Online course quality evaluation instruments: A scoping review

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How do we make judgements about the quality of online courses? Checklists and rubrics are commonplace in higher education for establishing and measuring design features of online courses. They are created and used by institutions, academics and educational designers to standardise measures for quality online course design. Despite an intensifying spotlight on quality learning and teaching in higher education, no large-scale review of course quality instruments has occurred. This scoping review aimed to ascertain the conceptions of quality being promoted by course quality evaluation instruments and the capability-building resources that underpin these instruments. Seventy-five instruments used to measure quality in online course design in higher education were identified via a systematic search. These instruments were charted and coded. This paper reports on findings that summarise the key attributes of the course quality evaluation instruments, conceptualises a shared definition of course quality and proposes specific core criteria for measuring course quality under the domains of learning design, assessment and evaluation, usability and accessibility, social interaction and technology. The findings indicate that course quality instruments and their support resources have capability-building potential; yet, mostly this potential is not fully realised. We recommend shifting the capability-building potential of these tools from checking compliance to enabling skills development.

Implications for practice:
- Teaching academics can ensure course quality by using evaluation instruments featuring the five overarching conceptualisations of course quality.
- Teaching academics should customise quality evaluation instruments around agreed standards and definitions of the elements of course quality.
- In collaboration with teaching academics, third-space professionals should leverage the affordances of course quality evaluation instruments to build staff capability and agency.

Keywords: course quality, online course design, higher education, learning design, scoping review

Introduction

As higher education (HE) grapples with mass online delivery, inconsistencies in the quality of courses are forefronted. The visibility of digital pedagogies associated with online course delivery means that what was often obfuscated behind closed doors in classrooms is now increasingly visible in learning management systems (LMSs).

Quality in teaching and learning is a contested space (Schindler et al., 2015), "lacking the rigorously empirical evidence base ultimately needed to make quality improvement more a science than an art" (Marshall, 2012, p. 74). This may be rooted in diverse theorisations of learning and teaching (Ertmer & Newby, 2013), compounded by the complexities of notions of quality, and diverse stakeholders' perspectives (Ehlers, 2004). Relativistic notions of quality demonstrate that there is no absolute notion of quality, rather that quality is based on the positionality of the stakeholder (Bloch et al., 2021). Due in part to this lack of cohesive theorisation or practical application of course quality, there are differing praxes and varying integration of quality characteristics into course design, even by experienced academics and learning designers (Lenert & Janes, 2017).

Judgements on quality in the literature focus on students' perceptions of teaching staff, an engaging learning experience, positive social and emotional support and availability of information technology and library resources (Esfijani, 2018; Hill et al., 2003). Comparatively, for educators, quality is viewed through the lenses of institutional support, technology support, faculty support, course structure, course development and instructional design, teaching and learning, student support, social and student engagement and evaluation and assessment (Shelton, 2013). Of course, some argue that any notion of quality within the commodified neoliberal university (Connell, 2013) can be regarded as an accountability measurement influenced by factors such as graduate employment outcomes, enrolments and profitability.

For the purposes of this scoping review, we approached quality at the meso level, that is, the design of learning and curriculum in individual courses or units of study (Esfijani, 2018). We acknowledge that this is but one aspect of quality, explicitly distinct from, but influenced by, teaching quality or institutional capability, and bounded by what can be achieved within the technological affordances of an LMS (Lane, 2009). Even within this frame, we recognise widespread disagreement resulting in many local context-specific practices (Bates, 2015, Chapter 2). From this complex basis, it is more critical than ever for an empirically informed understanding of how quality is measured. The challenge, therefore, is to determine acceptable indicators of quality and then create tools for measuring that which are underpinned by sound educational theory.

One method for setting the descriptors on course quality, to provide an objective measurement, is a course quality evaluation instrument (CQEI) in the form of a checklist or rubric. These mechanisms try to package elements of quality into objective criteria that can be practicably applied by academic staff and third-space professionals (see, e.g., Blood-Siegfried et al., 2008; Heidke, 2015; Hostetter & French, 2021). These instruments generally encompass several broad domains of quality – such as assessment, technology and student interaction – and contain granular criteria against which courses are rated on a scale (Lee et al., 2020). They appear, at least on the surface, to consider multiple stakeholders' perspectives on quality, with students indicating that they value the items in checklists as important to successful learning (Ralston-Berg et al., 2015). In addition to investigating existing tools, we were interested in enquiring if these measurement instruments can work as a proxy for understanding the components and characteristics of quality in online course design.

The design and implementation of CQEIs vary depending on their audience and purpose, whether that be improving the quality of courses while developing the capabilities of educators (Sun & Rosa, 2015) or effecting time-saving measures for academic staff (Kathuria & Becker, 2021) or perhaps aligning with accountability measures in the managerial university (Laiho et al., 2020). There are generally two approaches to implementing CQEIs. The first aims to motivate academics to improve their praxis through self-directed professional development (Mirriahi et al., 2015), whereby academics complete the checklist independently using supporting just-in-time resources and materials (Kathuria & Becker, 2021). The other is a collaborative approach, where an evaluation using the CQEI is undertaken by peers, third-space professionals or certified reviewers and can result in accreditation or certification (see, e.g., Quality Matters, 2018). This peer approach can help to mitigate the reliability problems associated with individuals implementing criteria that are ambiguous or lack the appropriate clarity and guidance (Lee et al., 2020; Yuan & Recker, 2019). Irrespective of implementation methods, course quality instruments can help overcome the barriers academics face in developing quality online courses – including, time, training, resources and lack of quality exemplars (Kathuria & Becker, 2021) – as well as foster the development of high-quality courses that maximise student learning outcomes and student satisfaction (Baldwin et al., 2018).

