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The Impact of Peer-review of Teaching on Students' Performance

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Abstract

Amidst the increasing focus on teaching quality, Peer Review Teaching (PRT) is acknowledged for improving pedagogy and student performance. However to date, a comprehensive framework linking PRT effectiveness with student outcomes is lacking in the literature. The study addresses this oversight and conducts a literature review to develop six propositions and a conceptual framework. This identifies the key elements of effective PRT and assesses its impact on student performance. The study contributes to evaluation and assessment in higher education and extends the understanding of PRT's role in educational success. Practically, it provides actionable strategies for educators and policymakers. The research underscores the criticality of resource utilization, technological integration, and embracing diversity in PRT for enhancing various student performance dimensions.

Keywords: *Academic; Evaluation; Feedback; Peer-review of Teaching; Performance; Student*

1. Introduction

With the growing focus on the significance of university teaching, peer-review of teaching is regarded as a method to enhance teaching quality by promoting the exchange of effective practices among faculty members (Hinrichs et al., 2022). Nonetheless, this improvement in teaching quality can only be realized if programs are executed with care and consider major apprehensions regarding the peer-review of teaching. This process may require a considerable shift in staff attitudes, as they must recognize the benefits of peer-review for it to effectively contribute to the enhancement of teaching quality. According to Lomas and Nicholls (2005), UK universities have increasingly adopted the practice of peer-review of teaching, though its utilization is not as widespread as it is in countries such as Australia and the USA. However, Johnston et al. (2020) noted that recently, peer-review of teaching (PRT) has emerged as a key method for enhancing teaching quality in higher education. However, calls for further research are significant (Tennant & Ross-Hellauer, 2020). Despite significant international research on

PRT outcomes (e.g., Lomas & Nicholls, 2005), findings are not extensively documented within Australian universities (Burrows et al., 2011). In Australia's tertiary education sector, PRT initiatives have predominantly been informal and small-scale, with limited publication of their results (Harris et al., 2008). Thus, this literature review aims to deepen our understanding of the elements within PRT that contribute to the development of teaching, specifically in the context of Australian higher education. The study synthesizes prior literature to create a conceptual framework to address the following research questions: (1) What are the elements that enhance the effectiveness of PRT? (2) What aspects of student performance/learning outcome does an effective PRT affect? The study highlights six propositions; while propositions 1,2, and 3 are focused on addressing research question 1, propositions 4,5, and 6 address research question 2.

2. Literature Review

2.1. Elements that enhance the effectiveness of PRT

The peer-review process for teaching programs has demonstrated positive outcomes at various levels, yet its effectiveness is contingent on diverse resources, encompassing both human and non-human elements. Positioned as an established system nurturing a culture of collaboration, reflection, and excellence through feedback and academic discussion (Hinrichs et al., 2022), PRT relies significantly on human resources. At the program level, significant factors such as framework, program design, basis of participation, observation, feedback, and reflective practice are central to determining program engagement and achieving successful outcomes. Individual-level factors such as prior experience and participants' perceived development requirements also play a role in the effectiveness of a PRT program. However, Woodman & Parappilly (2015) found that even early-career academics without previous experience of peer review can benefit from the process and accelerate changes to their teaching approaches. Faculty members who embrace accountability, establish high standards, and pursue continuous improvement play a pivotal role in cultivating a culture of excellence, ultimately contributing to the success of PRT programs (Hinrichs et al., 2022). Diverse non-human resources have also been identified as key factors influencing the success of PRT programs. These resources encompass program development processes, review instruments, and program evaluation strategies. The literature regarding the influence of human and non-human resources leads to the development of Proposition 1. This proposition posits that the success of PRT programs is significantly influenced by the utilization of both human and non-human resources. This proposition underscores the importance of various elements such as faculty expertise, administrative support, technological tools, and educational materials in shaping the effectiveness of PRT. It suggests that a harmonious integration of these resources is crucial for the optimal functioning and impact of PRT programs within educational institutions.

