

Students' Agreement with QM[®] Rubrics as Benchmarks for Online Course Quality

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Abstract: Many factors should be considered when planning to provide an effective Online Learning (OL) experience. Of these factors, quality is the most noticeable concern that received considerable debate. Over the years, several suggestions for standards for ensuring online course quality have been suggested. Among these, Quality Matters (QM) is the most used and principally accepted rubric for quality assurance. Much research explored its potential and impact on maintaining online course quality, yet more research is needed to parallel the expansion of online learning post-COVID-19 pandemic. Additionally, as more students are involved in fully OL classes, it is perceived that their perceptions of QM would be more authentic as they are stemmed from actual experience. To this end, the present study explores students' perspectives towards QM rubrics as a benchmark for measuring OL course quality. The study adopted a mixed method where quantitative data were gathered by surveying 112 university students using a QM-based questionnaire of 42 items. Using average scores of the participant responses to the questionnaire, the researcher compared their evaluation to the QM general and specific standards. Furthermore, focus-group interviews were conducted to validate and justify the quantitative data. Frequencies of mentioning the most and least important standards were calculated. The findings revealed that the participants agreed to 71% of the QM rubrics. On the other hand, they overvalued standards related to learners' privacy, course introduction, assessment, and course technology while undervalued standards associated with learning objectives, learner support and accessibility. The participants' justifications for their judgments revolved around the importance of privacy in cyberspace, the vitality of online assessment tools, and their familiarity with the new technologies that made IT support a secondary standard for them. These results imply reconsidering OL course quality by focusing more on using variable technologies and tools that engage students in the experience, ensure their privacy, and facilitate their interaction with the course content. Further research that utilises larger samples and involves QM-based OL courses is suggested to support the present findings.

Keywords: Online learning, e-Learning, e-Learning quality, Quality matters, Quality rubrics

1. Introduction

As has been expected by many researchers, e.g. (Bach, Haynes and Smith, 2007; Selingo, 2013), Online Learning (OL) at the tertiary level has been normalised in most parts of the world. However, what was not expected was the speed with which this transformation took place. The outbreak of Coronavirus (hereafter the pandemic) imposed lockdown and social distancing that forced academic institutions around the globe to adopt OL. Many researchers considered this transformation abrupt and dramatic (Riley et al., 2021; Motz, et al., 2021; Saxena, Baber and Kumar, 2021). This perception entails a question: was the world ready for this change? Two years after the announcement of COVID-19, a global pandemic, and with the gradual return to face-to-face learning, many teachers and researchers can answer the question. It can be stated that OL was a successful solution. However, as sufficient time is the key factor that guarantees an effective transition to OL (Mestan, 2019), and as this time was not available in the recent transition (Marković, Pavlović and Mamutović, 2021), it is conceivable to assume that quality was sacrificed during shifting to the ad hoc OL in 2020.

Quality is one of the foremost constructs of OL that requires reconsidering (Weller, 2005). Much work has been done investigating the optimal standards for developing online courses. However, most of the research was conducted from the viewpoints of educators and course developers. Perspectives of the essential stakeholders of the learning process, i.e. students, regarding standards of quality online learning are also explored. However, quality issues studies from students' perspectives were more related to instructors' practice and technology use than overall course quality. The new reality imposed by the pandemic has made investigating the issue more urgent. After all, "providing pupils the highest quality of instruction is still paramount for institutions of higher learning even in times of worldwide emergencies" (Majewska and Zvobgo, 2023, p. 314). Revisiting the issue after implementing OL on a wide range is more insightful. Students can now provide their perceptions about OL based on their authentic experience with online courses and virtual classes as the only learning method for over two years.

Quality Matters Rubrics (QMRs) are utilised widely to assess online course quality. These rubrics have been used for almost twenty years, along which they remain the most used benchmark for measuring quality (Rohers, Wang and Kendrick, 2013). The rubrics have undergone continuous improvement following structured processes. These processes include reviewing the literature on online learning, peer reviewing the course that

met the rubrics, and statistically analysing the most frequently met and missed standards (Shattuck, Zimmerman, & Adair, 2014). Moreover, the process “involves focused input from a [r]ubric [c]ommittee composed of faculty and instructional staff with extensive experience using the QM [h]igher [e]ducation [r]ubric” (Quality Matters, 2023). The currently used version is the sixth, but this version will be updated to the seventh edition by early July 2023, according to the QM website.

As stated by many studies, these rubrics represent the optimal criteria that can be used to assure OL quality (Shattuck, Zimmerman, and Adair, 2014; Sadaf, Martin and Ahlghrim-Delzell, 2019). Subsequently, it is perceived that measuring the students’ level of agreement with QMRs will explain how they perceive online course quality and reflect the level of concordance between QMRs and students’ actual viewpoints about OL quality. To this end, the current study posed the following research question:

RQ1. To what extent do students’ perspectives of online course quality agree with the QMRs?