Interest in the use of CQEIs to ensure quality has been steadily increasing, especially since COVID-19 (see, e.g., Kathuria & Becker, 2021; Zimmerman et al., 2020) despite some evidence of their inadequacy (Baldwin & Ching, 2019). A small-scale review of six evaluation instruments was conducted by Baldwin et al. (2018), which explored the characteristics of United States of America national and statewide

instruments to find commonalities and divergences in their standards, later updated to include the Canvas course evaluation checklist (Baldwin & Ching, 2019). Additionally, Baldwin and Trespalacios (2017) mapped how CQEIs aligned with Chickering and Gamson's (1987) seven principles for good practice in undergraduate education. However, as yet, no large-scale systematic review has been conducted on online CQEIs. Due to the recent explosion in the number of CQEIs and the evidence that newly created CQEIs fail to adequately address already established research-informed best practices (Baldwin & Ching, 2019), the time is now ripe to identify and synthesise these instruments into a cohesive body of knowledge, interrogating their common measures of quality. The aim of this scoping review was to systematically identify published online CQEIs. Of this data, we asked the following questions: What are the conceptions of quality being promoted? What are the commonalities between instruments? What are the professional development supports for implementation?

Methods

This scoping review was used to "identify the types of available evidence in a given field", "clarify key concepts/definitions in the literature" and "identify key characteristics or factors related to a concept" (Munn et al., 2018, pp. 3–4). Employing the scoping review methodology outlined by Khalil et al. (2016), we began by defining our search strategy, instrument selection criteria and methods of data extraction and analysis.

The search strategy aimed to identify scholarly and grey literature. In November 2021, a preliminary search was conducted in the ERIC and Web of Science databases. The resulting articles were analysed to identify keywords that were then used to refine the final search strategy and study selection criteria. In December 2021, a full systematic search was conducted in ERIC, Web of Science, Scopus, Google and Google Scholar by two of us using the search terms in Figure 1. During the search process, it was noted that some CQEIs explicitly referenced others as having influenced their conception. Where these CQEIs were not captured by the original search terms, the CQEI was located and the search terms were modified accordingly. Due to most CQEIs being published on institution websites and never formally published in the academic literature, the Google search engine formed a major part of our search strategy and aided in capturing instruments from institution and organisation websites. As has been identified, search engine algorithms can lead to forms of selection bias (Ćurković & Košec, 2020). Therefore, once the full search was complete, one of our research team members replicated the Google-based portion of the search using the same keywords and inclusion terms to identify any instruments missed due to the filter bubble effect. Further, a manual search for CQEIs on institution websites was conducted using the top 20 institutions listed by the Times Higher Education (2021); searching the top 20 rankings did not provide any further instruments or possible keywords.

The inclusion and exclusion criteria for the CQEIs are displayed in Figure 1. CQEIs were screened in duplicate against the inclusion criteria, with disagreements settled by a third member our team. As this study focused solely on CQEIs in the public domain, we excluded seeking out institutions and organisations that use CQEIs in their practice and do not situate them publicly on their website.
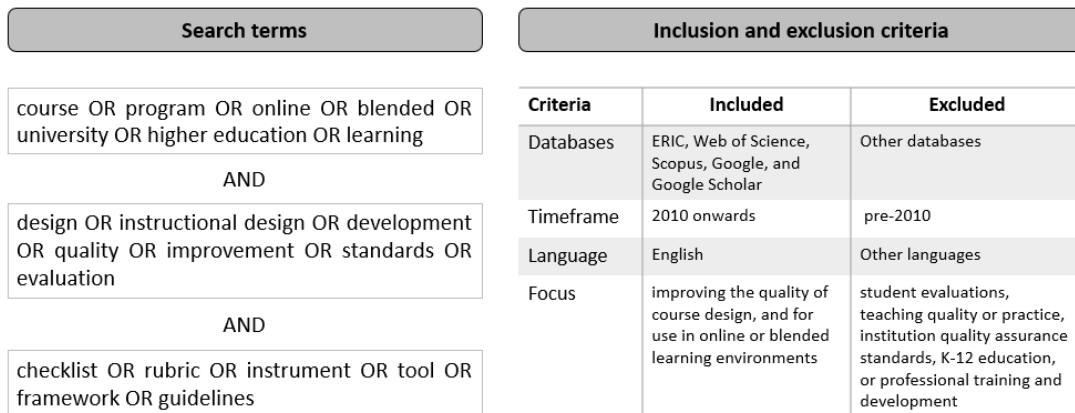
Search terms

course OR program OR online OR blended OR university OR higher education OR learning

AND

design OR instructional design OR development OR quality OR improvement OR standards OR evaluation

AND

checklist OR rubric OR instrument OR tool OR framework OR guidelines

Inclusion and exclusion criteria		
Criteria	**Included**	**Excluded**
Databases	ERIC, Web of Science, Scopus, Google, and Google Scholar	Other databases
Timeframe	2010 onwards	pre-2010
Language	English	Other languages
Focus	improving the quality of course design, and for use in online or blended learning environments	student evaluations, teaching quality or practice, institution quality assurance standards, K-12 education, or professional training and development

Figure 1. Search terms and inclusion criteria

Data from the CQEIs was then extracted and charted by two members of our team. The key data extracted was influence (it is common practice for institutions to develop their own CQEI based on others in the field; where an instrument explicitly references another, it was noted), number of domains (the number of broad domains covered in a checklist; a broad domain would cover, e.g., technology), number of criteria (i.e., the number of individual items being evaluated), measure of quality (whether the instrument was structured as a checklist or rubric or whether another scoring system was used), implementation approach (whether an instrument was designed for self-evaluation or peer evaluation) and accreditation (whether an instrument provided an accreditation measure).

