Immersive professional learning to foster technology-enabled peer-review

Gayani Samarawickrema and Olga Gavrilenko
Victoria University

This paper reports on a professional learning exercise designed to help academic staff gain pedagogical and technological confidence to successfully integrate peer-review practices and a feedback tool into their teaching practice. The study focuses on an immersive professional learning experience in higher education, embedded as a formative assessment task within a unit in the university's Graduate Certificate in Tertiary Education (GCTE), a nationally recognised qualification. Taking a descriptive case-study approach, we report on academic participants' professional learning experience as they undertook the unit, specifically the potentials of *FeedbackFruits* from a learner perspective, and how participants gained pedagogical and technological confidence through engagement in the task. The findings highlight how professional learning can be embedded for successful outcomes and the importance of providing professional learning in a safe environment allowing participants to consider both pedagogical practices and relevant learning technologies in context so that technology adoption occurs purposefully and with confidence.

Keywords: Professional learning; immersive learning; peer-review and feedback; *FeedbackFruits*,

Introduction

Higher education academics are often compelled to be innovative in their teaching practice, adopt new technologies and prepare learners for a 21st century workforce. This is never easy without purposeful and focused professional learning opportunities. Simultaneously adopting new technologies and applying new learning approaches and pedagogies before ones' students can be a demanding and stressful experience for many academics. The uptake of new technologies will be minimal if academics' competence and confidence are not carefully fostered. This also includes protecting academics from likely technological mistakes made by anyone taking up a new technology, while in the process of teaching their students. This paper describes one such exercise. Therefore, this paper has two threads – professional learning and the application of learning technology for the provision of feedback.

The literature describes academics as slow to adopt technology and resisting using learning technology (Birch & Burnett, 2009; Deneen & Boud, 2014). In their defense, Batson (2011) argued that academics are often told to adopt technology without a reasonable rationale offered to them. While academics are required to apply technologies for learning and teaching, professional learning often provided is typically focused on acquiring mastery on how to use individual applications. Such training is dislocated from practice (Flavell, Harris, Price, Logan, & Peterson, 2019) as the pedagogical application of the technology to a learning context is rarely considered in the training. In addition, effective integration and use of technology by academics is unlikely to happen if the approach is not individualised (Judge & O'Bannon, 2008). The value of professional learning within courses that have organisational accreditation, the criticality of situating such learning in authentic contexts, the provision of time to reflect, opportunities to share experiences with colleagues and engage as learners have been highlighted by Wilson and Stacey (2004). Consequently, the professional learning experience described in this paper is embedded in the Graduate Certificate in Tertiary Education (GCTE), a postgraduate course designed for all academics at Victoria University (VU), Australia to enhance their higher education teaching practice. This study explores the professional learning experienced by the academics as they engaged in the unit and used the peer-review technology as learners.

The context

Staff at VU are competent users of VU Collaborate (the university's learning management system and its ecology of tools, e.g., BuddyCheck, *FeedbackFruits*, H5P, Padlet, Turnitin, Zoom). This convenient availability of the tools has forced academics to rethink their teaching and optimise the pedagogical possibilities the tools

offer. To address this challenge and accompanying expectations, VU offers just-in-time skills-based workshops on how to use technology. Complementing this was our approach to provide academics the opportunity to discuss, reflect and share concerns leading to transferring the technology learning experience into their contextualised practice. Academics need to understand the affordances of technological tools within their disciplinary contexts and learner needs. Such understandings of technology integration require hands-on experience which in turn influences adoption. Introducing new technologies in the classroom can be stressful particularly when the technology is new and when the academic has never used it previously. Therefore, our strategy was also protecting academics from the risk of any public exposure of technological mistakes (Samarawickrema, Stacey, & Warren, 2008). Our approach aligned with Tondeur, Van Braak, Sang, Fisser, and Ottenbreit-Leftwich (2012) who highlighted the importance of educators modelling pedagogically exemplary use of learning technologies to promote preservice teachers learning to teach with technology. To enable authentic professional learning for academics to obtain the learner experience, *FeedbackFruits* (a self and peer review online tool) was embedded within an early peer-review summative assessment in the Curriculum design and assessment unit in the Graduate Certificate in Tertiary Education (GCTE). The GCTE is an accredited four-unit postgraduate course offered to all new academics at VU to improve their teaching practice.