2. Literature Review

2.1 Online Learning

There were many drivers for the vast growth of OL. Among these are the rapid technological change, globalisation, development of students’ IT skills, student lifestyle, and the increase in the international higher education market (Bach, Haynes and Smith, 2007). On the other hand, numerous issues are related to OL (Mahyoob, 2020), and there are many hypes around them. Some of these issues are related to the globalisation and commercialisation of education. Others are about whether OL means the death of campus life and whether OL is proper for training, not teaching. Other concerns are related to limited social interactions and the need for extra skills (Psotka, 2022). However, the most important is the issue of the probable decline of standards that OL may lead to (Weller, 2005). The perceived decline may be caused by unplanned and rash shifting to teaching online. When switching to OL, it should be noted that this transition is “a complex process that requires serious planning and its success is influenced by several factors” (Marković, Pavlović and Mamutović, 2021, p.2). Careful consideration of these factors is the best way to retain learning quality.

Quality of OL can be considered a type of Quality of Service (QoS). According to Tomei (2010, p.185), QoS is “A set of defined levels of performance, requirements for achieving quality”. Establishing QoS aims to ensure the proper delivery of data consumers. It comprises four levels: user, application, system, and network. Therefore, it is different from Quality of Experience (QoE), which is a “more subjective assessment of the satisfaction of the user with the service” (ibid). Accordingly, most OL course evaluations are QoE-based as they are always designed to reflect learners’ opinions about their satisfaction with the OL course. According to Palloff and Pratt (2009, p50), most course evaluations directed to students are customarily executed to measure some form of a popularity contest where students reflect on their perspectives about instructor practice and their level of satisfaction rather than the course quality. For them, eight elements should be considered when evaluating an online course. These elements are (1) Perception of the overall online course experience, (2) Orientation to the course, (3) The content, (4) Discussion and interaction, (5) Self – assessment, (6) course management system, (7) Technical support and (8) Access to resources. Institutions producing various rubrics to measure OL quality use these standards and other similar ones. The most renowned and recent are QMR, the most known and applied rubrics used to measure OL quality.

2.2 Quality Matters

Quality Matters is “a faculty-centred, peer review process designed to certify the quality of online and blended courses” (Quality Matters, 2021). Since its first launch in 2003, the quality matters program has targeted three components: QM rubrics, peer review, and professional development (Budden and Budden, 2013). QM rubrics are validated and proven to reflect the best practice of OL (Sadaf, Martin and Ahlghrim-Delzell, 2019). The rubrics have undergone slight changes over the years. The sixth version (2020) includes 42 specific standards that are distributed, as shown in Table 1 below.

Table 1: General and Specific Review Standards From the QM Higher Education Rubric, Sixth Edition*

No.	General Standards	Specific Standards			
		Essential	Very important	Important	Total
1	Course overview and introduction	2	3	4	9
2	Learning objectives (Competencies)	5	-	-	5

No.	General Standards	Specific Standards			
		Essential	Very important	Important	Total
3	Assessment and measurement	3	2	-	5
4	Instructional materials	2	3	-	5
5	Learning activities and learner interaction	3	1	-	4
6	Course technology	2	-	2	4
7	Learner support	3	-	1	4
8	Accessibility and usability	3	3	-	4
Total		23	12	7	42

*Source. Quality Matters: <https://www.qualitymatters.org/qa-resources/rubric-standards/higher-ed-rubric>

The specific standards are assigned points values ranging from essential (3 points), very important (2 points) and important (1 point). More than half of the specific standards are considered essential and distributed among the eight general standards. It is also noted that all the specific standards related to learning objectives are essential. Other standards, however, are deemed very important (12 standards) and important (7) standards. An online course is QM-certified only if the total points attained are $\geq 85\%$ of the possible points. The general standards of QM can be explained as follows:

- Course overview and introduction: Straightforward course design helps students understand how to start the course (Sadaf, Martin and Ahlghrim-Delzell, 2019).
- Learning objectives: Provided as “advance organisers for learners, providing some level of scaffolding for the current lesson” (Brown, Lewis and Toussaint, 2018, p.175).
- Assessment and measurement: Used to evaluate the impact of new assessment methods, student engagement with them, and their performance on them (Riegel and Evans, 2021).
- Instructional materials: As it is believed that course materials are a basic factor that creates an interesting learning experience and increases students’ engagement. (Schmidt and Stowell, 2017).
- Learning activities and Learner Interaction: The QM developers suggested this rubric as interaction is an “important aspect of successful online teaching” (Marković, Pavlović, and Mamutović, 2021, p.2). Accordingly, teachers are expected to utilise different techniques for discussion and use both asynchronous and synchronous teaching methods to help create a learning community
- Course technology: This provides technology standards students use to access the course material and receive the necessary support in LMS and counselling units (Rohers, Wang and Kendrick, 2013).
- Learner support: To assist students in accessing different forms of support to facilitate their learning and cast a sense of community (Al Zumor, 2015). This includes both infrastructure and pedagogical support, which are crucial to the effective application of quality online learning (Azila-Gbetteor, Abiemo and Glate, 2023).
- Accessibility and usability: QM requires that “all learners must have access to the course materials to learn, including those individuals with disabilities” (Brown, Lewis and Toussaint, 2018, p. 174). However, meeting this specific standard may require further investigation as accessibility standards differ from country to country.

Faculty members face challenges in applying QMs rubrics. Some of these challenges are that they are time-consuming, and some of them are unclear. Moreover, some instructors reported that they do not improve their instruction and remove creativity from classes (Budden and Budden, 2013). However, most previous studies acknowledged their high capacities in validating OL course quality (Shattuck, Zimmerman, and Adair, 2014; Al Zumor, 2015; Brown, Lewis, and Toussaint, 2018; Lynch and Gaston, 2020).