Both individually and collectively, we then thematically and recursively coded and analysed criteria from the CQEIs using NVivo (Auerbach & Silverstein, 2003; Braun & Clarke, 2006) to explore commonalities between the criteria. Instruments were initially deductively coded to five broad themes (learning design, assessment and evaluation, social interaction, technology, usability and accessibility) by two of us to explore conceptions of quality, and disagreements were resolved by a third member of our team. These themes were determined based on the broad domains covered by leading instruments and known domains of quality from learning design literature. Criteria were then inductively coded to sub-themes to explore commonalities between CQEIs in more detail. Finally, to explore the professional development supports provided to support academics and course designers in applying the lists to new and existing courses, two of our team members examined the instruments, their source web pages and any linked support resources to uncover references to specific educational theories, pedagogies and research-informed practices that underpinned the development of the criteria or instrument. When searching for references to theory, pedagogy or research-informed practices, two of our team looked for explicit references in the instrument or specific instrument support resources, any references found in generic teaching and learning resources were not included.

Results

A total of 126 CQEIs were identified. Instruments were then screened and some were excluded as they did not meet the inclusion criteria (*n* = 10), were duplicates (*n* = 16) or were developed prior to the 2010 cut-off (*n* = 7). Additionally, we have included only the latest and most comprehensive version of instruments where condensed or modified versions exist (resulting in *n* = 11 instruments being excluded) – for example, the Emergency Remote Instruction version of the Quality Matters (2020) rubric was not included, and only the High-Quality Course Review Instrument from the University of Central Florida (2018) was included. Three CQEIs were also excluded as they specifically focused on massive open online courses – which we believe to be sufficiently different from traditional HE courses in terms of context and cohort so as to be omitted. Finally, four instruments were excluded as they were direct copies of another instrument on the list and identified themselves as such. Thus, a total of 75 instruments were included in the scoping review – see Figure 2.
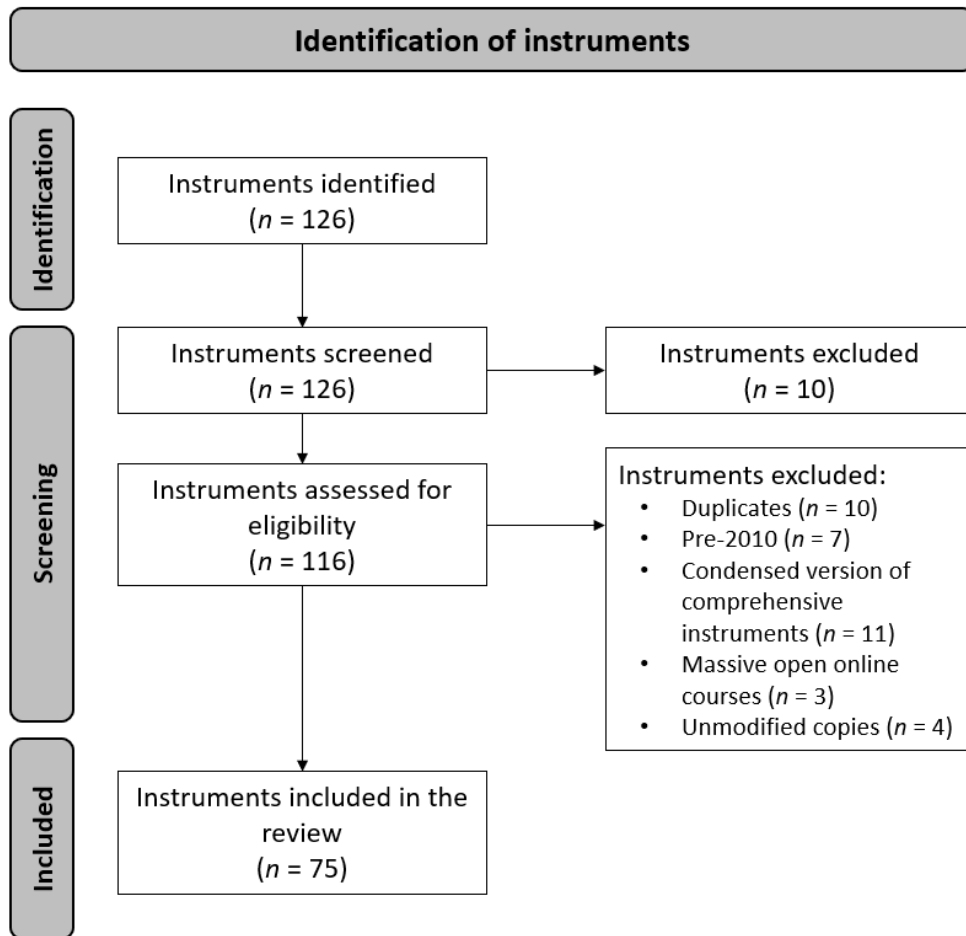
Figure 2. Preferred reporting items for systematic reviews and meta-analyses flow diagram

