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# Developmental evaluation of teaching quality: Evidencing practice

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# Developmental evaluation of teaching quality: Evidencing practice


## Abstract

The evaluation of teaching quality and practice is increasingly important in higher education and usually done via student surveys (quantitative data) alone. Much less attention is given to teachers' self-evaluations of teaching practice (qualitative data). This emphasis on quantitative over qualitative data can result in incomplete and biased measures of teaching quality, and inappropriate changes to educational practice, which may, in turn, negatively impact outcomes, experiences and university micro-cultures. In this paper, we present a case study of an international residential masters module, in rapid transition to online delivery during the COVID-19 pandemic, to demonstrate: 1) how developmental evaluation (DEval) can be used for rigorous critique of teaching practice in conjunction with student satisfaction data; and 2) how qualitative reflections on teaching practice can be transformed into justifiable evaluative evidence, using DEval theory and techniques. Our DEval approach, theorised and enacted using the community of inquiry framework, increased the teachers' skills and confidence to plan and continually evaluate teaching-learning enhancements. We discuss the implications and benefits of DEval for teachers and universities when used to assess teaching quality. In addition, we expand on existing knowledge to provide clarification on the purposes and appearances of all levels of evaluation in higher education.


## Practitioner Notes

1. It is beneficial for universities and their staff to increase evaluation skills, knowledge and practice.
2. Developmental evaluation theory and techniques can help transform teachers' reflections and critiques of their practice into justifiable evaluative evidence, thus increasing the rigor, and subsequent use, of this rich form of data.
3. Developmental evaluation, as described in this paper, can help to build teachers' skills and confidence in planning and evaluation for ongoing, transformative enhancements to teaching-learning.
4. Using developmental evaluation, teachers self-evaluations can be used in conjunction with student satisfaction data to address some of the current challenges of using student surveys as the primary data source in university assessment of teaching quality.


## Keywords

DEval, qualitative evaluation, reflective practice, teacher self-evaluation

# Introduction

This paper follows a recent call by the editors of the *Journal of University Teaching and Learning Practice* for "authors to continue to explore ways to respond to the challenges of using student surveys as primary tools of data collection" (Ali et al., 2021, p. 7). We present a case study through which we explored the challenges and possible benefits of developmental evaluation (DEval) for improving the rigour of teachers' reflections on practice; used with student satisfaction data to evaluate teaching quality. In addition to explaining how we undertook DEval, we share the evaluation findings to showcase and help justify the utility of this approach. Our study was predicated on the idea that, if DEval can improve the rigour of teachers' reflections, universities may consider this qualitative data in addition to (predominately quantitative) student survey data to evaluate teaching quality. This may help address some identified issues in using student data as the primary source (Ali et al., 2021; Darwin, 2021). Before proceeding to the case study, we define evaluation in universities, and discuss the issues and challenges with evaluating teaching quality, which DEval has the potential to address.

Evaluation is understood as "the generation of a credible and systematic determination of merit, worth, and/or significance of an object through the application of defensible criteria and standards to demonstrably relevant empirical facts" (Gullickson, 2020, p. 4). It differs from research in its "use of criteria and standards to form judgments, which are used for decision-making, development and/or accountability purposes" (Cook, 2021, p. 215). In the higher education research literature, evaluation has been described as occurring across four domains of social practice (Saunders, 2011, 2012) – systemic, programmatic, institutional and self. Table 1 shows our expansion of Saunders' (2011, 2012) work, with consideration of Smith's (2008) 4Q model focused on the evaluation and enhancement of teaching. The case study presented in this paper spans two levels of evaluation with respect to teaching quality: module and self (see Table 1).

**Table 1**

*Levels of evaluation in higher education*

| Level | Purpose | Description |
|---|---|---|
| Sector-wide | Accountability<br>Management<br>Comparison<br>Auditing | Beyond programmes.<br>International, national and/or regional. |
| Government-initiated programme | Impact<br>Effects<br>Value for money | Each evaluation is situated in the context of the institution in which it is conducted.<br>Same objectives, priorities and rules apply across all. |
| University-wide | Quality assurance<br>Quality standards<br>Enhancement | Whole-of-institution. |
| Course, subject, unit or module | Value<br>Impact<br>Enhancement | About delivery of a course or unit<br>Judgements made by students, staff, supervisors and/or employers. |

| Level | Purpose | Description |
|---|---|---|
| Self-evaluations and peer review | Personal learning and development | Judgements about self, made by staff or students.<br>Based on evidence*. |

* distinguishing aspect of evaluation cf. reflection, according to authors.

While university leaders consider student evaluations as acceptable measures of teaching quality and student experience, teachers' self-evaluations are less well received and considered mere reflections on practice (Darwin, 2021). Universities tend to rely on student survey data for decision-making and developments because it is convenient and readily available (e.g., see Smith, 2008). Stroebe (2020) argues that the overreliance on student data encourages both poor teaching and grade inflation. Darwin (2021, p. 221) similarly points to the "ubiquitous and formidable presence" of student perspectives in institutional decision-making, citing several scholars who question the extent to which this data can be relied upon. He discusses student respondent bias, arguing that the sector's drive to meet targets, based on historic assumptions about survey data, unintentionally slows developments and responsiveness to complex and dynamic environments, while disincentivising innovation (Darwin, 2021). Survey fatigue among students has also been observed, impacting response rates and data validity (Adams & Umbach, 2012). Despite these issues, student surveys continue to inform decisions about promotions, programme viability and funding (Adams & Umbach, 2012), which can be stressful for teachers (e.g., see Cook, Jones & Al-Twal, 2021).

We are not arguing against the use of student evaluations as engaging with the student voice is vital for providing student-centred educational experiences that support retention, engagement and success (Ali et al., 2021; Darwin, 2021). For example, during the Covid-19 pandemic, student perspectives provided valuable insights (Wilson et. al, 2020). Rather, we suggest a more balanced approach to the evaluation of teaching quality, using data from both student and staff perspectives; namely, DEval for teacher development and the enhancement of teaching-learning. The case presented in this paper benefited from this approach, with ongoing improvements made to the module since that time.