2.3 Previous Studies

Several factors can contribute to students’ satisfaction with OL and hence formulate their positive perceptions of OL. Kuo et al. (2013) reported some of these factors related to students’ interaction with online instruction and content. Maintaining that student satisfaction is an essential marker of the quality of learning experiences, the research explored the perspectives of 111 students who studied 11 online courses. It was found that learners’ interaction with instructors and content and internet self-efficacy predict students’ satisfaction with OL. On the other hand, other factors, such as self-regulated learning and interaction among students, have no

reliable predictive power of students' satisfaction. This study is insightful as it traces OL quality and student satisfaction to extrinsic rather than intrinsic factors. It subsequently entails that investigating OL quality should be directed to the course design and delivery, the aspects that quality benchmarks aim to maintain.

Another explored aspect of OL is its effectiveness which can also predict students' positive perception of OL. A meta-analytic study (Prestiadi et al., 2020) reviewed 60 research articles about different aspects of OL learning effectiveness. The study has suggested that OL effectiveness is influenced by several factors, including quality as a primary influencer. Accordingly, students' views about quality standards are also envisaged to be of great value for validating quality benchmarks

With the advent of QM as a benchmark of online course quality assurance, researchers started to measure their validity and impact on OL quality. Although studies that targeted students' perspectives towards QM are relatively few, they can give feedback about how students viewed or reacted to quality standards (Kumar et al., 2022) QMRs. Concerning this, A study to measure student perspectives on quality was conducted by Ralston-Berg (2014). The research targeted a sample of 3160 students either enrolled in or had taken an online course. The participants were selected from 31 institutions distributed between 21 states in the United States. They were surveyed regarding QMRs and whether they would agree with them as quality indicators and contributors to success. The researchers used a survey based on QM and asked the participants to assign values from 0 to 4 for each standard. The study's findings showed that the participants considered all the QMRs important for success. Nevertheless, they appointed different values to the standards. This indicates that QMRs are perceived as proper contributors to success; however, they are perceived differently from the consumers of OL courses.

To evaluate student perception of the impact of QM on their learning and engagement, Sadaf, Martin and Ahlghrim-Delzell (2019) surveyed 50 students enrolled in QM-certified online courses. The study revealed that students considered course activities and learner interaction the most important standards impacting student learning and engagement. Moreover, they believed student support was the least important factor affecting student learning and engagement. The study utilised a robust method as students' responses pertain to QM-certified courses and hence are based on authentic experiences.

Another study (Lynch and Gaston, 2020) investigated the impact of two online courses redesigned according to QM on students' performance compared to online courses designed by faculty. The rubric for the comparison was students' scores in the QM and non-QM courses. Also, the researcher used end-of-course evaluation questions to explore the students' overall satisfaction with the courses. The sample was composed of 891 student scores. In addition to a slight increase in the students' marks in the QM course, the study reflected positive trends toward QM, although no clear procedures to control the course design were reported.

The rationale for selecting the QM studies reviewed above is mainly methodological. Studies that utilised a substantial sample size were elected as they were supposed to reflect more trustful results. The second criterion for selection was the authentic experience of the QM-based course. i.e., the participants study a QM-certified course or a course designed strictly following the QMRs. The resemblance of the approach followed in the studies was another criterion of choosing the reviewed study, i.e., to assess the rubrics from the students' points of view. The present study follows the perceived positive criteria of QM research, i.e., surveying a reasonable number of students who study QM-based courses for a considerable time through a QMR-based to generate comparable data.

Moreover, the new reality of OL imposed by social distancing due to the pandemic provides a broader setting for research on students' views regarding OL quality as the approach has become the norm. This suggests that the online courses and the new population included in OL after the pandemic differ. Learning was then achieved through fully online courses rather than partial or blended, as there were no other ways to communicate or deliver content to the students. Subsequently, students were likely to treat OL more seriously; hence, their responses would be more genuine and stemmed from a deeper comprehension of the nature of OL. These differences are crucial to this study as they reflect students' experiences with typical OL courses. They provide more authentic and trustful responses to assess students' evaluation of online course quality. This is perceived as a contribution that this study aims to provide

3. Methodology

This study adopted a mixed-method approach to answering the research question. Firstly, a quantitative research technique is used to explore the level of agreement between students' scores on the QMR-based survey and the points preassigned by QM. Secondly, the results were cross-checked by collecting qualitative

data elaborating on students' perspectives towards QMRs, as the quantitative data may not be sufficient evidence for students' perspectives.

3.1 Participants

The sample of this study incorporated 112 undergraduates who study English language and literature at the College of Sciences and Humanities, Prince Sattam Bin Abdulaziz University (PSAU) in Saudi Arabia. The sample was selected by following intact class clustering methods. The students were selected from levels five and seven to confirm that they studied the previous four semesters, which were delivered online, at the university. Given that these levels represent 25 % of the eight levels, it is considered statistically appropriate and can represent the university's research community. All the participants started fully online learning in March 2020. They have studied online for at least four semesters; some have studied more since enrollment in summer courses is optional. In brief, the least number of fully online courses studied by any participant is 12. The detailed characteristics of the participant are shown in Table 2 below.