As has been noted (Baldwin et al., 2018), CQEIs often point to other instruments that helped inform their development. By far the most often cited instrument is Quality Matters (2018) (n = 24). As several institutions noted, this was in part due to those institutions being subscribers to the Quality Matters programme and having created a modified version of the rubric to use in-house prior to sending courses for a formal Quality Matters review. The next most cited instruments were Blackboard (2020) (n = 10), the SUNY Online Course Quality Review Rubric (OSCQR) (State University of New York, 2019) (n = 5), Rubric for Online Instruction (California University, 2003) (n = 6) and the Quality Online Course Initiative Rubric (Illinois Online Network, 2019) (n = 5).

Instruments contained between nine and 102 criteria (mean 38) split across an average of six domains. Most instruments were presented in the form of checklists (n = 53). Of these, 17 defined multiple levels of quality (e.g., sufficiently present, minor revisions, moderate revisions, major revision), and 11 ranked their criteria by importance – either through a subset of essential criteria or a points system to add weightings to each criterion. From a nomenclature perspective, we noted that many of these instruments were referred to as rubrics, despite not containing the defining features of rubrics (criterion-level descriptors across a scale); in fact, only nine instruments could truly be considered rubrics.

Most CQEIs were designed to be implemented using a self-guided approach (n = 22) by an academic reviewing their own course, followed by those which recommended a peer-review process (n = 13) – seven instruments were identified as being designed for either self- or peer review. The remaining instruments (n = 33) omitted a suggested implementation approach. Seven of the instruments were presented as part of an accredited process, four by an external agency and three for institutional badging of high-quality courses.

The mean conceptions of quality presented by the instruments showed a principal focus on learning design (29%) and usability and accessibility (28%), with a lesser focus on assessment and evaluation (18%) and social interaction (16%) and a minor focus on technology (9%) – see Figure 3. However, at an instrument level, these were quite variable, from instruments that took a holistic approach encompassing all focus areas equally to those which focused on only one or two areas – see the top five most cited instruments in Figure 4.
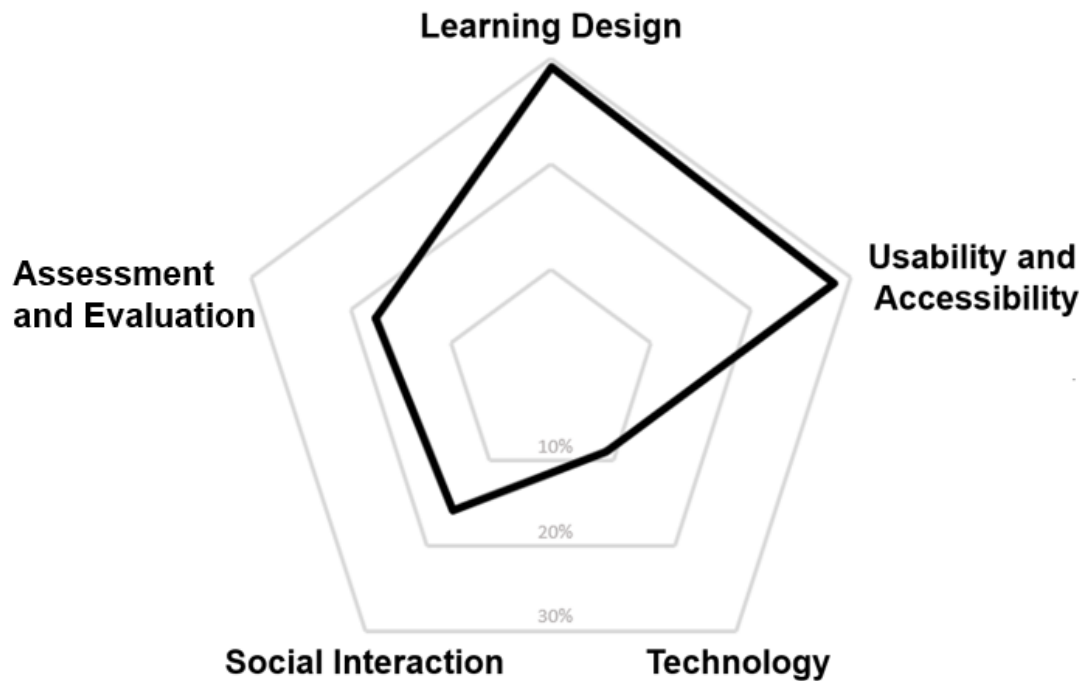

Figure 3. Mean conceptions of quality across all instruments

QM emergency remote instruction checklist (Quality Matters, 2018)	Blackboard (2020) Exemplary Course Program Rubric	SUNY Online Course Quality Review Rubric (OSCQR) (State University of New York, 2019)