Tadesse, Manathunga and Gillies (2018, p. 4) suggest "that recent quality improvement efforts are piecemeal and more geared towards quality assurance than improvement" with "little more than formal reporting" and haphazard implementation. We argue that the increased scrutiny of teaching quality, both within and across institutions, makes it vital for teachers to upskill and increase their knowledge about evaluation. Doing so can enable teachers to justifiably self-evaluate (not merely reflect) to challenge processes and decisions traditionally driven by student data alone. For example, the teachers in our case study experienced benefits from learning about DEval, as an evaluative approach, with the findings used to inform their practice and request additional resources. Evaluation is also key to enabling teachers to improve how they demonstrate their impact on student learning and experience. As Morgan (2008, p. 2) posits, "in quality assurance, various evaluative processes can inform promotion, teaching awards, performance reviews and support claims of teaching excellence". Therefore, in this paper, we offer a possible solution: DEval knowledge, tools and techniques to help teachers transform their reflections into more rigorous evaluative evidence.

The distinction between reflection and evaluation is important to clarify. In our conception, *reflection* is personal, subjective and susceptible to bias, whereas *evaluation* is evidence-based and more objective. For example, teachers continuously *reflect in action* to adjust their practices with students, and *reflect on action* to review curricula, syllabus, learning materials and teaching

resources (Schön, 1991). This is not evaluation. We assert that university leaders are more likely to consider evaluation as strong *evidence for action* as it involves criteria (pre-set or emergent) and standards to form judgments, which can be used for decision-making, development and/or accountability purposes. Although evaluation (at any level; see Table 1) is considered more objective than reflection, it still allows considerable choice with respect to what is evaluated, by whom, how and why (Cook, 2021). Because of this, we see no reason why teachers reflections cannot become rigorous, evidence-based self-evaluations, *if* grounded in evaluation theory, tools and techniques. In other words, qualitative data, produced by teachers, can be just as valuable, informative and evidence-based as quantitative surveys of student experience and teaching quality.

In the current higher education landscape, characterised by rapid change, supercomplexity (Barnett, 2000) and neoliberal discourses (Ingleby, 2015), we, therefore, posit that rigorous evaluations of practice and change (across all evaluation levels) is vital to protect the opportunities and rights of university teachers, and will enable effective and ongoing educational development and employment. To illustrate the value of DEval theory, tools and techniques for teachers, we present a case study in which teachers used DEval to evaluate the impacts of a Covid-19-induced university change – a rapid shift from on-campus to online – with international students, during a week-long period of delivery. Before doing so, in the next section, we define DEval and articulate its key characteristics, called *sensitising concepts*. We then apply these sensitising concepts to our case study, clarifying specific DEval design considerations and reporting the evaluation findings.

## What is developmental evaluation?

The creator of DEval, Michael Patton, describes it as supporting "innovation development to guide adaptation to emergent and dynamic realities in complex environments" (2011, p. 1). DEval is, thus, an approach that embeds evaluation to enable ongoing reflection and adaptation. With this in mind, we predicted that DEval would be of continual relevance for teachers when used to reflect, evaluate and adapt practices to provide quality educational experiences for students.

To evaluate a complex environment, it is unhelpful and unjustified to use a simple criterion checklist to assess teaching quality; the evaluator needs to be able to distinguish between strict fidelity criteria and more general indicators (Patton, 2011). Thus, to deal with complexity in evaluation, Patton (2016) offers eight *sensitising concepts* specifically for DEval processes, outcomes, designs and utility. We applied these sensitising concepts throughout the DEval of the case study presented in this paper. Below, we introduce each concept, in general terms, according to Patton's (2016) work, in which he states that DEval should be:

***Co-created*** – the evaluator(s) must be close to, or part of, the process. That is, university teachers are ideally placed to undertake DEval on their practice. Co-creation also suits university environments where collaborative practices, such as communities of inquiry (Garrison, Anderson & Archer, 1999; Garrison & Anderson, 2003) and students as partners (Cook-Sather, Bovill & Felten, 2014), are used and/or promoted.

***Considerate of complexity*** – acknowledging complexities in dynamic environments is core to DEval and suits the dynamic and complex environment of higher education (Marshall, Blackley & Green, 2022). DEval addresses the "great unexplored frontier" of evaluation, characterised by "conditions of complexity" (Patton, 2016, p.1). In DEval, evaluators recognise and describe the complexities in play throughout the evaluation.

***Approached using systems thinking*** – recognising that people, programmes and institutions do not operate in isolated vacuums (Dunnion & O'Donovan, 2014; Galbraith, 1999). Whereas an evaluation is usually bounded, a DEval, in recognising complexity (see above), must consider wider relationships, connections and perspectives. DEval used in a university context must, therefore, acknowledge the temporal, spatial and wider contextual issues that impact perceptions and developments. Systems thinking assists in bringing these aspects into awareness.

***Developmental*** – the matter or object being evaluated is simultaneously developed with the evaluation as it occurs. DEval is an ongoing process that can be used in emergent design. This suits the cyclical nature of academia and professional practice, including curriculum (re)design, and the evaluation and enhancement of teaching.

***Driven by innovation*** – the purpose of DEval is to conceive of new ideas or solutions to problems, which requires originality, and forms a large part of the work of universities and teachers (e.g., Brennan et al., 2014; Fujita, 2020; Guàrdia et al., 2021; Novak & Bracken, 2019).

***Utilisation focused*** – the focus is always on the main users of the evaluation. In our case study, the utilisation focus was to improve the practice and experiences of teachers and students, respectively as they were the 'main users'.

***Rigorous*** – substantiated by evidence and theory. The former may be from student, staff and other sources, and a mixture of qualitative and quantitative data, using "any methods or tools deemed appropriate" (Patton, 2011, p. 288). The latter is not predetermined (as in *theory of change*, see Cook, 2021) because "it is useful to examine change efforts in terms of their theories of education" (Fullan, 1999, p. 21). This means that DEval can be adapted to different contexts and used in conjunction with other relevant theory. In our case study, the community of inquiry framework informed the evaluation (as detailed in the next section).