Table 2: Participant Features and OL Learning Experiences

Gender	Total Participants	levels	Learning method
Male	44	5 th & 7 th	4 semesters online 1 semester blended*
Female	68	5 th & 7 th	semesters online

*Note. Some courses at the male campus were delivered partially online starting from the second semester of 2021.

3.2 Instruments

3.2.1 The questionnaire

The quantitative data was collected using a questionnaire based on the QM standards, sixth Edition 2020. The rubrics were translated into Arabic by the researcher. Further, it was validated by two university professors who specialised in translation and Arabic linguistics. The raters were asked to check the draft for translation compatibility, linguistic errors, and naturalness. To match the QM evaluation rubrics, the participants were asked to state if each standard is *essential* (3 points); *Very important* (2 points); or *important* (1 point) to e-course quality; see Appendix A for the English version of the questionnaire.

As of March 2020, PSAU has adopted a fixed template on Blackboard LMS to be used by all faculty members. The template is based on the QMRs; therefore, students are believed to be aware of the application of each standard, and thus they can estimate its impact on the course quality. Figure 1 below displays the template used to provide online courses according to the QMRs.

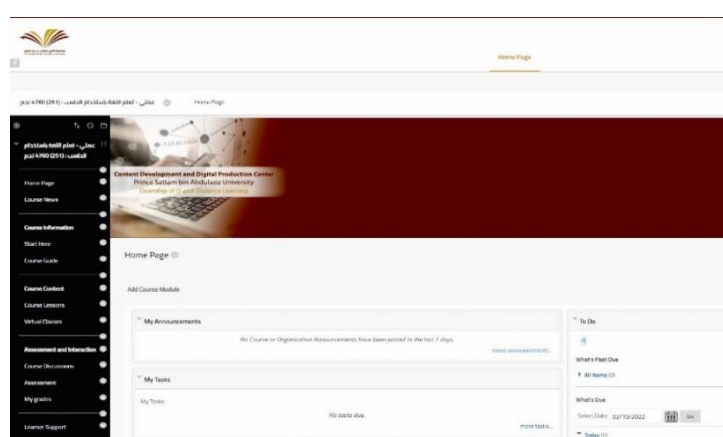


Figure 1: Template of Online Courses Offered by PSAU

As shown in Figure 1, the main course menu is designed to make all the offered courses meet QM standards. For example, the *start here* page contains sublinks to a *welcome message*, *course overview*, *course tour* and an *ice breaker* forum. *Course guide* includes links to *course description*, *calendar*, and *policies*. Also, the expected learning outcomes, grading policy and learning resources are articulated there. The *course lessons* page is designed in module format. Faculty are provided with a template to fill each module's objectives, learning

outcomes, and assessment and upload the unit contents in different formats. The menu also contains links to *assessment*, *learner support* and *course announcements*. In brief, all the 42 QM standards are met when the template is used properly. Accordingly, the participants were asked to respond to the questionnaire regarding their experience in learning the courses provided according to the above template. Google Forms tool was used to design and distribute the questionnaire to students in each elected section. The completion rate was 87.5%, as some students did not complete the questionnaire for different reasons. It was clearly stated and maintained that no personal information is needed, and the data is just for research purposes.

3.2.2 Focus group interviews

As the differences between the average scores of the respondents and the QMRs would often be slight (between 1 and 2), it was envisaged that qualitative data is needed to support or refute them. Accordingly, focus group discussions were organised after the first phase of data analysis. The research sample was divided into ten groups (4 for males and 6 for females). Each group incorporated 9 to 12 students. The discussions were held online, and both open and closed-ended questions were used. The participants were first asked to state, in Arabic, the most and the least two important QM standards; then, they were asked to justify their answers.

3.3 Data Analysis

The questionnaire data were analysed using descriptive statistics. The mean scores of the participant responses to each general and specific review standard were calculated and compared against the QM points. To measure the level of difference between the students' evaluation of QMRs and the points assigned by QM to each general standard, a two-sample t-test (independent t-test) was performed. Further, a detailed analysis of the level of students' agreement to QMR assigned values was performed. According to the calculations, one of four statuses was identified for each result, as in Table 3 below.

Table 3: Interpretation of the Results

Status	Interpretation
Identical	The points assigned by QM and the participants for the specific and general standards are similar.
Equal	The total points assigned to the general standard are equal; however, the points of the specific review standards are different.
Overestimated	The average total points assigned by the participants is greater than that set by QM.
Underestimated	The average total points assigned by the participants is less than that set by QM.

As for the focus group interview data, the most frequently stated standards (the most or least important) are ranked. Moreover, the reasons for electing such standards are recorded according to their frequency of mention (reasons stated less than three times are not considered).

4. Results

The study's research question explores the level of agreement between the participants' perception of quality and the QMRs. First, the two-sample t-test yielded that there was no significant difference in students perception of the standards ($M = 12.8$, $SD = 2.9$), and the QM evaluation ($M = 12.5$, $SD = 2.7$); $t(7) = -.664$, $p = .528$. The results indicate considerable agreement between students' perceptions and QMRs. This overall compatibility of the participant scores with the QM-assigned points was further calculated yielding the results shown in Figure 2 below.