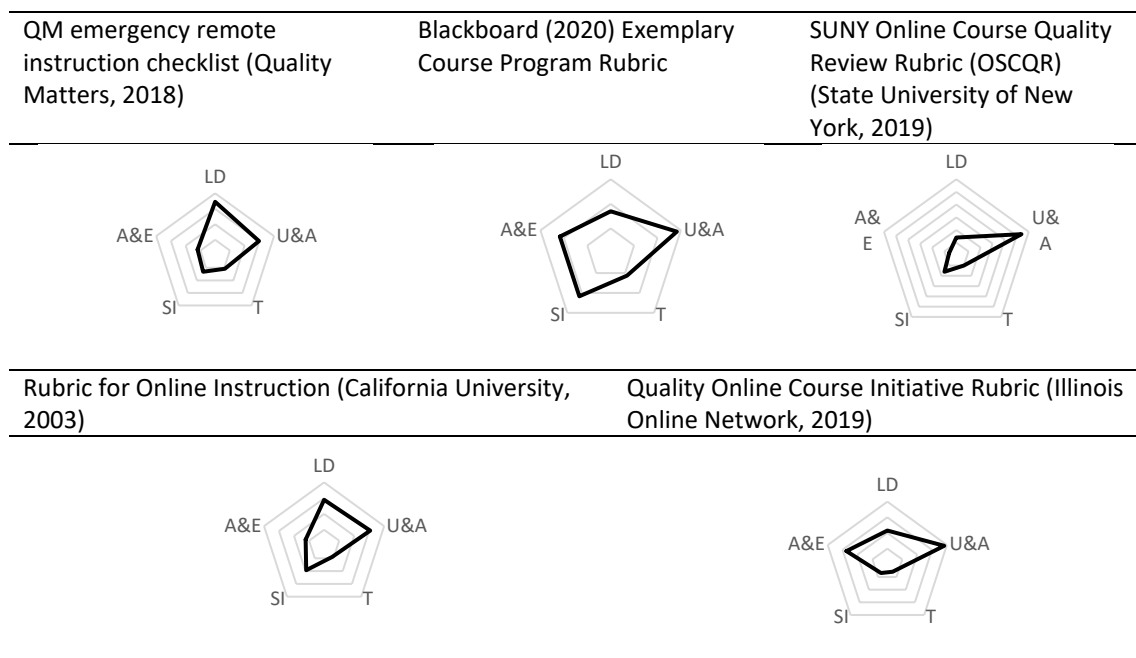| Rubric for Online Instruction (California University, 2003)	Quality Online Course Initiative Rubric (Illinois Online Network, 2019)

Figure 4. Conceptions of quality for the five most commonly cited instruments

Table 1 displays the results of the thematic coding of criteria for measures of quality by the rate of occurrence (the percentage of checklists in which a criterion or its derivatives appear). Examples of specific criteria are provided for each criterion code – the instruments from which these criteria were selected are identified by a numerical value assigned during coding (see the Appendix). We present the 38 criteria that appear in a quarter or more of the instruments that we coded.

Table 1
Common criteria in CQEIs

Criterion code	Domain	Examples of specific criterion	Rate of occurrence
Course learning objectives	Learning design	"The course learning outcomes are described in terms of what the student will be able to do upon completion and are written from the students' perspective." (52)	96%
Accessibility	Usability and accessibility	"All course content is compliant with accessibility standards and accommodates the use of assistive technologies (i.e., alt tags for images, closed captioning and/or transcript for multimedia, etc.)." (15)	94.7%
Navigability	Usability and accessibility	"The course employs a navigation scheme that is consistent, predictable and efficient throughout the course to facilitate ease of use." (62)	85.3%
Learner supports	Learning design	"Course instructions include a link to the institution's academic support services and resources that can help learners succeed in the course." (13)	82.7%
Constructive alignment	Learning design	"Course contains learning content and activities that are aligned with assessments and learning objectives." (74)	77.3%
Learner-to-learner interaction	Social interaction	"Learning activities include student-student interaction to foster a sense of community (e.g. discussions, constructive collaboration, and peer reviews)." (11)	70.7%
Instructor introduction	Social interaction	"Instructor provides a personalized bio and statement that welcomes students to the course in text or video format." (39)	70.7%
Set learner expectations	Learning design	"Students are informed about the requirements for successful participation in this course: what they will do and how much time they are expected to spend in class, online and undertaking individual study effort." (24)	66.7%
Course syllabus	Learning design	"Students have easy access to a course syllabus which contains crucial course information and requirements they need to know about the course prior to starting." (41)	66.7%
Assessment rubric or marking guide	Assessment and evaluation	"Assessment marking criteria and/or rubric (aligned with the learning outcomes) are used and available to students prior to assessment items being submitted for marking." (3)	64%
Orientation	Learning design	"The course provides an orientation for the overall course as well as an overview in each individual unit section. Students know how to navigate and can identify what tasks are due and	64%