The activity and the rationale to use *FeedbackFruits*

FeedbackFruits is a suit of interactive tools that incorporate peer-review, group member evaluation, assignment review, skill review functionalities to provide peer feedback. Its interactive study material feature allows document, video and audio uploads for group engagement. We used the peer-review option only, to allow participants to review each other's work using defined criteria.

Although the literature on the use of *FeedbackFruits* is scarce, Danmeri (2018) in her master's thesis describes its use by academics in three Dutch universities, reviews the learning experiences, perceived impact and strengths and weaknesses, and provides a useful background to the tool. Our purpose was to model the use of *FeedbackFruits* for peer feedback practices and provide an immersive experience and demonstrate the pedagogical potential for improved performance in the assessment (Liu & Carless, 2006) including its significant benefits for both reviewer and reviewee (Topping, 2009). The learning benefits of producing and receiving peer-feedback is well established in the literature (Nicol, Thomson, & Breslin, 2014; Pearce, Mulder, & Baik, 2010) with key benefits identified as developing critical thinking, promoting greater metacognition, improving group work, fostering collaborative behaviour, helping peers improve their work (Cho & Cho, 2011), developing evaluative judgement (Boud, Ajjawi, Dawson, & Tai, 2018; Fawns & O'Shea, 2019), being exposed to greater diversity of perspectives, improving communication skills and reflecting on one's own work (Nicol et al., 2014). We were keen for our participants to experience these benefits.

Like Mostert and Snowball (2013) our designed task required two peers to give feedback on a draft piece of work to increase reliability. Participants were required to provide feedback against four criteria of the assessment rubric to ensure that the feedback was purposeful, safe and encouraging. The reviews were not anonymous as we wanted participants to take responsibility for their feedback. Consequently, our learning design drew on only some key functionalities of *FeedbackFruits*. The tool was demonstrated in a workshop and as additional support, detailed instructions (in downloadable PDF format) and a discussion forum dedicated to the task to resolve any queries or uncertainties arising, were offered. Overall, the task was designed so that *FeedbackFruits* provided GCTE participants with a student perspective, i.e., opportunity to gain empathy and experience as a student user. This strategy facilitates a complete authentic student experience enabling the professional learning to be immersive and high-impact. For many academics, to experience learning as a student is a rare opportunity. By offering an authentic task over an extended period, giving time for reflection and engagement, we deliberately moved away from ways in which professional learning has been commonly offered.

Our study explored the professional learning experienced by the participants in relation to technology enabled peer review and feedback through a summative assessment in the GCTE. In this paper we report on (a) the potentials of *FeedbackFruits* for learners, and (b) how the participants (who were academics) gained pedagogical and technological confidence.

Method

Data was collected via a 19-item Qualtrics survey of which 11 items were open-ended. The participants' perspective as student users of the tool was explored through nine questions (five open-ended and four closed questions). Ten questions (six open-ended and four closed questions) explored participants' perspective as teachers potentially implementing the tool in their class. Participation in the survey was voluntary, and the questionnaire was administered after participants completed the final assessment of the unit. All 68 participants who completed the unit were emailed the plain language statement, an assurance of anonymity and link to the Qualtrics survey which resulted in 38 responses (55.9%). Ethical approval to conduct this study was granted by the university's ethical approval body.

Findings

Of the 38 respondents, 17 (nearly 45%) had previously formally integrated peer-review with assessment, while 10 (26%) used peer-review activities informally. Significantly, 11 respondents (29%) had not used peer-review activities at all with their students. Of those who used peer-review activities, only two had used *FeedbackFruits* while an overwhelming 95% had never used the tool. Clearly, majority of respondents were unfamiliar with a purpose-built learning technology such as *FeedbackFruits* for peer-review, increasing the value and relevance of their responses to this study.