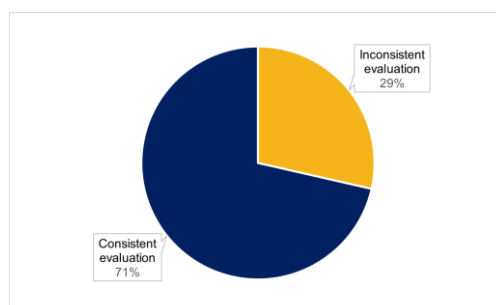


Figure 2: The Overall Compatibility Between the Participants' Scores and the QM Points

Figure 2 indicates that the participants agree to 71 % of QMRs. In other words, they disagree with some QMRs assuming that they are more or less impactful in determining course quality. The difference between the two evaluations is at the general and specific levels. Figure 3 outlines the comparison result.

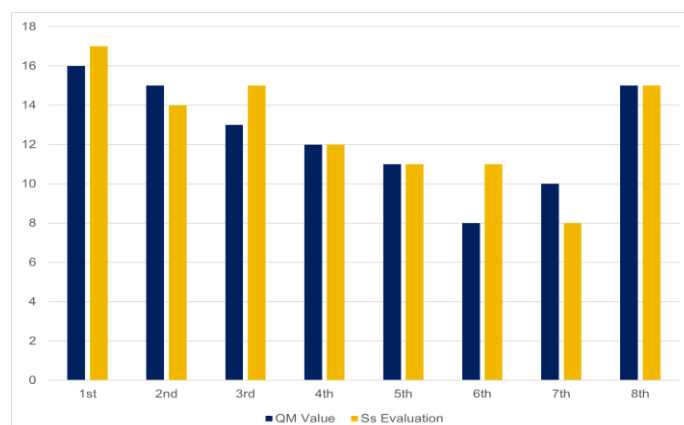


Figure 3: Participants' Scores Versus QM Points (General Standards)

The results show that the participants fully agreed to only three of the eight general standards. Their evaluation of the other standards varied. While they overestimate the effect of some standards on online course quality, they undervalue the impact of others. Table 4 elaborates on these findings.

Table 4: Participant Scores vs QM Points (General Standards)

No.	General Standards	QM points	Average Score by participants	Status
1	Introduction & Overview	16	17	Overestimated
2	Learning Objectives (Competencies)	15	14	Underestimated
3	Assessment and Measurement	13	15	Overestimated
4	Instructional Materials	12	12	Equal (different details)
5	Learning Activities and Learner Interaction	11	11	Identical
6	Course Technology	8	11	Overestimated
7	Learner Support	10	8	Underestimated
8	Accessibility and Usability	15	15	Equal (different details)

The findings revealed that the participants utterly agreed with the fifth standard *learning activity and learning interaction*. Their assigned values to the specific standards of this general standard are identical to those set by the QM. Furthermore, their evaluation of the fourth and the eighth standards, *Instructional Materials* and *Accessibility and usability*, respectively, are equal though the values assigned to the specific rubrics are slightly different. On the other hand, they overestimate the impact of the first general standard: *Introduction & overview*; the third one: *Assessment and measurement*; and the sixth one, *Course technology*. In contrast, the participants underestimate the remaining two general standards: the second: *Learning objectives (Competencies)* and the seventh: *Learner support*. Figure 4 details the agreement results to the eight standards suggested by Quality Matters.

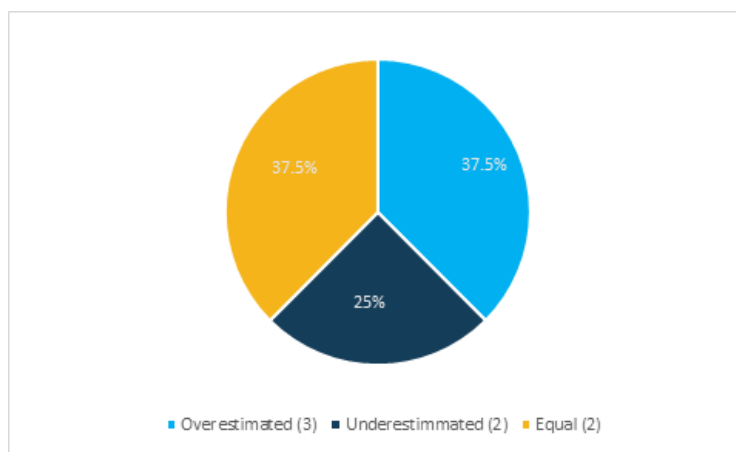


Figure 4: Participant Evaluation Results of the QMRs (General Standards)

A brief look at these details revealed that the participants underestimated the effect of two standards while overestimating three and agreeing to the remaining three.

It has already been shown that the participants agreed to 30 of the 42 specific standards, making 71 % of compatibility. Regarding the remaining 12 standards with which the participants disagree, it was found that they are distributed among seven general standards (given that the fifth general standard received identical values). Table 5 reports the standards with inconsistent evaluation.