		how they are to proceed within the course site." (64)	
Communication	Social interaction	"The instructor provides students a plan for course communication that, Outlines when and how students can expect to hear from the instructor, Outlines expected response times and availability. Effectively utilizes LMS communication tools, Outlines when and how students can contact the instructor." (63)	64%
Feedback quality	Assessment and evaluation	"The combination of assessments (self, peer, formative, and summative) throughout course provides constructive, meaningful and actionable feedback to students." (25)	61.3%
Community building	Social interaction	"Activities are designed to help build a sense of community, rather than each learner perceiving himself/herself studying independently." (6)	61.3%
Instructor expectations	Social interaction	"The instructor's plan for interacting with learners during the course is clearly stated." (43)	60%
Learner-to-instructor interaction	Social interaction	"Instructor-to-student interaction is regular, substantive, and initiated by both instructor and student. The instructor is regularly "present" in the class." (27)	60%
Organisation and structure	Usability and accessibility	"Are content and activities organized logically (by topic, module, week, or type)?" (44)	50.7%
Learner-centred technologies	Technology	"Learning outcomes drive tool and platform selection and implementation." (28)	50.7%
Content variety	Learning design	"Content is presented using a variety of appropriate mechanisms (e.g., content modules, links to external resources, print material, discussion boards, visual, auditory media like Panopto) that promotes learner engagement." (18)	49.3%
Course evaluation	Assessment and evaluation	"Throughout the semester, instructor provides multiple opportunities to solicit feedback from their students about their learning and on the course for the improvement of the course." (9)	48%
Scaffolding technologies	Learning design	"Clear and consistent instructions/guides for using the technology are provided." (4)	46.7%
Copyright	Learning design	"Current copyright legislation and citation conventions are used for all course materials." (38)	46.7%
Assessment instructions	Assessment and evaluation	"Instructions for assignments are explicit about what students should be able to do, the conditions under which the student should produce the assignment, and how well the student should perform; rubrics are provided for assignments." (61)	41.3%
Institution policies	Usability and accessibility	"Links to institutional policies (e.g., academic honesty policies), materials, and forms relevant for learner success are included and easy to find." (6)	40%
Content chunking	Learning design	"The learning materials are meaningfully segmented ("chunked") to reduce cognitive load." (68)	40%

Assessment variety	Assessment and evaluation	"Use a variety of assessment methods throughout the course to provide student opportunities to demonstrate learning in multiple modalities and weightings." (55)	40%
Quality instructions	Learning design	"Online activities and assignments are written with explicit instructions for how to participate, when responses or submissions are expected and how the activities are assessed." (39)	40%
Academic integrity	Learning design	"The course models the academic integrity expected of learners by providing both source references and permissions for use of instructional materials." (43)	37.3%
Accessibility and usability of technologies	Usability and accessibility	"All learning materials, multimedia, and tools utilized are accessible and ready to meet diverse learner needs to currently accepted standards." (42)	36%
Content currency and relevance	Learning design	"Instructional materials are current, best representing the discipline and reflecting current trends." (58)	34.7%
Active learning	Learning design	"The course engages students in active learning through an appropriate mix of student-content, student-instructor and student-student interaction." (13)	33.3%
Self-assessments	Assessment and evaluation	"Opportunities for learner self-assessment are provided (e.g., practice test, journal, self-reflection, quiz)." (6)	33.3%
Fit for purpose assessments	Assessment and evaluation	"The assessment instruments are sequenced, varied, and suited to the learner work being assessed." (17)	32%
Instructor presence	Social interaction	"Instructor demonstrates presence by engaging actively and frequently throughout the course." (39)	30.7%
Assessment frequency	Assessment and evaluation	"Assessments are provided regularly to provide feedback on student achievement of learning outcomes." (18)	29.3%
Designed to a style guide	Usability and accessibility	"The course conforms to the institution's design standards (style guide)." (3)	29.3%
Calendar or schedule	Learning design	"Is there an overall course schedule that shows main activities, deliverables and due dates?" (22)	26.7%
Readability	Usability and accessibility	"The course design facilitates readability and minimizes distractions." (5)	25.3%

These results would indicate that indeed there are some universal notions of criteria for measuring quality across CQEIs, with 18 criteria that appear across more than 50% of instruments. Yet, this is not conclusive evidence of common notions of quality, so while there is some general consensus, there is still quite a lot of variance across instruments and their specific institutional focuses. Further, despite the criteria in Table 1 appearing as the most common, it is unclear whether these represent universally accepted notions of quality or whether we see represented an artificially high recurrence of criteria from sources on which many other instruments are based – 24 instruments explicitly identified Quality Matters as an influence. Further study could be undertaken to track and provide clarity around this phenomenon.

What was perhaps surprising was how infrequently some core educational principles and best practices appeared in instruments. For example, universal design for learning (24%), authentic assessment (21.3%), manageable learner workload (21.3%), scaffolding (17.3%), diversity and inclusivity in course design

(14.7%) and personalised learning (12%) came in much lower than one might anticipate. Additionally, there were some unique criteria that were institution- or context-specific but are worth recognition for their importance, for example, from the University of Calgary (2021, p. 2) "Include an Indigenous Land Acknowledgement".

There was some variance between CQEIs in regard to their focus – that is, either for an individual course, institution-wide or somewhere in between. Where an instrument focused on one or the other, it was straightforward as to the rationale and structure of the list as well as the intended audience, but in cases where instruments tried to do both, their purpose was unclear. For example, reviewing criteria from the Australasian Society for Computers in Learning in Tertiary Education's (2020) Technology Enhanced Learning Accreditation Standards, we find that some are unlikely to be a course-level quality issue over which an instructor is likely to have individual agency (e.g., "Learners are able to access analytics (e.g. via a dashboard)"), but others are clearly focused on an individual course instructor (e.g., "Opportunities for learners to engage in a variety of tasks (e.g. co-creation, quizzes) are provided").

Table 2 shows the types of capability-building resources linked to course quality instruments by rate of occurrence.