***Timely*** – the findings are available as needed, on an ongoing basis, rather than once at the end. This is particularly useful for university teachers who continually evaluate their practice.

In the next section, we refer to the sensitising concepts to illustrate how DEval offered the university teachers a useful framework for evaluating the transitioned module and their practice (through rigorous self-evaluation). We assume that most readers will be familiar with transitioning to online as a result of the Covid-19 pandemic. Thus, the described DEval approach should be generalisable and adapted to meet specific contextual needs.

## Case study

The case study context is a small law school at a young university located in the north of England. A significant proportion of income is generated from transnational education (TNE) delivered with a partner institution. The focus of the case study is one of four modules, studied part-time (in any order) prior to the completion of a thesis, leading to a masters in law. Typically, the module has approximately 30 students from around 20 countries across Europe, America, Asia and Africa. Pre-pandemic, it was delivered twice annually to highly motivated mid-career professional students employed in the public and private sector, or national and international non-government organisations.

The module in focus was a weeklong campus-based residential and the other three modules were asynchronous online. Students would travel to the UK for the module, residing near the campus for an immersive intercultural experience, with collaborative skills-based learning, networking and assessment. The residential module aimed to establish a sense of belonging among the international students with the university, while strengthening connections between peers, students and staff.

At the time of the case study, two teachers delivered and managed the module. In spring 2020, due to the Covid-19 pandemic, the teachers had one week to transition the residential module online. After this 'crisis transfer', and prior to the second delivery of the transitioned module, the evaluating researcher (FB) worked with the two teachers to design the DEval presented in this paper. The DEval focused on the effects (on learning, assessment and teaching practice) of the transition for students and the two teachers. FB was an insider in this context (i.e., employed at the university) and collaborated with the two teachers throughout the evaluation. The other researcher (EC), with expertise in evaluation, contributed from outside, after the evaluation. Table 2 shows the module as it was both prior to the pandemic (as a residential) and during the evaluation.

**Table 2**

*Module structure*

| Campus residential structure | Transitioned residential structure |
|---|---|
| Students on campus 9 a.m. – 5 p.m. | Students login between 8 a.m. – 5 p.m. |
| Day 1: welcome and icebreakers. | Day 1: asynchronous icebreaker. |
| Days 2-3: workshops covering the rule of law, alternative dispute resolution and corporate social responsibility. | Days 1-4: asynchronous lectures and synchronous discussions on the rule of law, alternative dispute resolution and corporate social responsibility, with repeated delivery for time zone differences. |
| Day 4: cultural visits. | Days 4 and 5: synchronous practical assessment. |
| Day 5: practical assessment. | |

### *Theoretical framework*

The community of inquiry framework "is a collaborative-constructionist process model" that has been used to describe "the essential elements of a successful online higher education learning experience" (Castellanos-Reyes, 2020, p. 557) and as a lens to study, inter alia, a single learning environment (Stenbom, 2018). Therefore, this framework provided a suitable theoretical lens for this case study (one module in one university) and the DEval.

Developed at the University of Alberta in the late 1990's, the community of inquiry framework is focused on social, cognitive and teaching presences (Garrison & Arbaugh, 2007; Hilliard & Stewart, 2019). *Cognitive presence* has been summarised as "the process of learning" (Stenbom, 2018, p. 22); how students connect with content and construct knowledge through discourse and individual reflections (Swan & Ice, 2010). *Social presence* has been summarised as "the human experience of

learning" (Stenbom, 2018, p. 22); how students build affective connections with peers. *Teaching presence*, "the moderation and guidance of inquiry" (Stenbom, 2018, p. 22), is needed to design and facilitate the other two presences. The community of inquiry literature supports the premise that interactions among students is key to learning, which requires community development (Fiock, 2020). Thus, all three presences need to be built into online courses for optimum learning.

There is a validated community of inquiry survey that has been used by many educational researchers in wide-ranging contexts to assess online teaching quality (Garrison, 2016; Jan, Vlachopoulos & Parsell, 2019; Stenbom, 2018). This survey was used in the DEval as explained below.

### *Developmental evaluation questions, design and methods*

FB worked in consultation with the teachers to ensure the DEval would be appropriate, manageable and responsive to the following evaluation questions: (1) What are students' perceptions of the social, cognitive and teacher presences during the transitioned module? (2) What are teachers' contextual concerns regarding the online delivery of the formerly residential module? Figure 1 shows the three phases of the DEval that occurred during the delivery of the transitioned module.

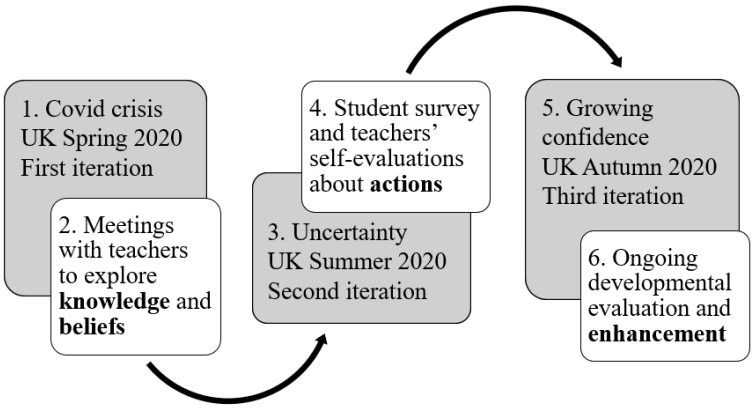


**Figure 1**

*Timeline of DEval design and module delivery*

The design of a DEval should always be pragmatic and flexible, with engagement and methods working together to maximise the effects and benefits of the evaluation. Two of Patton's (2011) ten design examples were particularly suited to this evaluation and were subsequently combined to enable the DEval to:

1. Develop the module in response to changing conditions
2. Consider uncertainties, including emerging issues and teachers' reactions to change
3. Collect and use data to capture teachers' and students' perspectives, and the effects of changes on outcomes
4. Capture teachers' self-evaluations and student feedback.