Table 5: Specific Standards With Inconsistent Participants' Evaluation

No.	Specific standard	Participants score	QM Points	Status
1.4	Course and institutional policies with which the learner is expected to comply are clearly stated within the course, or a link to current policies is provided.	3	2	Overestimated
2.2	The module/unit-level learning objectives or competencies describe outcomes that are measurable and consistent with the course-level objectives or competencies.	2	3	Underestimated
3.4	The assessments used are sequenced, varied, and suited to the level of the course.	3	2	Overestimated
3.5	The course provides learners with multiple opportunities to track their learning progress with timely feedback.	3	2	Overestimated
4.2	T The relationship between the use of instructional materials in the course and completing learning activities is clearly explained.	2	3	Underestimated
4.4	The instructional materials represent up-to-date theory and practice in the discipline.	3	2	Overestimated
4.5	A variety of instructional materials is used in the course.	3	2	Overestimated
6.3	A variety of technology is used in the course.	2	1	Overestimated
6.4	The course provides learners with information on protecting their data and privacy.	3	1	Overestimated
7.3	Course instructions articulate or link to the institution's academic support services and resources that can help learners succeed in the course.	2	3	Underestimated
8.5	Course multimedia facilitate ease of use.	3	2	Overestimated
8.6	Vendor accessibility statements are provided for all technologies required in the course.	1	2	Underestimated

Most of the specific review standards are overestimated. Moreover, one specific standard, i.e. 6.4, is highly overvalued as the participants assign it the highest value while QM rates it with the lowest value.

The results of the focus group discussion showed a considerable match to the quantitative data results. Table 6 reports the findings of the closed-ended questions from the interviews.

Table 6: Students' Perspectives Regarding the Level of Importance of QM Standards

Most important standards	Freq.*	Per cent	Least Important standards	Freq.*	Per cent
(1) 3 rd Assessment and Measurement.	73	75.2 %	(1) 8 th Accessibility and Usability.	68	60.7 %
(2) 6 th Course Technology.	67	59.8 %	(2) 7 th Learner technical and academic support.	76	67.9 %

Note. Freq. stands for the frequency of assigning the stated rank to the specific standard

Each of the mentioned standards was mentioned as the first or second most or least important standard at least 67 times. Students stated different motives for their choice, which will be elaborated on while discussing the results.

5. Discussion

The present study investigated the level of agreement between students' perspectives of OL quality and the QMRs. The data was collected through a QM-based survey. The participants' evaluation of the specific and general standards was analysed and compared with the QM points.

The study findings demonstrate a considerable agreement with the QMRs reaching 71%. This result was not only expectable as many previous studies prove QM as an optimal benchmark for measuring online course quality (Rohers, Wang and Kendrick, 2013; El-Sabagh, 2015; Al Zumor, 2015; Lynch and Gaston, 2020). It was even expected that the participants would agree with QM to a greater extent. The result is also in line with previous findings concerning students' perspectives on QM impact on online course quality, e.g. (Brown, Lewis and Toussaint, 2018) and (Sadaf, Martin and Ahlghrim-Delzell, 2019). The compatibility of the participants' evaluation with QM is intuitive since this program was developed in the light of scientific research and is based on rigorous peer-review processes by faculty. Moreover, many benefits are related to applying these standards, as Buuden and Budden (2013) stated, which may raise students' satisfaction.

Likewise, previous studies revealed that the level of compatibility between the student's evaluation and QMRs is not complete and identical. This result is comparable to (Ralston-Berg, 2014), which demonstrated that while the students considered all the standards important, they ranked some items differently than QM-assigned values. In the case of the present study, only one general standard was evaluated identically to QM-assigned evaluation, i.e. the fifth standard, *Learning activities and Learner interaction*. This result is interesting as this very standard is also found to be the most important one that impacts learning and engagement by Sadaf, Martin and Ahlghrim-Delzell (2019). Moreover, in a study to validate a rubric formed to value the quality of online courses in the light of QM (Lee, Recker, and Yuan 2020), the researchers found that the only rubric that has a significant and positive effect on online learning is learner engagement and interaction. The participants' agreement to this standard implies students' eagerness to employ different activities that promote their learning and a clear plan statement for interaction between instructors and learners. Teachers and course developers should seriously consider such considerations.

The results also exposed overvaluing of some standards. It is noted that the standards that the participants overestimate are related directly to course structure and delivery. The participants thought that providing a comprehensive overview of the course and an excellent introduction to navigating it is highly important, i.e. general standard no. 1. They also value clear assessment policy and criteria, using different assessment methods and opportunities to track their learning progress, i.e., general standard no. 3. Moreover, the participants were enthusiastic about employing various techniques that promote active learning and engagement, as stated in the general standard no. 6.

The focus group interviews further supported the finding. The participants ranked the third standard, *Assessment and measurement*, and the sixth one, *Course technology*, as the two most important standards for OL course quality. When asked about the reasons for such ranking, most of them stated that various assessment

tools, a clear plan, and timely provision, of course, grades are vital for an excellent online course. Reem¹, one respondent from the semester 5 group, stated that for her, using online quizzes, uploading assignments through LMS, and getting instant feedback are the only things she likes about OL. Also, the participants frequently asserted that what they seek in OL courses is the effective use of technology that “enable [them] to participate and interact using different devices and applications, include multimedia, protect their data, and provide an easy and interesting learning environment” as one respondent stated. “The system is perfect,” said Hind, the leader of the CALL section, “but the inadequate design of instructors and the use of complicated or few technologies harden the task for us. Sometimes we cannot use mobile devices to conduct specific tasks, which contradicts the basic aim of OL, which is flexibility, as I think”.