Proposition 1*: Human and non-human resources influence the effectiveness of a PRT program.*

Another element that influences the effectiveness of PRT is the integration of technology. Integration of technology into the PRT process can substantially improve teaching adaptability, which in turn positively impacts student performance. The term 'technology' in this context refers to digital tools and platforms that assist in collecting, analyzing, and disseminating feedback throughout the PRT process. The adoption of technology-enhanced classroom observation systems, which are becoming widely accessible and economically feasible, exemplifies this integration (Rodgers et al., 2019). Moreover, the role of digital platforms extends further to facilitate collaborative and continuous processes of reflection and improvement among educators (Fallon et al., 2015). Additionally, the use of visual data outputs, when combined with feedback, has been predominantly employed to track student behavioral trends (Noell et al., 2002) and specific teaching actions, such as the delivery of praise statements. The potential of these outputs, however, extends to portraying larger instructional practices. For instance, outputs that illustrate the use of modelling or other complex teaching strategies offer a rich source of information for further enhancing teaching methods (Rodgers et al., 2019). Thus, the literature suggesting the importance of integration of technology in PRT, leads to the development of Proposition 2. This proposition focuses on the transformative role of technology in the Peer-Review of Teaching process. It argues that the integration of digital tools and platforms in PRT not only enhances the adaptability of teaching methods but also positively impacts student performance. This proposition highlights how technology can facilitate more dynamic and responsive teaching approaches, thereby aligning educational practices with contemporary learning needs.

Proposition 2: *Integration of Technology in PRT Enhances Teaching Adaptability and the effectiveness of PRT*

Prior studies have debated on whether it is better to have PRT conducted by individuals from the same discipline, or whether different disciplines may add more value. The importance of diversity in educational settings is well-documented in academic literature (Quinlan, 1995). This diversity, facilitated by comprehensive peer-review feedback, enables educators to tailor their teaching methods to be more inclusive and reflective of the student population. De Lange & Wittek (2018) observe that a dominant teaching approach within a single discipline could overshadow more unique teaching styles and restrict the variety of methods used, a concern also raised by Quinlan (1995). Therefore, introducing a variety of perspectives from different disciplines into the Peer-Review of Teaching is essential to circumvent this limitation and promote a broader array of teaching methodologies. This leads to the development of Proposition 3. In this proposition, the emphasis is placed on the value of incorporating inclusive and diverse perspectives in PRT. It asserts that a PRT process enriched with varied cultural, academic, and pedagogical viewpoints contributes to the creation of a holistic learning environment. This proposition advocates for the recognition and integration of diverse insights and experiences, enhancing the quality and relevance of the educational experience for students.

Proposition 3: *Inclusive and Diverse Perspectives in PRT enhance the effectiveness of PRT and contribute to a Holistic Learning Environment*

2.2. Aspects of student performance influenced by effective PRT

The notion that peer-review of teaching serves as a developmental tool is strengthened by findings suggesting that it benefits not only the individual being reviewed, but also the reviewer. Assessing the quality of academic teaching is crucial for improving teaching and learning outcomes and achieving strategic goals related to enhancing education (Baik & Blasioli, 2018). At the individual level, faculty members experience numerous benefits, such as the development of reflective practices, stronger collegiate relationships, and enhanced teaching effectiveness (Bowen, 2009). From an institutional perspective, PRT initiatives can foster a transition in teaching methodologies from a teacher-centric to a student-centric focus (Baik & Blasioli, 2018), lead to improved student learning outcomes and place a greater emphasis on teaching quality (Bell & Thomson, 2018). At the organizational level, discipline-specific factors play a crucial role in fostering teaching development. Various scholars suggest that the observer/reviewer should either belong to the same discipline, be a senior academic leader, or an educational developer (Bell, 2001). This leads to the development of Proposition 4. This proposition explores the impact of PRT programs on student performance, both at individual and institutional levels. It posits that PRT, when effectively implemented, can lead to significant improvements in student learning outcomes, academic achievement, and overall educational quality. This proposition underscores the far-reaching benefits of PRT in fostering academic excellence and institutional success.