Patton's (2011) inquiry framework for evaluation – focused on knowledge, beliefs (or values) and action – was also used due to the complexity of the case (i.e., a steep learning curve and multiple beliefs about teaching-learning and student experience). In Patton's (2011) inquiry framework, *action* is the result of both *knowledge* and *beliefs*, emphasising the importance of the evaluator's role in supporting teachers to identify and distinguish between knowledge and beliefs, while managing changes, through action, during the DEval. This was achieved by challenging the teachers to test and question their beliefs, thus enabling new knowledge to be identified, while informing actions (Patton, 2011). The congruent and non-congruent aspects of teachers' knowledge, beliefs and actions were identified by FB using interview methods, as suggested by Patton (2011), meaning that his inquiry framework supports the use of qualitative data in addition to quantitative (student survey data) in evaluation.

Patton (2011, p. 288) also advocates using "any methods or tools deemed appropriate" in an evaluation. For this evaluation, a mixed methods approach was appropriate to combine qualitative and quantitative data, methods and analysis (Clark, Plano & Ivankova, 2016).

Quantitative data was collected using Garrison's (2016) community of inquiry survey that includes 34 items, covering all three presences across a Likert scale of 1-5. As previously mentioned, DEval allows for dynamic and responsive changes to methods to prioritise utility and rapid feedback. Therefore, following discussions with the teachers, four additional survey items were added to invite open comments, and further explore students' perceptions of social interaction and the teaching-learning platform. The survey was constructed and released to students via Jisc online surveys. Of the 34 students who received the online survey, 19 responded (after the second delivery), representing a response rate of 56%. Though this is a reasonable rate for an online class survey, the sample is small, and many temporal and contextual issues will have influenced responses. The student survey was anonymous, with data aggregated and used for only enhancement purposes.

The teachers were interviewed individually to capture their reflections on the survey results, and on actions. Qualitative data comprised one pre-delivery meeting and two post-delivery interviews, recorded and transcribed via Microsoft Teams – the university's preferred secure platform familiar to both teachers and the evaluator.

Firstly, student survey data, and then the qualitative teacher data, were analysed deductively, using the community of inquiry framework. Doing so enabled meaningful comparisons between the data gathered from each source. Themes for the analysis of transcripts corresponded to the three presences used in the survey framework, using Garrison, Anderson and Archer's (1999) community of inquiry coding template (Table 1, p. 89). Fiock's (2020) summary of instructional activities (Table 1, pp. 141-149) was also informative during the analysis of the qualitative data.

### *Ethics*

As a small-scale 'insider' (Mercer, 2007) study, specific ethical issues were relevant and student anonymity was of vital importance. Therefore, prior to engagement with student and staff participants, ethics approval was obtained from the institution providing the module in question and employing the researcher (FB) and the module teachers. In addition to research ethics (BERA, 2018), evaluation ethics concepts were applied (UKES, 2018). Insider research carries the advantages of ease of access, and the pre-existence of trusting relationships and knowledge (Atkins, 2012). However, since developments were of benefit to the teachers, the university and the evaluator (Wellington, 2000), the perspectives presented could not be seen as wholly objective. For example,

it was possible that the teachers would over-emphasise their need for resources, while minimising unhelpful information, and teachers and the evaluator could be tempted at any time to focus on the positive, as opposed to negative or neutral, outcomes. These issues were minimised by the use of a logical, rigorous and clear design framework, strong lines of communication between researcher and teachers, and the involvement of a second evaluator (EC) who was an outsider to the context. In addition, close relationships facilitated early discussion with the teachers regarding their privacy, in view of the difficulties of maintaining complete institutional anonymity. As such, verbatim quotes, provided in the Discussion section, do not distinguish between teachers. It is also worth noting that FB, as an academic colleague and departmental insider, held no seniority and was an outsider to the case being evaluated, with no student contact. Complete objectivity is unattainable (Patton, 2015) and, thus, the authors' approach is not value free. In this case, however, a neutral stance towards data, as well as clarity with respect to theory and methodology, aimed to allay evaluator bias, which could otherwise have operated against progress (e.g., if seen as competing against FB's resourcing needs) *or* in favour of particular departmental colleagues.

### *Planning and implementation*

RUFDATAE (Cook, 2021) is a useful planning framework to ensure that all relevant aspects are included in an evaluation of any type. The acronym stands for Reasons, Use, Foci, Data, Audience, Timing, Agency and Ethics. In this section, we use RUFDATAE, in retrospect, to detail the 'what, why, how and when' of the DEval presented in the case study described above.

What were the **Reasons** and purposes for the evaluation?

As previously mentioned, the module was forced to transition online from face-to-face delivery. The broad purpose was to evaluate the effects of the unplanned change to take appropriate action as soon as possible. In particular, the teachers wanted to know whether and how the online format worked for the international students to enhance their practice and the module itself. DEval would enable the teachers to discover the students' perspectives, in a timely way, so that they could adjust their teaching practice accordingly. In addition, the teachers wanted to transform their personal reflections (of little value to managers and leaders) into acceptable evaluative evidence (self-evaluations) framed by DEval and community of inquiry theory, methodology and praxis.

How was the evaluation **Used**?

During the evaluation, the teachers used data to inform their teaching practice, assure quality delivery and reassure themselves that the module attended to the international students' learning and experiential (intercultural) needs. Immediately after the evaluation, the teachers used the evaluative findings to justify their decisions to line managers and senior leaders and make evidence-based arguments in support of future online and blended delivery of the module.

What were the evaluation **Foci**?

The evaluation foci spanned two levels– module and self (see Table 1) – experienced by students and teachers (as previously described). These foci would enable the teachers to enhance their practice, the student experience and the module itself (which was previously delivered on-campus).

What **Data** and evidence were collected and analysed?

This is summarised in Table 3.

