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People, Partnerships and Pedagogies

Who wants to be a teaching innovator?

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Innovative teaching is a common goal in Australasian university strategic documents. However, innovative teaching requires innovative teachers, yet our study of science, health and engineering staff at a Victorian university found many teaching academics did not identify as innovative, even when reflecting on their 2020-21 pandemic teaching experiences, and even though they demonstrated as much innovation at that time as their peers who did consider themselves to be innovators. This concise paper investigates reasons why teaching academics may be reticent to call themselves innovators, finding tentative support for three hypotheses: that there may be differences in how innovation is understood that are discipline-specific; that there may be social stigma associated with innovation that can be overcome via a change in organisational culture; and that some academics may associate innovation with negative connotations or experiences. We conclude with practical recommendations for building a culture of innovation in learning and teaching.

Keywords: teaching innovation, academic identity, pandemic experience, qualitative survey

Introduction and brief literature review

The word *innovation* and its derivatives appear frequently in the strategy documents of Australasian universities, including those for learning and teaching. The current strategic plan of Deakin University, for example, aims for “innovation and excellence in both education and research” (2021, p. 6), while the Australian National University’s Learning and Teaching Strategy (2022) embraces “learning and teaching as innovative” (p. 6) and aims to “support teaching staff in the design and sharing of innovative blended and flipped learning activities” (p. 17). Auckland University’s Vision 2030 and Strategic Plan 2025 (2020) commits to giving students “imaginative and innovative programmes” (p. 5), empowering staff to “innovate and succeed” (p. 8) and providing teachers with “support for selected pedagogical innovations” (p. 10). In our own institution, La Trobe University, “innovation” is one of four cultural qualities, though this has proved the most difficult to provide examples for (Loch et al., 2021). Despite institutional focus on innovation, the relationship between learning and teaching innovations and academics appears rocky. Stalemates are common, with the roll-out of educational technology in institutions frequently encountering “academic resistance” (Sakala & Chigona, 2020; Watty et al., 2016) and teaching innovations initiated by individuals and departments rarely gaining broader support for adoption (Lašáková et al., 2017). This state of affairs is all the more regrettable, given the importance of intellectual curiosity (Winter, 2009), creativity (Frick & Brodin, 2020), and the search for truth (Hakala, 2009) in the academic identity. This study investigates the extent to which teaching academics identify themselves as innovative. In a survey of their experience during the first year of the COVID-19 pandemic, we asked teaching academics whether they felt their teaching practice had been innovative. Surprisingly, many did not, despite exhibiting similar behaviour to those who did. We propose three hypotheses to explain this finding and test them on further data available from the survey.

Initial finding

Our survey of teaching experiences during the first year of the COVID-19 restrictions (n = 138) was carried out in a large faculty comprising 7 schools spanning science, health and engineering disciplines across a multi-campus Victorian university. The survey was run mid-2021 (i.e., after the first year of COVID-19 restrictions but before Melbourne’s second long lock-down) with approval from our human research ethics committee (reference HEC20487). The survey included a question asking if respondents felt that their teaching practice during the pandemic had been innovative (see Table 1), though no definition of *innovative* was provided. Survey participants were also asked about the innovations they had trialled, and either wanted to retain or abandon. Coding was applied to their responses, enabling an indicative comparison of how many new (to them) teaching practices they had adopted. Codes were purely descriptive, for example “synchronous online lectures”, “online labs”, “Microsoft Teams”, “online exams”, “Zoom consults”, as well as a category for a range of “new technologies” (e.g., polling software, a tablet computer, lightboard). We found little difference between those

who identified as innovative (average number of innovations = 4.7) and those that did not (average innovations = 4.4). This difference is not statistically significant ($p = 0.17$), using the Mann-Whitney U test (as the number of innovations cited was not normally distributed).

Table 1: Would you describe your teaching practice during COVID as innovative?

Response	no.
Yes	72
No	45
No or unclear answer	21

Survey comments supported the observation that despite similar teaching practices, some respondents readily identified as innovative while others were more reticent to do so:

Absolutely, yes. We had no idea what we were doing, were making it all up as we went along, discussing it with colleagues, and learning from each other. The creativity and innovation of your academics is something to behold (a Teaching Focussed Anatomy academic).

I wasn't doing anything that others around the world aren't also doing. I would describe it as 'best practice' rather than genuinely innovative (a Teaching & Research Chemistry academic).

Research questions

The apparent reticence to identify as an innovator puzzled us. We propose three hypotheses to help explain this observation:

Hypothesis 1. Definitional interpretation

It is apparent that some of our survey participants were hesitant to identify as innovative because for them an innovator is someone who creates something entirely new, rather than introducing something that is new in their own particular context (e.g. if they are the first person in their department to try a teaching technology, even if it was first released years ago, or already in use in other disciplines). The latter definition of innovation is broadly accepted in the diffusion of innovation literature (Rogers, 2003). It is possible that different disciplines have different understandings of what constitutes innovation. The foundational work of Becher and Trowler (2001) has established the influence of discipline epistemologies on the cultures of academic "tribes", which could lead to differing understandings.