Proposition 4*: PRT programs have a positive impact on students' performance at the individual level and institutional level.*

Defining what constitutes good teaching is challenging, as it can manifest in various ways. The specific context of the environment and the objectives of a class largely influence the different forms good teaching can take. For example, the range of teaching behaviors displayed in a lecture is likely to differ from those in a tutorial, workshop, laboratory, or online setting. While collaboration with peers plays a crucial role in refining one's teaching abilities, the primary focus should always be on the student, their experiences, and their learning outcomes. Additionally, for university educators, Glassick's (2000) sixth standard of scholarship involves engaging in reflective critique of one's own work. The key elements of this standard are the critical evaluation of teaching practices based on a wide range of evidence, and, crucially, using this evaluation to improve the quality of future teaching. This leads to the development of Proposition 5. This proposition delves into the relationship between effective PRT programs and deep learning outcomes. It suggests that well-structured and thoughtfully executed PRT processes can significantly enhance students' deep learning capabilities, leading to a more profound understanding of subject matter and critical thinking skills. This proposition highlights

the role of PRT in cultivating an educational environment conducive to in-depth learning and intellectual growth.

Proposition 5*: Effective PRT programs have a positive impact on deep learning outcomes.*

The literature suggests that an effective PRT process enhances teaching quality (Raj et al. 2017), which in turn influences students' involvement and commitment to their learning journey, characterized by increased attentiveness, active participation in discussions, and deeper engagement with course material. Moreover, the role of student engagement is not limited to arousing interest; it extends to deepening students' commitment to their education. Axelson and Flick (2010) emphasize that when students find their classes engaging and relevant to their interests and aspirations, their motivation and dedication to studies are significantly enhanced. This heightened engagement benefits academic performance and fosters a positive, enduring attitude toward learning. Insightful PRT feedback enhances teaching quality in several ways. It creates a more diversified, inclusive, and collaborative learning environment and fosters a culture of ongoing feedback and reflective practice. This continuous refinement of teaching methods ensures that they evolve in response to constructive critiques, aligning closely with the needs and expectations of students. The benefits of effective PRT on student engagement and participation, as evidenced in the existing literature, lead to the development of Proposition 6. This proposition focuses on the role of PRT programs in enhancing student engagement and active participation in the learning process. It posits that through the refinement of teaching methods and strategies guided by PRT, educators can create more engaging and interactive classroom environments. This proposition emphasizes that enhanced student engagement, fostered by PRT, is key to fostering a dynamic and effective learning experience.

Proposition 6: *PRT Programs Enhance Student Engagement and Participation in the Learning Process*

3. Findings

Through synthesizing evidence from existing literature, this study has developed six propositions. Using the propositions, the study has designed a conceptual framework that provides a comprehensive understanding of what leads to effective PRT, and what outcomes an effective PRT has in regard to student performance and learning outcomes.

In response to the first research question, the study finds that human and non-human resources, technology integration, and inclusive and diverse perspectives contribute to enhancing the effectiveness of PRT. Based on this, as illustrated in Figure 1, the study has developed the following three propositions:

Proposition 1*: Human and non-human resources influence the effectiveness of a peer-review of teaching program.*

Proposition 2: *Integration of Technology in PRT Enhances Teaching Adaptability and the effectiveness of PRT*

Proposition 3: *Inclusive and Diverse Perspectives in PRT enhance the effectiveness of PRT and contribute to a Holistic Learning Environment*