**Table 3**

*Data collected and analysed in the DEval of this case study*

| Participants | Data | Method | Analysis |
|---|---|---|---|
| Students | Numerical | Community of inquiry survey | Basic statistical |
| Students | Free text | Additional open survey items | Inductive thematic |
| Teachers | Transcript (not individualised) | Meeting | Deductive thematic |
| Teachers | Transcripts | Individual interviews | Deductive thematic |

Who was the **Audience**?

The primary audience was the teachers taking part in the evaluation. However, in some contexts, the primary audience will not be the participants. Nevertheless, DEval is always a process of co-creation (Patton, 2011) through engagement between evaluator(s) and users.

When did the evaluation take place (**Timing**)?

The timing of the evaluation was described earlier and shown in Figure 1. Feedback from the teachers indicated that the timing of the DEval was useful to inform the change process and enable timely enhancements to the module and their teaching practice.

Whose **Agency** was involved?

Only three people (FB and teachers) were required to prepare, collect and analyse the data – a key advantage of this approach. Currently, the two teachers continue to evaluate the module, using what they learned (without FB), and the module is still taught online.

What were the **Ethical** considerations?

In evaluation it is important to "determine whether ethics clearance is required before proceeding" (Cook, 2021, p. 227). As explained above, institutional ethics approvals were obtained prior to commencing this evaluation. Ethics approval was particularly important in this case because the evaluator is an institutional insider, and the evaluation was co-designed with the participants. Data collected by the two teachers, in their current ongoing evaluation, does not require ethics clearance as they are not reporting externally.

# Evaluation findings

In this section, we first present a summary of the case study findings (see Table 4) to exemplify the utility of our approach to using the community of inquiry framework. We then articulate the benefits of DEval, to this case study context, by referring to Patton's (2016) *sensitising concepts* underpinned by his inquiry framework (2011) of *knowledge*, *values* and *action*. Here, our aim is to substantiate how DEval, as a frame, offers much more than student evaluations used alone, or teacher reflections (not self-evaluations) made in response to occurrences (not as part of a carefully considered evaluation plan). We conclude this section with our reflections on the findings.

## *Case study*

Table 4 summarises the findings in this case study, using our community of inquiry approach. It is important to note that, since the analysed data referred to specific practices at given moments in time, generalisations across the data, with respect to participants' perspectives were working hypotheses, not necessarily hard and fast conclusions (Cronbach, 1975). Wider generalisability (to subsequent iterations of module delivery) could also not be claimed. Nevertheless, the opportunity for the teachers to dialogically interact with the dynamic and contextual data during the DEval (particularly during the design phase), did, we argue, increase the rigour of this methodology.

**Table 4**

*Case study findings: Students' and teachers' perspectives analysed using the community of inquiry framework*

| Community of inquiry presences | Students' perspectives | Teachers' perspectives |
|---|---|---|
| Cognitive – process of learning | - 90% positive responses.<br>- Most felt they had been able to meet their personal learning objectives.<br>- Online format avoided visa and travel issues, presenting 'a relief' that saved time, expense and uncertainty.<br>- Marks not significantly affected. | - Least problematic 'presence'.<br>- Strong belief in the need for peer-to-peer and teacher-student interaction to support learning.<br>- Concerned about ensuring students get value for money. |
| Social – human experience | - 85% positive responses (lowest score of the 'presences').<br>- Valued getting to know each other but many found it difficult to achieve this online.<br>- 26% did not feel comfortable disagreeing with others online. | - Belief that social interaction was of great value, yet difficult to achieve online.<br>- Strong value of diverse perspectives to trigger learning.<br>- Belief that the online experience should replicate face-to-face interactions but difficult to achieve. |

| Community of inquiry presences | Students' perspectives | Teachers' perspectives |
|---|---|---|
| Teaching – moderation and guidance | - 90% positive responses.<br>- Highly satisfied with teachers' facilitation of learning.<br>- Valued triggers given by teachers to prompt discussion and learning.<br>- Some appreciated the additional learning they gained from practicing online skills perceived to be of benefit to their employability. | - Significant time and effort required to plan shift to online and facilitate instruction.<br>- Poorly resourced.<br>- Technology provided novel opportunities to mix students in small groups.<br>- Diverse time zones created problems.<br>- Being present and active online was important. |

### *Benefits of developmental evaluation*

The below benefits are organised with respect to Patton's (2016) sensitising concepts and consider the experiences and feedback of the teachers and students captured during the evaluation.

***Co-created*** – conversations with the teachers revealed they were most concerned (*value*) about the impact of online delivery on the international students' social interactions and networks. This *(knowledge)* led to the addition of open text questions to the survey instrument *(action)* which enabled the teachers to capture the students' views of the effects of the online environment on their perceived development of social and human experience. These insights proved useful for the teachers and may not have been discovered without this co-creation feature of DEval.

***Considerate of complexity*** – the dynamic nature of national responses to Covid-19 (Maciąg et. al, 2020) and other emergencies, such as travel restrictions on students impacted by the war in Ukraine (ICEF Monitor, 2022; Upton, 2022), create challenging environments of chronic uncertainty and complexity. In this case study, there was the potential for conflicts among staff, e.g., teachers and leaders, due to their different perspectives (*knowledge* and *values*), particularly with respect to how to proceed (*action*). A range of possible unintended consequences could have occurred with differing results. Student demographics changed unpredictably from one delivery to the next. As an illustration, one student from the Democratic Republic of Congo was forced to travel across the border to Rwanda to access internet connection. Such uncertainty is a feature of complex environments (Glouberman & Zimmerman, 2004) and key to thoughts and actions in DEval.

***Approached using systems thinking*** – this feature of DEval enabled the identification and consideration of macro-, meso- and micro-level issues associated with the case (i.e., *knowledge* and *values*, leading to *action* via decision-making). First, macro-level issues included the sustainability of the institution, the economic necessity of fee income and the need to achieve graduate outcomes. Systems thinking enabled broad consideration of the potential macro benefits of the transition to online for students, such as attendance without the need for a visa and travel to the UK. These factors can act as significant barriers (to onshore study) for international students; and it is impossible to know how many prospective students chose not to enrol in the module in the past due to such issues (Healey, 2020). On the other hand, it is possible that a wider range of students might attend an online

module in future, which would be beneficial for the university in terms of student diversity, fee income and, ultimately, in the context of legal education, supporting the rule of law internationally.