Potential of *FeedbackFruits*

Commenting on the technological potential of *FeedbackFruits*, all were overwhelmingly positive, with the exception of two. Respondents commented that the tool was 'quick and convenient to use', 'user-friendly', 'efficient for uploading and reading', 'accessible', 'efficient' and 'convenient'. They also liked the tool because the 'layout was easy and quick' and 'the ease of use and the structured nature of the tool'. One commented that 'the graphical user interface was easy to use'. Respondents also identified shortcomings that would make the tool inconvenient to students as one explained, 'I cut and paste from a working Word doc outside the tool. I would not have found drafting within the tool easy'. The difficulty in attaching documents, the inability to print feedback and the absence of a wordcount were further limitations of the tool. Another commented that it was 'cumbersome to go into another platform' although contrarily, another respondent observed 'I didn't realise I was using it' (i.e., another platform). Overall, respondents affirmed the technological ease of the tool while several also highlighted its potential for learner engagement validating it as: 'Quick and easy to learn how to use it. Makes the feedback assessment more interesting and interactive.'

Gaining pedagogical and technological confidence

Respondents being academics in the institution, were quick to see the deliberately embedded pedagogical design in the peer-review activity and the potential of *FeedbackFruits* to complement that activity. Their responses indicated their growing pedagogical confidence in peer-review activities. Their considerations of implementing *FeedbackFruits* to facilitate the process could be perceived as an indicator of growing comfort with the tool.

Specific pedagogical observations respondents made were related to the systematic peer feedback, described as 'excellent', and the value of the task to receive feedback to improve work. Other pedagogical observations that 'It allows students to think from the instructor's perspective in understanding the assessment task and assessment criteria'; developing 'higher order skills such as critical thinking skills', 'building collegiality with peers', improving communication skills collaboration and 'learning about different ways people write' were highlighted. One participant particularly appreciated the task because 'it simulated the social character of good academic communities', formalised 'peer-to-peer learning, in the style of social constructivism' – a valued experience especially because they knew that their peer group consisted of fellow academics. Although in general the task was appreciated by the respondents, one pointed out that success was relative to how the task was designed and contextualised within the framework of the unit, in this instance within the assessment strategy of the unit (with reviews or feedback required against four criteria which were drawn from the assessment rubric). This idea was confirmed by another respondent who observed that both 'the theoretical but also the practical implications which was wonderfully constructed as part of the unit'. Two participants pointed out that although the pedagogical structure of the task was good, it is useful only if everyone is committed and took the time to write quality feedback. These reflective comments indicated that respondents were weighing up pedagogy, technology and learning design. Nevertheless, several comments acknowledging 'boosting self-confidence', 'giving confidence in giving constructively aligned feedback' indicated an emerging assurance

related to peer-review practices and the use of technology for the purpose. One respondent provided a description of how he/she would like to use the tool in a similar assessment as well as in a group assessment in two separate units he/she taught, indicating clear plans for adoption.

Discussion and Conclusion

The purpose of this exercise was to facilitate focused professional learning to foster both technological and pedagogical confidence so that academics successfully integrate both learning technologies and peer-review approaches for learning in their teaching practice. Our respondents' comments indicated overwhelming acceptance of the pedagogical strategies we implemented and serious contemplations related to the use of *FeedbackFruits* in their own teaching practice. The findings confirmed that the (a) immersive experience (b) time for reflection, and (c) the added impetus of receiving recognition via the study unit in the GCTE, focused the professional learning for the respondents. Although linking all professional learning to a formal study unit would be impossible, this study confirms the value of professional learning that is immersive, contextualised, social, active, practice-related, relevant to the real-world and supported through reflective practice. The safety of the learning environment enabled academics to deliberate on both pedagogical practices and relevant learning technologies in context, potentially leading to their adoption.

Given the great emphasis on developing 21st century skills which include digital skills, digital citizenship and responsible and appropriate use of technology coupled with the ongoing pressure on academics to adopt learning technologies to facilitate transformative change in pedagogical practice, immersive professional learning opportunities that boost knowledge, skills and confidence of academics would have to be keenly considered. It is essential that the new generation of academics are comfortable and confident in harnessing the technology to gain pedagogical ends. A sustained program of professional learning which allows for time, opportunities to trial, reflect, share concerns and integrate technology affordances with pedagogical priorities is a worthwhile investment so that academics adopt and appropriately use them with confidence.