Hypothesis 2. Social stigma

We were also intrigued by Rogers' (2003) characterisation of innovators' place in their social networks in his foundational work on diffusion of innovation. For Rogers, those belonging to the most innovative sextile of the adoption curve are typically less well connected to the community in question than their peers, and less likely to be seen as opinion leaders in this community than the next sextile of adopters (i.e., the "early adopters"). Exactly because of their innovativeness, they tend to be seen as fringe-dwellers by the rest of the community. We hypothesised that this stigma may explain the aversion to being labelled an innovator exhibited by some of our survey participants.

Hypothesis 3. Negative connotations with innovation

Some professions rely on well-established practice standards, which may mean that innovations, without strict protocols to ensure reliable and replicable outcomes, may be seen as unacceptable deviations or shortcuts. As one survey respondent commented:

No. "Innovative" is not necessarily good. Sometimes innovations are disasters – whether it be a new design for a plane that consequently crashes or a new teaching technology (a Teaching & Research Microbiology academic).

Negative connotations could also arise from a fear of failure, known to be a particular issue in the highly competitive academic environment (Loch et al., 2021). It is also possible that some staff simply had a negative experience of innovation in the first year of the COVID-19 pandemic, and for that reason did not identify as a teaching innovator during this period. Thus, there may be personal, disciplinary, or environmental reasons for not wishing to be described as innovative.

Results

We tested our first hypothesis, that there may be discipline variation in the understanding of innovation, by breaking down the proportions of academics identifying as innovative by school, as a proxy for discipline. This yielded diverse results (Figure 1). While response numbers by individual school were too small to test for statistical significance, there appears to be a trend indicating that academics in harder science disciplines may be less willing to identify as innovative, compared with those from clinical disciplines. It is possible that harder sciences have a different threshold for novelty before something is considered innovative. While this finding provides tentative support for our first hypothesis, it may also reflect differing positive or negative connotations with innovation that are discipline-related, which is encapsulated in hypothesis 3. We will return to this in more detail below.

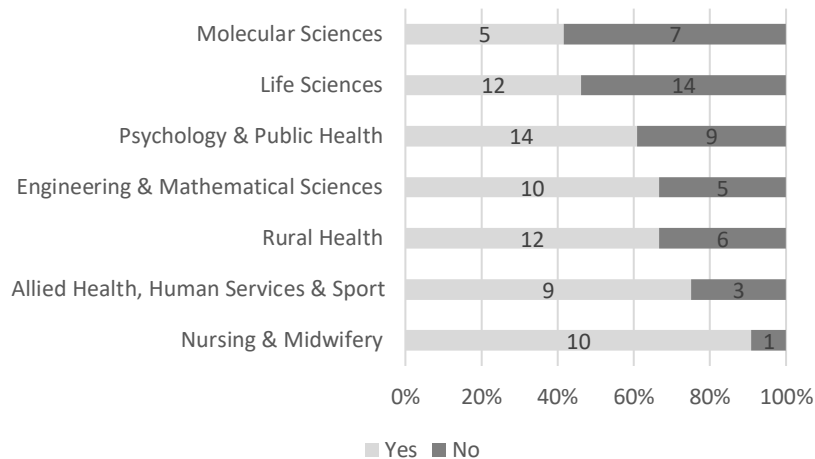


Figure 1: Would you describe your teaching practice during COVID as innovative? Proportion and number of yes/no responses by school.

On the strength of this apparent disciplinary difference, we also investigated the difference in identification with innovativeness by position type, discovering that academics in Teaching Focussed positions were more likely to consider themselves innovators than traditional Teaching & Research academics (Figure 2). Here $\chi^2 = 0.04$, indicating statistical significance. Due to small numbers, Research Only, Sessional, and Adjunct positions were not included in this analysis.

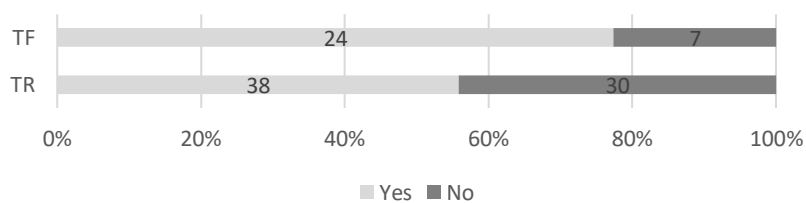


Figure 2. Would you describe your teaching practice during COVID as innovative? Proportion and number of yes/no responses by position, Teaching Focussed (TF) or Teaching & Research (TR).