This result is compatible with previous studies. For example, Ralston-Berg’s (2014) findings showed that the highest values of student evaluation were assigned to standards related to assessment, instructional technology and course introduction. Notwithstanding, participants in that study also emphasised the importance of instructional materials and learning objectives. The participants of the current research devalued these two standards.

Learner Support is considered of high importance by QM. Ten points are assigned to the specific review standards that make up this general standard. Notwithstanding, the study participants seemed less enthusiastic about these standards (their average value for the standard was 8). According to the researchers’ viewpoint, a logical justification for this finding might lie in the learner characteristics. To check this assumption, the respondents were asked in the focus group interview why they rate this standard as the least (or the second least) important standard. Most participants answered that they are acquainted with the LMS, accustomed to technology in general, and familiar with the university regulations; therefore, there is no need for technical or academic support. Few answers were extrinsic as Badr, a semester seven student, stated, “after all, if I called the technical support, all they would do is to ask me to switch the browser or restart my device; I can do that without being instructed”.

Additionally, this result is not unprecedented or exclusive to this study, as a similar finding was yielded by Sadaf, Martin and Ahlghrim-Delzell (2019). In general, new generations of university students are technophiles who may not face difficulties dealing with sophisticated technology and gadgets. Hence, they think technical support is not critical for online course quality. However, their assumption is implausible as many post-COVID-19 studies found considerable challenges facing students during the emergency OL related to technology or communication, e.g. (Aguilera-Hermida, 2020; Mahyoob, 2020; Azila-Gbetteor, Abiemo, and Glate, 2023). Therefore, technical support should be seriously considered as online course menus and content may not be complicated per se; however, accessing or navigating them may represent a real problem for some students. Institutions need to provide adequate services that convince the students of the importance and efficacy of technical support to foster the importance and efficacy of learner support.

The findings showed that the participants tend to overestimate the impact of most of the specific review standards they disagree with. The most prominent result is related to the specific review standard 6.4, which reads, “*The course provides learners with information on protecting their data and privacy*”. The relatively high value assigned to this standard implies that learners are highly attentive to their privacy. Further, focus group discussion confirmed that this finding was not yielded by chance but attributable to this generation’s high level of technological awareness. It seems that with the increased time spent by most students in cyberspace for gaming or on social media platforms, they are now more alert to privacy concerns.

Many participants, especially females, stated they did not feel secure enough during online courses. Abir, a level 7 student, stated that she thinks videoconferencing applications represent a high risk to students’ personal information. “We all heard that [she named a specific videoconferencing service] is unsafe, and our videos and photos can be stolen easily”. Other respondents stated that they cover their webcams with tapes; however, they are still concerned about their personal data stored on their computers or smartphones. Male respondents were also alert to the privacy and security measure. However, they were more concerned with potential attacks and data loss caused by viruses and hackers than breaching their personal information.

This result matches the heavy controversy raised during the pandemic concerning the potential breach of students’ privacy that the quick transition to OL might cause. Few studies dealt with students’ privacy and cyber security in OL; accordingly, this result implies considering this point further in designing online courses. A

¹All names in this article are pseudonyms.

sensible suggestion may be to add rubrics that ensure clear instructions for applying privacy settings, using updated and secure software, and taking all the precautions to maintain students' privacy and security.

On the other hand, the participants undervalue the impact of specific review standards related to course objectives, instructional materials, learner support and accessibility. It is noted that two of these standards are related to the concept of *alignment* between QMRs. According to this concept, there should be an interconnection between the essential course components to ensure achieving the desired learning objectives for the course. In the focus group discussion, students frequently considered learning objectives the least or the second least important standard. When asked to justify their evaluation, most answers showed that the concept was unclear to the student. Fahd, a student at level 5, said that "I think these objectives are important for teachers to follow and tell us what to do". Other students stated directly that they did not understand what exactly meant by the specific standards of this general standard. Nevertheless, they do not think they are essential to make an OL course successful if the other standards are fulfilled.

As the concept of alignment between learning objectives and outcomes seems advanced and professional, the participants' assigned values are prospective. Nevertheless, instructors are invited to maintain alignment in their online courses to help achieve the learning outcomes, even if students do not recognise how it works or promotes the quality of the course.

The findings of this study imply that QM is an effective benchmark to ensure OL quality. It further indicated that students agree to most of the standards included. However, specific considerations should be presented both to the students and instructors to get the most out of the program. For students, it will be more valuable to enlighten them on how the process works, what is expected from them, and how they can benefit from them. As far as the instructors are concerned, they are expected to offer more attention to students' concerns regarding privacy, assessment and course technology.

One consideration limits the generalisability of these results. The QMRs are supposed to be applied in all the courses studied by the participants during the lockdown and after. The university provided a course template based on QMR; however, it was not possible to confirm that all the instructors applied the template properly. To avoid this limitation, a detailed description of general and specific QMRs was presented to the participants, yet complete comprehension of the rubrics is not guaranteed.