References

Batson, T. (2011). Faculty 'buy-in' - to what? *Campus Technology.* Retrieved from https://campustechnology.com/articles/2011/04/06/faculty-buy-in-to-what.aspx

Birch, D., & Burnett, B. (2009). Bringing academics on board: Encouraging institution-wide diffusion of e-learning environments. *Australasian Journal of Educational Technology, 25*(1), 117–134. doi:https://doi.org/10.14742/ajet.1184

Boud, D., Ajjawi, R., Dawson, P., & Tai, J. (Eds.). (2018). *Developing evaluative judgement in higher education: Assessment for knowing and producing quality work*. London: Routledge

Cho, Y. H., & Cho, K. (2011). Peer-reviewers learn from giving comments. *Instructional Science, 39*(5). doi:10.1007/s11251-010-9146-1

Danmeri, F. (2018). *Investigating teachers' perspectives: Students' experiences of collaboration, feedback and reflection using an educational technology tool.* (Master's Degree in Educational Leadership). Tampere University of Applied Sciences Tampere, Finland.

Deneen, C., & Boud, D. (2014). Patterns of resistance in managing assessment change. *Assessment and Evaluation in Higher Education, 39*(5), 577–591. doi:10.1080/02602938.2013.859654

Fawns, T., & O'Shea, C. (2019). Evaluative judgement of working practices: Reconfiguring assessment to support student adaptability and agency across complex settings. *Italian Journal of Educational Technology, 27*(1), 5–18. doi:10.17471/2499-4324/1027

Flavell, H., Harris, C., Price, C., Logan, E., & Peterson, S. (2019). Empowering academics to be adaptive with eLearning technologies: An exploratory case study. *Australasian Journal of Educational Technology, 35*(1), 1–15. doi:https://doi.org/10.14742/ajet2990

Judge, S., & O'Bannon, B. (2008). Faculty integration of technology in teacher preparation: Outcomes of a development model. *Technology, Pedagogy and Education, 17*(1), 17–28.

Liu, N., & Carless, D. (2006). Peer feedback: The learning element of peer assessment. *Teaching in Higher Education, 11*(3), 279–290. doi:https://doi.org/10.1080/13562510600680582

Mostert, M., & Snowball, J. D. (2013). Where angels fear to tread: Online peer-assessment in a large first-year class. *Assessment and Evaluation in Higher Education, 38*(6), 674–686. doi:10.1080/02602938.2012.683770

Nicol, D., Thomson, A., & Breslin, C. (2014). Rethinking feedback practices in higher education: A peer review perspective. *Assessment and Evaluation in Higher Education, 39*(1), 102–122.

Pearce, J., Mulder, R., & Baik, C. (2010). *Involving students in peer review: Case studies and practical strategies for university teaching*. Retrieved from Melbourne Australia:

Samarawickrema, G., Stacey, E., & Warren, C. (2008). *Academic staff take the lead: Experimenting with social software at Deakin University*. Paper presented at the Hello! Where are you in the landscape of educational technology? Ascilite 2008, Melbourne.
http://www.ascilite.org.au/conferences/melbourne08/procs/samarawickrema.pdf

Tondeur, J., Van Braak, J., Sang, G., Voogt, J., Fisser, P., & Ottenbreit-Leftwich, A. (2012). Preparing pre-service teachers to integrate technology in education: A synthesis of qualitative evidence. *Computers & Education, 59*, 134–144. doi:DOI: 10.1016/j.compedu.2011.10.009

Topping, K. (2009). Peer Assessment. *Theory into Practice, 48*(1), 20–27. doi:10.1080/00405840802577569
Wilson, G., & Stacey, E. (2004). Online interaction impacts on learning: Teaching the teachers to teach online. *Australasian Journal of Educational Technology, 20*(1), 33048.