Table 2
Capability-building support resources linked to CQEIs

Capability-building resources	Rate of occurrence
Explicit instrument-level references to research-informed best practice	24%
Generic teaching and learning support resources	18.7%
Criterion-specific detailed descriptions	17.3%
Criterion-specific strategies for improvement	17.3%
Support staff contact details	17.3%
Criterion-specific examples	16%
Explicit criterion-level references to research-informed best practice	13.3%
Professional development programme	8%
Research paper	1.3%

The most common support resources found accompanying CQEIs were links to generic teaching and learning support guides on institutional websites. However, these resources were contextually broad and did not reference the instrument or its criteria specifically. Few instruments offered specifically tailored support such as strategies for improvement (n = 13), detailed descriptions of criteria (n = 13) or examples of criteria in practices (n = 12) – which in some instances left criteria ambiguous and open to subjective interpretations. Similarly, direct links to in-person support were scant, with only 13 instruments providing contact details for staff at the institution – commonly through booking a consultation with a staff member from a central teaching and learning unit. Six instruments were paired with professional development programmes aimed at upskilling reviewers (sometimes accrediting them formally as reviewers) in the instrument and its implementation. Overall, 49% of quality instruments have no linked capability-building or support resources.

A total of 18 CQEIs made explicit reference to underpinning research-informed best practices – those being practices that are grounded in theory and research as opposed to best practices that are based on the educator's experience but not necessarily shared collectively (Bates, 2015). A total of 10 instruments made explicit reference to underpinning research-informed best practices at the individual criterion level. Although research-informed practices could be implied for some instruments, this was possible only where the user was familiar with educational terminology. For example, "Complexity is managed through breaking each lesson into manageable parts" (Carnegie Mellon University, 2021) could be presumed to be a reference to cognitive load theory, but only where the user was acquainted with this theory and its application. Perhaps most interestingly, 71% made no explicit reference to underpinning research-informed best practice.

Discussion

CQEIs aimed at evaluating and improving the quality of HE courses continue to be developed and refined at universities around the world. This contribution aimed to pull together these disparate works into a more cohesive body of knowledge from which we can learn and improve the development of such instruments. From the 75 instruments identified, charted and coded, we were able to establish clear answers to our research questions.

If recurring criteria can be taken as indicators for quality, then these instruments broadly espouse similar conceptions of quality for HE courses. The overarching domains being learning design, assessment and evaluation, social interaction, usability and accessibility, and technology seem to present a universally accepted notion of quality – albeit with each instrument having a different weighting and focus on each area. Yet, while there are broad commonalities between the criteria in CQEI, it is perhaps less so than could be expected. Finally, for the most part, the body of instruments lacked both explicit capability-building supports and an articulation of the underpinning educational theories, pedagogies and research-informed best practices influencing the design of the instruments.

Two of these findings warrant further discussion: firstly, can we apply the shared conceptions of quality expressed via instrument criteria to articulate a cohesive conception of course quality? Secondly, what are the implications of the limited capability building supported in the implementation of these instruments? Answering these two questions leads us to propose options for unlocking the true potential of CQEIs.

Towards a shared conception of course quality

The deductive thematic analysis identified five thematic clusters of criteria: learning design, assessment and evaluation, social interaction, accessibility and usability, and technology. The presence of these overarching themes suggests that there is a shared conception of quality. Our inductive analysis found that irrespective of institutional context, there are several common criteria indicative of course quality (Table 1). These are writing and aligning quality course learning objectives; ensuring accessibility standards are met; designing with a focus on ease of navigability; providing learners with the necessary course, academic, and well-being supports; and ensuring constructive alignment both vertically and horizontally. Beyond this set of five common criteria, there is wide variation. Nowhere is this more evident than in the differences between the instruments developed by different campuses of the same institution.

We had assumed that there would be greater correlation between the thematic groupings and individual criteria; however, this is not the case. We propose that the differences at the criteria level arise from individual institutional priorities, rather than a lack of a shared conception of course quality. In reframing this imagining of CQEIs, we instead see these instruments as adaptable, ephemeral tools that reflect notions of quality that are dynamic and changeable to institutional needs, staff capability and policies, rather than as static regulators of quality.

We perhaps naively set out on this research to see whether we could identify shared conceptions of quality and shared instrument criteria that would articulate a cohesive conception of course quality. Instead, it seems that a universal conception of course quality remains as nebulous as ever – and from our findings, we see that the number of unique instruments may be representative of the need to contextualise criteria and evaluation standards based on varying specific institutional, student and faculty needs. However, this can benefit institutions seeking to create CQEIs, as they can draw upon complementary instruments with different focus areas to create a more holistic tool: for example, combining the University of Calgary's (2021) online course design checklist, which focuses on assessment and evaluation, social interaction and usability and accessibility, with the Comprehensive Rubric For Instructional Design In e-Learning (Debattista, 2018) and its focus on learning design and technology; alternatively, combining the social interaction strengths of the Online Learning Consortium's (2016) tool

with Dublin City University's (2020) specialisation in learning design, and the University of Massachusetts, Darthmouth's (2020) emphasis on usability and accessibility.