The fact that the study sample is uni-cultural may slightly affect the generalizability of the study to other socially or culturally different settings. The study was conducted in a conservative community where female campuses are taught by male faculty through videoconferencing apps and other modern virtual learning solutions. This reality might have a two-fold impact on the results. First, female participants were familiar with OL learning solutions long before the pandemic; thus, their evaluation might stem from a more profound comprehension than that of participants from other comparable communities. Second, female participants may overvalue standards relating to their privacy and communication with male faculty. Other than these considerations, no particular factors of the research sample that may limit the generalizability of the findings were supposed.

6. Conclusion

Quality Matters is a peer-review process to ensure course quality that has been proven effective for many years. Much research investigated applying it and its impact on OL quality. However, the new post-pandemic reality, which has made OL an everyday practice, requires more research on its impact and students' perception of it. The current study surveyed students who have studied several online courses designed according to a QM-based template. The aim was to explore the level of the participants' agreement with the rubrics.

The findings of this study can be summarised in that while students agree to a considerable extent with QMRs, their contrastive perceptions of some standards are noteworthy. They consider privacy an essential criterion to maintain course quality and overvalue standards related to course overview, assessment, and course technology. On the other hand, they devalue learner support and accessibility.

The generated results of the present study can be validated and supported by further research on students' perceptions of OL quality and QM. Reliable results can be generated by a research study investigating students' perspectives of QM-certified online courses. Other suggestions include exploring students' attitudes and performance through studies that adopt experimental and control groups. Based on the current study results, it will be fruitful to conduct studies investigating privacy issues in online learning settings as students are now more aware of these issues.

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Appendix A: The Questionnaire²

Please rate the importance of each of the following criteria for making an online course. [3] Essential. [2] Very Important. [1] Important

Course Overview and Introduction

- 1.1 Instructions make clear how to get started and where to find various course components.
- 1.2 Learners are introduced to the purpose and structure of the course.
- 1.3 Communication expectations for online discussions, email, and other forms of interaction are clearly stated.
- 1.4 Course and institutional policies with which the learner is expected to comply are clearly stated within the course, or a link to current policies is provided.
- 1.5 Minimum technology requirements for the course are clearly stated, and information on how to obtain the technologies is provided.
- 1.6 Computer skills and digital information literacy skills expected of the learner are clearly stated.
- 1.7 Expectations for prerequisite knowledge in the discipline and/or any required competencies are clearly stated.
- 1.8 The self-introduction by the instructor is professional and is available online.
- 1.9 Learners are asked to introduce themselves to the class.

Learning Objectives (Competencies)

- 2.1 The course learning objectives, or course/program competencies, describe outcomes that are measurable.
- 2.2 The module/unit-level learning objectives or competencies describe outcomes that are measurable and consistent with the course-level objectives or competencies.
- 2.3 Learning objectives or competencies are stated clearly, are written from the learner's perspective, and are prominently located in the course.
- 2.4 The relationship between learning objectives or competencies and learning activities is clearly stated.
- 2.5 The learning objectives or competencies are suited to the level of the course

Assessment and Measurement

- 3.1 The assessments measure the achievement of the stated learning objectives or competencies.
- 3.2 The course grading policy is stated clearly at the beginning of the course.
- 3.3 Specific and descriptive criteria are provided for the evaluation of learners' work, and their connection to the course grading policy is clearly explained.
- 3.4 The assessments used are sequenced, varied, and suited to the level of the course.
- 3.5 The course provides learners with multiple opportunities to track their learning progress with timely feedback.

Instructional Materials

- 4.1 The instructional materials contribute to the achievement of the stated learning objectives or competencies.
- 4.2 The relationship between the use of instructional materials in the course and completing learning activities is clearly explained.
- 4.3 The course models the academic integrity expected of learners by providing both source references and permissions for use of instructional materials.
- 4.4 The instructional materials represent up-to-date theory and practice in the discipline.
- 4.5 A variety of instructional materials is used in the course.

Learning Activities and Learner Interaction

- 5.1 The learning activities promote the achievement of the stated learning objectives or competencies.
- 5.2 Learning activities provide opportunities for interaction that support active learning.
- 5.3 The instructor's plan for interacting with learners during the course is clearly stated.
- 5.4 The requirements for learner interaction are clearly stated.

Course Technology

- 6.1 The tools used in the course support the learning objectives or competencies.
- 6.2 Course tools promote learner engagement and active learning.
- 6.3 A variety of technology is used in the course.
- 6.4 The course provides learners with information on protecting their data and privacy.

Learner Support

- 7.1 The course instructions articulate or link to a clear description of the technical support offered and how to obtain it.
- 7.2 Course instructions articulate or link to the institution's accessibility policies and services.
- 7.3 Course instructions articulate or link to the institution's academic support services and resources that can help learners succeed in the course.
- 7.4 Course instructions articulate or link to the institution's student services and resources that can help learners succeed.

Accessibility and Usability

- 8.1 Course navigation facilitates ease of use.
- 8.2 The course design facilitates readability.
- 8.3 The course provides accessible text and images in files, documents, LMS pages, and web pages to meet the needs of diverse learners.
- 8.4 The course provides alternative means of access to multimedia content in formats that meet the needs of diverse learners.
- 8.5 Course multimedia facilitate ease of use.
- 8.6 Vendor accessibility statements are provided for all technologies required in the course.

²The questionnaire is based on QM Review Standards for Higher Education, available at: <https://www.qualitymatters.org/sites/default/files/PDFs/StandardsfromtheQMHigherEducationRubric.pdf>