This was an encouraging finding, given the significant efforts at our institution to ensure the viability of the newly created Teaching Focussed positions, including through requiring applicants to have demonstrated teaching excellence, supporting Teaching Focussed staff to exercise leadership roles in learning and teaching, and a number of cases of promotion to higher academic levels. This finding also supports our second hypothesis, in that the theorised social stigma associated with teaching innovation is likely to be higher for teaching and research staff than for teaching focussed staff who have been given a “license” for teaching innovation. If this is the case, then this finding points to the possibility of improving the institutional culture of innovation through targeted organisational interventions, such as raising the prestige of Teaching Focussed positions.

Regarding our third hypothesis, it was evident from survey comments that some respondents did indeed have a negative experience of innovation during the pandemic. Some felt that they lacked the expertise to teach fully online, or simply that their content was not suitable for online teaching:

No. We are not specialists in online teaching. We teach content that is best taught F2F (or can only be taught F2F in some cases) so we have tried to adapt as best we can using the available technologies (a Teaching & Research Ecology academic).

Others felt they needed more time to innovate effectively:

It would have been more innovative if we had more time to think and reflect rather than rushing to get teaching material online and adapting to the next change (a Teaching Focussed Allied Health academic).

Comments such as these may reflect the need to create a “safe space” for innovation, in which the inevitable setbacks associated with innovation are tolerated, and there is permission to fail (Loch et al., 2021). Some simply felt overwhelmed by the pandemic situation:

To be honest, surviving last year was about all of the innovation many of us could muster (a Teaching & Research Psychology academic)

To interrogate further whether a negative experience of innovation during the pandemic influenced identification with innovativeness, we were able to make use of another piece of data from the survey. Thirty-one of the 138 respondents indicated at some point in their responses a desire to return to “pre-COVID” learning and teaching arrangements as soon as they were able. We found that of these, 13 identified as innovators while 16 did not (and 2 did not answer that question clearly). Thus, of the 72 survey participants who identified as innovative, 18% planned to return to pre-COVID learning and teaching arrangements, but of the 45 who did not identify as innovative, twice that proportion, 36%, planned to return to pre-pandemic conditions. Again, while numbers are too small for statistical significance, this difference may be an indication that dissatisfaction with pandemic innovation led to a reluctance to identify as innovative. In this light, an alternative interpretation of Figure 1 is that academics in disciplines with major lab components were less satisfied with the experience of pandemic innovation, and hence less likely to think of themselves as innovative during this time. Consistent with this interpretation is that at our institution clinically based disciplines such as Nursing and Allied Health were allowed limited face-to-face teaching under strict conditions during lockdown. Because the 2020-21 pandemic experience was the focus of our survey, we were not able to find a clear association between willingness to identify as innovative and negative connotations with innovation more generally, beyond a few comments of which examples have already been cited. This could be the focus of future research.

Conclusion and implications for practice

This brief study has investigated why some academics did not describe their teaching practice during the first year of the COVID-19 pandemic as innovative, despite exhibiting similar behaviour to those who did. Firstly, there may be discipline differences (possibly a divide between “hard” sciences and clinical disciplines) in how innovation is understood. Secondly, it is likely, as Rogers (2003) predicts, that a certain amount of social stigma is associated with teaching innovation, however our findings suggest that that this can be overcome through deliberate efforts to change organisational culture, in our case through promoting a culture of teaching excellence through teaching focussed positions that are viewed as prestigious and rewarding, therefore providing a license for teaching innovation. Finally, it is likely that different discipline experiences of pandemic teaching led to greater or lesser willingness to think of emergency online teaching practice as innovative. This may be particularly true of disciplines with lab-based learning outcomes that were difficult to transfer to lockdown teaching. Consideration of academic identity is important for institutions that repeatedly state in their strategic documents the aspiration that their teaching and their teachers should be innovative. We draw the following recommendations for those wishing to build a culture of innovation in learning and teaching in their institutions:

1. Be careful with restrictive definitions. Perhaps use more inclusive terms such as “innovators and early adopters”, or “technology leads”, and more clearly distinguish between “teaching innovations” and “innovations” more generally. The broadly understood definition of innovation, according to diffusion of innovation literature (Rogers, 2003), as novelty in a particular social context rather than sui generis invention, could also be deliberately socialised in relation to teaching practice.

2. Recognise that one size does not fit all when it comes to teaching innovation, and that there may be valid discipline-specific reasons for varying levels of adoption (Bridge et al., 2021; Tierney & Lanford, 2016).
3. Create opportunities for innovators to be seen as positive role models and/or voices of authority among their peers in their areas of learning and teaching expertise, for example through presentations, recognition as “champions” at the school or departmental level, learning and teaching grants, teaching awards, support for publication in the Scholarship of Learning and Teaching, and ensuring a safe space for innovation in which innovators enjoy permission to fail (Loch et al., 2021; Lašáková et al., 2017; Tierney & Lanford, 2016).

We recognise that this brief study is only able to draw tentative conclusions, and further research is required to investigate our hypotheses more fully. Another limitation is that we were not able to investigate whether innovation is a gendered concept, as gender was not a question in the survey.

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