer collaboration across different disciplines is possible with the condition of considering and overcoming contextual factors within an institution
21		Jenkins, A.	1996	Examining disciplinary collaboration and improving teaching quality from the perspective of an educational developer	-	-	Curricular and pedagogic concerns, developing the faculty as scholars, developing careers within a discipline, promoting discipline-based teaching initiatives	Advantage of disciplinary collaboration: Greater identification with peers from the same discipline Reduce possibility of losing positive changes from lack of support	Greater identification operates best when aiming to change faculty beliefs Faculty members have to be provided ample support and resources to disciplinary collaboration in teaching and research
22	Opportunity: Prospects for	Wubbels, T. & Korthagen, F. A. J.	1990	To examine the effect of a reflective teaching program	73 teachers	Likert-type questionnaire	Attitude, student-teacher relationships,	More reflective attitudes, linking learning to teaching philosophies, cultural	The effects of promoting reflective teaching in teacher education was

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	Profes-sional De-velopment					(reflective attitude)	innovation, job satis-faction	aspects, better teacher-student re-lationships, more open to innovation, higher job satisfac-tion	promising but also discouraging Reflective teaching produced positive outcomes but some teachers are not in-clined to reflect or show innovation in teaching
23		Smith, K.	2009	To examine teachers' experi-ence of using re-flective practice in a cross-cultural peer review	-	-	Transna-tional ex-perience, reflective practice, transfor-mation, profes-sional de-velopment	Novel experience encourages reflec-tion on content, process and premise Reflection is forced by cultural differ-ences in environ-ment and climate	With appropriate support, reflection and cross-cultural discussions im-proves teaching practice
24		Hurst, B., Wil-son, C., & Cramer, G.	1998	Provide guide-lines to construct teaching portfo-lios	-	-	Sugges-tions for creating and pre-senting portfolios	Portfolio as: Self-selected body of reflective evi-dence Teaching compe-tency and creden-tials Representation of teachers' holistic view	The process of cre-ating teaching port-folios can help re-fine professional and personal goals through reflection. Teachers can redis-cover their strength and passion for teaching from put-ting together their portfolio
25		Knapper, C., & Wright, W. A.	2001	Outlining valid and useful steps for creating a portfolio	-	-	Clarifying and docu-menting teaching responsi-bilities,	Portfolios should include: Data from multiple sources (Head of	Portfolios can be developed for both formative and sum-mative purposes

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							selecting criteria for effective teaching, compiling supportive evidence, summarizing evidence, and collecting excellent back-up materials	School, peers and students) Teachers become aware the lack of information about teaching activities and effectiveness during the portfolio compilation	Portfolios increase the control of teachers over their evaluation process Teachers are responsible for documenting teaching accomplishments and finding methods to assess effectiveness of teaching practices
26		Van Note Chism, N.	2006	Examine the criteria used in teaching awards, the evidence required and standards for judging candidates	-	Content analysis of 144 teaching awards from 85 institutions across the US	Criteria, evidence, standards, match between the criteria and evidence	Majority (52%) of teaching awards do not specify teaching excellence criteria or uses a global definition Majority (92%) rely on letters of nomination as evidence. Teaching portfolios – requested by only 14% of programs Only two programs that list clear criteria for the award specifically match these with evidence that is considered suitable indicators of the criteria.	Low emphasis on PRT within the evidence requirements of awards programs except for letters of support, confirms the low use of standardized peer review processes in most institutions Failure to request evidence of teaching scholarship (portfolio) demonstrates the low value placed within the teaching dimension Clear and specific criteria and standards for teaching award programs needed; link criteria to evidence

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27		FitzPatrick, M. A., & Spiller, D.	2010	To consider the implications of teacher emotions in relation to the use of teaching portfolios by institutions Explore the accommodation of the emotional dimension of professional development into teaching portfolios	Eight participants from the Postgraduate Certificate in Tertiary Teaching in New Zealand University	Teaching portfolio, personal narratives	Uncertainty and anxiety created by portfolio requirements Emotional complexity in exploration of the self as a teacher	Some participants were uncomfortable about the blend of the formative and summative functions of the multi-purpose portfolio Producing the portfolio evoked a range of complex emotions	Emotions have a powerful in the process of learning to be a teacher The process of exploring the self and compiling the portfolio is private and should be undertaken under a trusted mentor with the support of invited peers

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