Second, at the meso-level were questions regarding the maintenance of programme and student numbers. For example, the demands on time of online (compared to on campus) delivery/learning was raised by the teachers and students as requiring action. Kebritchi, Lipschuetz and Santiague (2017) note that online delivery can take twice as much time as face-to-face. In our case study teachers said they felt permanently 'on duty' and in need of additional support from professional staff (e.g., technical support) and specialist facilitators to support online delivery. More extensive use of third-party providers, e.g., for feedback provision, also seemed to them to be an avenue worth exploration. These meso-level issues were discussed in consideration of the accuracy of the academic workload model, and the fees and costs of online delivery. While adapting materials for online delivery is often challenging and insufficiently supported (Kebritchi, Lipschuetz & Santiague, 2017), in this case study, such challenges were exacerbated by sudden and urgent need for change and the speed with which it had to occur.

Finally, micro-level issues centred on the impact of the transition to online on the quality of teaching, learning and assessment; fostering a vibrant learning community; and supporting student and staff wellbeing (Schwen & Hara, 2003; Smith, 2020). The teachers noticed their role had changed from one of teacher and residential manager (on campus), to one requiring teaching, management, greater attention to nurturing social interactions *and* resolving technical issues (also noted by Kebritchi, Lipschuetz & Santiague, 2017). The teachers commented that the students were more reliant on their facilitation, particularly technical, than ever before in face-to-face iterations of the module. As a consequence, they fulfilled additional technical roles while maintaining their pre-existing levels of practice in design, instruction and delivery. This response corresponds with Littlejohn et al.'s (2021, p. 1) observation that "transitioning to online teaching involves continuing existing work while also learning new practices". In Littlejohn et al.'s (2021) research, the female teachers were particularly challenged for reasons including "gendered patterns around caring and the extra support needed by students during the crisis, [which] added emotional labour to [their] already-full workloads." Using systems thinking, the teachers in our study were able to look beyond themselves to notice that a repeated pattern of overwork was unsustainable in the long-term and unhealthy, increasing the risk of burnout (Marshall, 2020).

Although the boundary (or scope) of the evaluation was the online module, systems thinking meant the module could not be viewed in isolation of the broader context and interdependent relations. Thus, the effects of past experiences (e.g., teacher-student interactions and the design of the programme) on *knowledge* and *values* and, in turn, *actions* and perceptions, were discussed and acknowledged throughout the evaluation. This included acknowledging that it was perhaps unrealistic to expect the same level of social interaction and engagement among students during a weeklong online module as had been the case during face-to-face residentials in the past. Findings from educational research (e.g., Hiscox, 2020) helped the teachers to rationalise and come to terms with this realisation. Instead of expecting the online module to do the same heavy lifting as the face-to-face residential, expanding the design frame for student social interaction throughout the programme became something worthy of consideration; and this expansion of mindset was achieved through systems thinking. Wider macro-level systems and their issues, such as the higher education environment, financial incentives, and visa and sustainability concerns (mentioned above), were likewise considered in terms of their effects on perceptions and developments.

***Developmental*** – using a developmental approach, the evaluators (researcher and teachers) could track what was being developed, how developments occurred and the implications of any findings, which, in turn, informed the emergent design. FB collaborated with the teachers as they worked in ways that enabled maximum alignment with their educational *values* and aspirations in the changing context. Subsequently, the teachers could develop their educational practices, supported by their growing *knowledge* of the impacts of developments on staff and student *actions*. For example, despite strongly expressed *values* regarding diversity as a trigger for learning, staff repeated workshops and separated students into groups based on time zones to aid delivery. This meant that students from, for example, Australia and South Africa or Thailand and Canada had little interaction.

Although students were satisfied with their learning, exploring issues in collaboration (as a group) was less well received than personal (individual) exploration, reflection and application. Data on the perceived value of brainstorming and online discussions showed that some did not agree these were helpful in resolving content-related questions or appreciating different perspectives. It is difficult to know exactly why some students felt this way. Factors outside the programme may play a part, depending on students' personal situations and educational backgrounds. Additionally, when it comes to 'satisfaction', the effect of expectations on perceptions cannot be easily quantified (e.g., Appleton-Knapp & Krentler, 2006). All students had initially signed up for a face-to-face residential. However, it became clear that further thought was needed to scaffold and encourage activities within these areas. Practices to enable this were built into the next iteration of the module, which occurred a few months later. For example, despite the considerable time zone variations, all students were subsequently taught together to maximise interaction among the whole group.

While it is important to consider emergent realities, as DEval does, scholars have criticised Patton's purposive-rational approach as ignoring messy political realities (Smith, 1989; Wiess, 1988). To address this, it is useful to use a social practice perspective to consider emerging practices and subjective realities. For example, at the very beginning of the study, the teachers acknowledged they often lacked time to evaluate *action* (purposive-rational approach), which inhibited their developmental planning. However, through using a social practice perspective, they could count, as evaluative evidence, everyday observations of behaviour patterns and *actions*. Doing so enabled them to use regular physical and mental activities, things and their uses, background knowledge (understandings), knowhow, and states of emotion and motivational knowledge (Reckwitz, 2002, p. 249). It was notable that, while many physical elements of their practice were forced to change radically (online), the teachers strongly held to their existing background knowledge, seemingly needing to balance the significant physical change with stability in other areas of their practice. The teachers appreciated the social practice perspective employed and, in developing their practice, they built upon their understandings, knowhow, states of emotion and motivational knowledge, applying these to the online environment and linking these into the emergent design and delivery framework and to calls for better resourcing.

***Driven by innovation*** – the online module was introduced in response to the challenge of providing a remote equivalent to a residential experience. The initial decision to move online was one with potentially huge impact. If unsuccessful, student satisfaction levels and academic performance could have precipitated a negative reaction with significant consequences. The move was subject to dynamic change and future plans continue to depend on institutional policy and the unpredictable nature of national and local travel restrictions. This meant it was crucial for teachers (and other staff) at all levels to work with students (use *knowledge* and *values*) to create an evolving plan to optimise opportunities (innovative *action*).