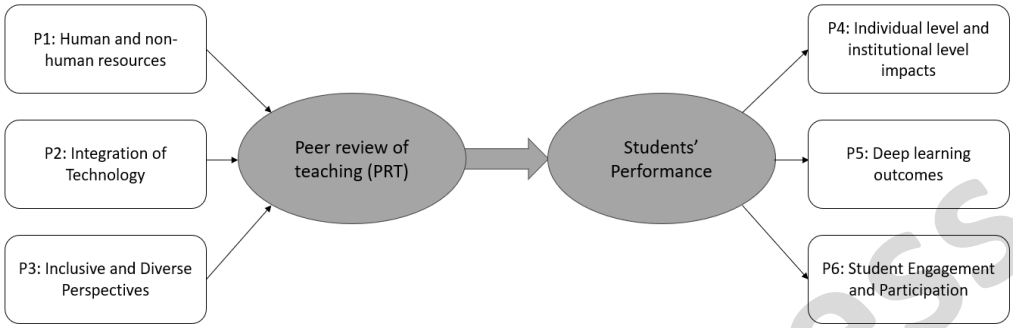

Figure 1. Conceptual framework. Source: Authors

In response to the second research question, the study finds that an effective PRT positively influences several aspects of student performance, including positive impacts on individual level and institutional level performance, deep learning outcomes, and student engagement and participation. Based on this, as illustrated in Figure 1, the study has developed the following three propositions:

Proposition 4*: PRT programs have a positive impact on students' performance at the individual level and institutional level.*

Proposition 5*: Effective PRT programs have a positive impact on deep learning outcomes.*

Proposition 6: *PRT Programs Enhance Student Engagement and Participation in the Learning Process*

4. Discussion

The study findings provide a nuanced understanding of the elements contributing to the effectiveness of Peer-Review of Teaching programs and their subsequent impact on student performance, offering valuable insights for both academics and policymakers in the higher education sector. The findings have several important implications for both academic practices and policy formulation within the higher education sector. The elucidation of six key propositions sheds light on vital aspects of Peer-review of Teaching, thereby providing a roadmap for enhancing the quality of education and student outcomes. For academics, the implications are multifaceted. The study underscores the importance of utilizing both human

and non-human resources effectively (Proposition 1), emphasizing that a well-coordinated interplay of faculty expertise, administrative support, and technological tools is crucial for the successful implementation of PRT programs. Furthermore, the integration of technology in PRT (Proposition 2) is identified as a key factor in not only enhancing the adaptability of teaching methods but also in elevating the overall effectiveness of PRT. This suggests a shift towards more digitally enabled peer-review processes, leveraging technology for more efficient and innovative teaching practices. Additionally, the study highlights the significant role of inclusive and diverse perspectives in PRT (Proposition 3). Policymakers in the HE sector, on the other hand, are urged to take actionable steps in light of these findings. The study advocates for policies that ensure adequate allocation and support for resources critical to PRT programs, aligning with the need for a comprehensive approach to resource utilization in peer-review practices. Moreover, the integration of technology in teaching and peer-review processes is seen as a priority, calling for policy frameworks that facilitate and support the use of digital platforms and tools in educational settings. Additionally, the promotion of diversity and inclusivity in educational policies is emphasized, highlighting the need for initiatives that foster diverse perspectives in teaching methodologies and PRT processes. The broader impact of these propositions on student performance is also evident. The latter propositions (4, 5, and 6) collectively illustrate the positive influence of effective PRT on enhancing student performance at both the individual and institutional levels, deepening learning outcomes, and boosting student engagement and participation. This comprehensive impact necessitates a concerted effort from both educators and policymakers to recognize and endorse PRT programs that are not only methodologically sound but also profoundly beneficial in improving student learning experiences.

5. Conclusion

In essence, the implications of this study offer a strategic direction for elevating the standard of higher education. By focusing on key factors that enhance the effectiveness of PRT and understanding their impact on student learning, both educators and educational policymakers can collaboratively work towards enriching teaching practices and fostering an environment conducive to student success. The adoption of these insights promises to lead to more effective, inclusive, and responsive educational practices, ultimately benefiting the broader educational landscape. The generalizability of the findings, which may vary across different educational contexts, disciplines, and cultures poses a limitation of this study. The study contributes to evaluation and assessment in higher education with implications for both theory and practice.

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