Exploring the potential of CQEIs for building capacity

CQEIs can provide academic staff with opportunities for authentic experiential learning, enabling them to upskill in learning and teaching in a manner that is deeply embedded within their own praxis. Yet, of the 75 CQEIs reviewed, most failed to provide associated authentic staff development opportunities – 49% of quality instruments had no linked capability building or support resources, and 71% failed to explicitly articulate the research-informed practices on which they are based. As such, these instruments offer a quantification of a course's quality without meaningfully offering opportunities for improvement. Whilst it was outside the scope of this study to explore the efficacy of the instruments that did supply support and capability-building resources, the lack of any supports in the vast majority of these instruments raises the question of whether these tools were designed to facilitate learning outcome improvements through developing staff or were more concerned with standardisation or performance assessment and accountability (Laiho et al., 2020).

The lack of embedded capability building within instruments misses the opportunity to empower academic staff with the skills and agency for improving the quality of their courses and instead could force ritual or strategic compliance (Schlechty, 2011). As some educational development work shifts from relationship building and upskilling to compliance and quality checking (Aitchison et al., 2020), cautions need to be raised about how CQEIs could become an avenue for further managerial oversight and, in combination with ineffective implementation, disempower academic staff. Further study regarding the implementations of CQEIs would make a valuable contribution.

Yet, there is hope. Baldwin and Ching (2019) highlighted the criticality of underpinning CQEIs with research-informed principles. We argue that these instruments must be authentic tools capable of evaluating courses in a way that empowers and upskills academic staff. Achieving these ends need not be an onerous undertaking as the elements of such an instrument already exist, albeit spread across the corpus. Such capability-building practices as those identified below provide concrete examples of how CQEIs can transcend institutional managerialism measurement, instead illustrating how they can be used to empower staff and build institutional capacity.

Guidelines for developing CQEIs

For practitioners and institutions seeking inspiration for developing their own CQEIs, we highlight practices from some of the leading instruments in the field. Illustrations of CQEI good practices can be observed in the following:

- The extensive research base that informed the Quality Matters (2018) standards, whose companion web page clearly articulates the theory and research underpinning the rubric.
- The practical strategies for improvement in the SUNY Online Course Quality Review Rubric (OSCQR) (State University of New York, 2019), whose companion web page contains strategies grounded in research-informed practice and where there are opportunities for educators to communicate and share their own praxis.
- The levels of progression associated with the University of Central Florida (2018), where courses can be designated as quality, high quality or exemplary, so that educators can develop their courses beyond minimum standards.
- The robust enactment model of the Australasian Society for Computers in Learning in Tertiary Education's (2020) Technology Enhanced Learning Accreditation Standards, where reviewers undertake comprehensive training to help them better understand and apply the criteria enabling more effective course feedback. This can be further enabled by ensuring that individual criteria are clearly articulated.

- Integrated professional development programmes such as California State University, Long Beach (2021), where the CQEI is embedded within a suite of capability-building resources to upskill educators in a more holistic manner.
- The contextualising of CQEIs to individual institutions such as at the University of Wisconsin, La Crosse (2017), the University of Wisconsin Oshkosh (2020) and the University of Wisconsin, Milwaukee (2021), where multiple CQEIs are clearly tailored to the needs of the individual campuses and educators.
- The regular updating of the criteria to meet the evolving needs of institutions, staff and technologies, such as the Canvas (2019) course evaluation checklist – now in version 3.

Limitations

As noted, traditional database searches turned up few results, so much of the search strategy for evaluation instruments relied on the Google search engine, which has the potential to introduce selection bias into our results (Ćurković & Košec, 2020), despite our attempts to mitigate this as described above. As this study focused on CQEIs in the public domain, it is likely that there are CQEIs that institutions and organisations may use in their practice and not situate them publicly on their website. Further, as many of the CQEIs existed on institutional websites, it is possible that details of the implementation, support and additional resources exist outside of the public domain, and, as such, commentary on some instruments may be incomplete. A future investigation of instruments that are not publicly available would be a valuable addition to build upon the findings in this paper.

Conclusion

What is clear is that there is no one-size-fits-all approach when it comes to CQEIs; institutions must, and should, adapt them to their own unique needs and context. Some overarching common themes do exist at the domain level, but beyond this, the criteria in each instrument are tailored to institutional context and need. So, whilst we cannot recommend the creation of a single universal checklist, there are some core criteria present in all instruments with the addition of nuanced criteria specific to the context. Those core criteria are having quality course learning objectives; ensuring accessibility standards are met; designing courses with ease of navigability in mind; providing learners with the necessary course, academic and well-being supports; and ensuring constructive alignment both vertically and horizontally, although, importantly, it is not just about the criteria, but how they are enacted to build academic capability and agency. To achieve these aims, we highlight some CQEI best practices that could guide individuals and institutions in making informed decisions about appropriate CQEIs and capability-building supports. Finally, we argue that a focus on CQEIs is only one part of the larger discourse on quality in HE, and as such, institutions must ensure their design and uptake enable and empower teaching academics to provide outstanding learning opportunities for their students.

Author contributions

Richard McInnes: Conceptualisation, Methodology, Investigation, Writing – original draft; **James Hobson**: Investigation, Data Curation, Visualisation; **Kerry Johnson**: Investigation, Data Curation; **Joshua Cramp**: Conceptualisation, Investigation, Data Curation; **Claire Aitchison**: Conceptualisation, Writing – review and editing; **Katherine Baldock**: Conceptualisation, Methodology, Writing – review and editing.

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Appendix: CQEIs

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