***Utilisation focused*** – the main users of this evaluation were the teachers responsible for delivery and design of the module. Therefore, the primary objective of the use strategy was development of the online module itself. The secondary objective, for the teachers, was to enhance their practice, including knowledge and use of evaluation. Unforeseen additional benefits occurred as a result of the teachers' use of the evaluative data (*knowledge* and *values* in *action*), particularly when dealing with student complaints regarding the move online, and in improving the quality of reports to senior managers. However, these aspects were not built into the design in this case. To ensure their coverage, detailed and broader consideration of such issues should be done at the design stage, as part of systems thinking.

Several useful lessons can be drawn from Fullan's (1999, p.18) insight that, within a complex change process, "problems are inevitable, and you can't learn without them"; certain opportunities or advantages can sometimes be found. For example, a significant proportion of students, who might have faced visa restrictions or financial constraints preventing attendance at the on campus residential, were able to participate online. Students learned online skills, which later became the subject of curriculum development. For staff, the evaluation led to changes relating to assessment and design that improved online delivery of the module. The opportunity for continued data collection, review and reflection resulted in further developments, although there were institutional and time constraints that limited the extent of this work. The teachers expressed their desire to raise the profile of the programme, with evidence from the evaluation helping them to achieve this aim. Finally, in a wider sense, the reduction in travel could be considered a more environmentally sustainable option for educating international students.

***Rigorous*** – to maintain a narrow and utilisation-focused approach, the community of inquiry theoretical framework provided a lens through which to view the online module and guide a thorough, well-considered and justified evaluation.

***Timely*** – an initial report was produced prior to the 3rd iteration of the online module, in late 2020. Throughout the evaluation, timely adjustments (based on *knowledge* and observed/reflected *values*) were made (*action*) to the module's design, staffing and activities to foster, particularly asynchronous, student engagement. For example, some students appeared to be attending the module while at work (e.g., a student appeared on screen in medical scrubs). Steps were immediately taken to emphasise to students the need for a clear schedule (steps previously not necessary when the residential was held on campus). This small enhancement, and many others that occurred, resulted in largely positive effects *because* of the timeliness that was enabled and supported by DEval.

### *Reflections on the findings*

This DEval incorporated educational theory and practices to establish appropriate data collection processes, determine needs and the effects of actions, inform teachers' decisions in planning and delivery, and identify enablers and barriers during delivery of the transitioned module.

Measuring the impact of any evaluation in complex environments can be difficult (Saunders, 2011). As such, it is important to highlight the original aim, which was to support development over time, not demonstrate impact against specific evaluation criteria. The evaluation was intentionally designed to support the teachers in their delivery of the module for maximum student benefit. This meant that evaluation and reporting focused on the people and process of teaching-learning, not on the outcomes of the process or reporting to senior managers. Smith (2008, pp. 517-518) argues that:

> improvements in the quality of individual teaching practices, curriculum design and student learning are unlikely to be achieved by reliance solely on broad-scale policy and systems designed to assure quality with a focus on measurement and reporting only of the aggregate picture.

This is addressed by using DEval, which negotiates between contextual bottom-up and systemic top-down criteria with an ultimate focus on the impact on people, whether intended or unintended (Patton 2011).

## Discussion

DEval has been described as appropriate when "developing a rapid response in the face of a sudden major change or a crisis" (Patton, 2011, p. 21). In outlining situations in which DEval may be helpful, Patton (2011) identifies adapting general programme principles to a new context. The "rapid response adaptation" (Patton, 2016, p. 4) to delivery during the Covid-19 pandemic was the innovation evaluated here, but DEval can be adapted to many situations where the emphasis is on an adaptive process. As the purpose of this evaluation was to provide timely support for colleagues, DEval with its utilisation focus, participatory nature and real-time evaluation (Rey, Tremblay & Brousselle, 2014) was particularly appropriate in this case.

In the described evaluation, Patton's (2011) inquiry framework for complex situations supported the teachers' steep learning curve (about online education and evaluation) by using familiar language and practices, focusing on learning and guiding evaluative practice. Therefore, by using this framework, data and findings from the evaluation added to their *knowledge* and *values*, which were applied in *action* as lessons learned (Patton, 2011). Ongoing DEval by the teachers has continued to support the testing of their lessons learned grounded in an ever-changing context. The teachers have reported that further enhancements (done post FB's involvement) have included the removal of repeating workshops in each iteration, and the provision of clearer and more detailed information to students prior to their online attendance. The added benefit of Patton's (2011) framework, which utilises concepts well-known to teachers, such as reflective practice (Schon, 1991), helped the teachers to notice and appreciate the positive effects of educational theory on their pedagogical practice, while boosting their confidence as educators. It has been noted that "the path from emergency education to a 'new normal' needs to be critically and reflexively explored. There was rarely time among educators to reflect critically on the didactic choices they made in haste" (Mathiasen, 2020, para. 2). In the transcribed pre-evaluation meeting, though seeing the value of self-evaluation as part of DEval, one of the teachers reflected (verbatim) on the first emergency delivery *'we were just thinking, what will work with what we've got. And then we just went with that, rather than explore how good can we make this and what else could we do.'* This observation reminds us of Kebritchi, Lipschuetz and Santiague's (2017) advice that, in making adjustments to take account of experience, care is needed to recognise the level of change needed after each delivery. This is a particular feature of DEval, which enables ongoing evaluation, that should be noted by the higher education sector.

Clear benchmarks, either self-generated or based on institutional guidance for online delivery, are also useful for planning and evaluation. Particularly in times of rapid and complex change, the institution must utilise the commitment and capacity of teachers as change agents (Fullan, 2006). For example, in this case study, while adaptive learning occurred after the first iteration, further generative learning (Senge, 1990) had to be supported to move from personal practice and self-evaluation to wider organisational practice and evaluation (Boud, 2012). This is a process that DEval

continues to support, for example, allowing the teachers and senior managers to consider student requests for further synchronous delivery in previously asynchronous modules. Watson (2012) argues that a successful law school must use both top down and grass roots approaches in continuous improvement, based on evidence-based pedagogy and research, to embed change and innovation. Evidence suggests that instructors often perceive a lack of incentives in designing and delivering online courses (Kebritchi, Lipschuetz & Santiague, 2017). Support for teacher self-evaluation and scholarship are, therefore, crucial for optimal outcomes to be achieved.

The provisional stability gained from the evaluation process was seen as a major benefit for the teachers, one of whom confirmed (verbatim) in interview, after reviewing the student survey data, that *'it gives us confidence in what we are doing*.' What subsequently followed was strategy and support to build on this foundational work, using ongoing data collection and evaluation, and encouraging consideration of measurements against predetermined benchmarks which were identified as required. To some extent, the teachers were able to raise the profile of their work using the data generated. However, the initial utilisation focus on pedagogy may have limited this, meaning that a wider or different focus would be needed in circumstances where the primary aim was to influence action at a higher institutional level.

The results here are supported by Kebritchi, Lipschuetz and Santiague's (2017) literature review, which concluded that institutions need to provide professional development and technical support for university teachers. From a practical point of view this is the area that posed the most immediate challenges and opportunities in this case. In general, micro-level adjustments can be made to an online module by teachers but, at the meso-level, resourcing will dictate the extent to which these can be fully realised, and any developmental change would need to adapt to such limitations. The political realities meant that the teachers in this case struggled to find clear lines for formal input into senior decision-making processes and continued to feel somewhat invisible as on campus activities were the focus of senior managers. At the macro-level, opportunities for online TNE, generated by new technology platforms, would increase demand, with finances subsequently balanced against the challenges of planning in periods of dynamic change. Ching and Maharg (2020, p. 26) echo these challenges in the context of legal education, remarking that technology developments can "support neoliberal tendencies in legal education or they can educate ethically and transformationally". This may be so, but in a context characterised by supercomplexity and neoliberal discourses (Feenberg, 2017), teachers need to use both student data and whatever other evaluative data they can muster, to justify their claims for time and support, so that bottom-up evaluation can meet top-down policy and influence – what Patton (2011, p. 177) refers to as "the muddled middle".

In DEval, the focus must *always* be on development (Patton, 2011). Therefore, even though time considerations did impact upon data collection and analysis in this case study, the nature of DEval meant that data generation continued. However, for reporting purposes it is always necessary to draw a line somewhere, even though it is tempting to keep collecting evidence. User timeframes are key to effective evaluation, adding constraints less evident in research. The co-design approach we utilised also necessitated the handing over of some control. This raised questions regarding the role of teachers involved in the evaluation process who were also subjects of 'evaluation'. Some conflict of interests is possible for such individuals who might be motivated to avoid questions that they fear will not reflect well on them. This negotiation of the relationship between evaluator and participants, and the boundary between what can and cannot be influenced, needs careful consideration. Nevertheless, without the DEval focus, it is possible that the teachers in the case study may have become victims of their own success. Good marks and student satisfaction do not precipitate institutional mechanisms for additional support. The lack of visibility of the students in physical

spaces, and the relatively low profile of the programme, may have also mitigated against higher level support for development. Thus, the DEval framing allowed these teachers to make evidence-based arguments for programme changes and resource allocation, which, though needed, were previously not supported by student data alone.

## Concluding remarks

It has been argued that "[q]uality assurance in teaching and learning requires not just the collection of data but also a system that ensures interpretation of, and response to, those data" (Smith, 2008, p.517). Addressing this, we used a case study to show how DEval can support scholarly rigor and critique of teaching practice in conjunction with student satisfaction data to provide a more holistic view of teaching quality. Using DEval theory and practice, we transformed qualitative teacher reflections into justifiable evaluative evidence, which increased the rigour of teachers' self-evaluations and provided stronger evidence for leaders' decision-making. This is a significant advantage of our DEval approach, which can be applied by teachers in other university contexts.

DEval's focus on systems thinking and complexity also meant that broader considerations were included than if student survey data were used alone, enabling the teachers to consider the full scenario in a theoretically rigorous way. The highlighted affordances of our DEval approach drew on existing educational theory and practice to contribute to knowledge about the enhancement of university educational practices, through evaluation, in ways that can be understood by teachers. This means our approach can be adapted and applied by practitioners in higher education. Moreover, our five levels of evaluation in higher education (Table 1) provides important clarification on the purposes and appearances of all levels of evaluation in higher education, building on the works of Saunders (2011, 2012) and Smith (2008).

We acknowledge the limitations of case study research, as a methodology, including that some aspects of our DEval approach may be criticised as superficial. Stronger conclusions might have resulted from more nuanced use of mixed methods and other student data, including interviews, observations of online interactions, and the use of academic performance results (although the latter was, of course, used by the teachers in their regular practice, just not articulated here). Since DEval is heavily influenced by the writing of its originator, Michael Patton, it is also worth noting that his approach has been criticised as unrealistic, too rational-purposive and requiring too much expertise, making it difficult to learn and apply (Rey, Tremblay & Brousselle, 2014; Smith, 1989; Weiss, 1988). However, in our case study, these criticisms did not emerge as issues. Rather, the evaluative results were of prime use for the teachers, where, previously, evaluation had been informal, unstructured and ad hoc. To avoid such criticisms, we recommend the use of RUFDATAE to plan any evaluation. While the described DEval resources are detailed, they are accessible, and we experienced no troubles regarding their use by teachers in the case study described.

More research is needed to build knowledge and DEval practices (Poth, Pinto & Howery, 2012). Although DEval has been effectively used in higher education curriculum innovation (Dickson & Saunders, 2014; Leonard, Fitzgerald & Riordan, 2016), little research has been conducted on using DEval in online educational environments. Future research could usefully identify precisely where else, and how, DEval can be of benefit to higher education.

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