Students' Perceptions of Online Course Quality: How Do They Measure Up to the Research?

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ABSTRACT

The Quality Matters (QM)™ rubric presents a set of research-based standards on which to judge the quality of online courses. The authors of this study investigated how students' perceptions of online course quality compare to those put forth in the QM rubric. Participants in this study n = 3,160 included students currently taking an online college-level course were invited to rate the importance of each QM standard restated from the student perspective. Students' ratings of each item were compared to the ranking of each item received by QM (3-Essential, 2-Very Important, or 1-Important). The student rating for each item was at least 1.0 indicating that students do value the QM criteria as important to their success in an online course. Items related to having clear instructions for getting started in the course and ease of navigation were rated highly by both QM and students. However, students did not value items related to the importance of interacting with peers and the instructor at the same high level indicated in the QM rubric. Other findings related to practical differences between student and QM ratings of rubric items are discussed.

INTRODUCTION

The number of students taking online courses has risen dramatically. In 2013 alone, the number of additional students taking an online course continued to grow at a rate far in excess of overall enrollments with 7.1 million students taking at least one online course (Allen & Seaman, 2014). That is, about one-third of all eligible postsecondary course enrollment is in online courses.

Quality Matters (QM) is a continuous improvement program available to higher education institutions whose purpose is to ensure the design quality of online and blended courses. Since the inception of the QM program, its leaders began sponsoring research focused on the impact of Quality Matters - both its rubric and its review process, which involves analyzing the design of a peer's course and providing recommendations for improvement of that course's design. The review process culminates with a determination as to whether (or not), the course design meets the thresholds established for quality (Shattuck, Zimmerman, & Adair, 2014).

To view Quality Matters Overview (2013) video go to https://www.qualitymatters.org

In a previous study, Ralston-Berg (2014) used the Quality Matters criteria to examine students' perceptions of quality in online courses. Ralston-Berg queried whether "students agree that items presented in the QM Rubric indicate quality?" Hixon, Buckenmeyer and Barczyk (2015) extended her work by examining how students rate the QM criteria for courses in general. The current study extends both studies by measuring the perceptions of students on the quality of their online courses and determining practical significance of the findings.

LITERATURE REVIEW

Quality Matters is considered the gold standard in terms of online standards development (Maryland Online, 2014).[A] QM originated from a grant project entitled "Fund for the Improvement of Postsecondary Education" (FIPSE), and is a faculty-centered, peer review-based process designed to certify the quality of online and hybrid courses. Empirical evidence demonstrating impact on student learning support the eight research-based standards and elements that became Quality Matters. Its framework emphasizes navigability, interaction, and instructional alignment. Specifically, the eight standards included in the QM rubric include: (1) Course Overview and Introduction, (2) Learning Objectives, (3) Assessment and Measurement, (4) Instructional Materials, (5) Learner Interaction, (6) Course Media & Technology, (7) Learner Support, and (8) ADA Compliance. Each standard includes a number of indicators, each of which is ranked in importance and assigned a weight, ranging from 3 (Essential) to 1 (Important). To view the standards, please refer to the interactive QM Research Library https://www.qmprogram.org/qmresources/research/.

[A] The materials found on this website may not be used without the express written consent of MarylandOnline. Terms of Use. © 2014. MarylandOnline. All rights reserved.

There are many researchers who have explored students' perceptions of quality in online courses (e.g., Chitkushev, Vodenska, & Zlateva, 2014; Paechter & Maier, 2010; Robins, Simunich, & Kelly, 2013; Young & Norgard, 2006). The perception of students is important to consider since student satisfaction is widely linked with various education outcomes. As reviewed by and cited in Ralston-Berg and Nath's (2008) research, student satisfaction has been shown to impact college performance (Bean & Bradley, 1986; Organ, 1977; Schwab & Cummings, 1970), achievement motivation (Donohue & Wong, 1997), college student achievement (Centra & Rock, 1971; Lavin, 1985), student retention (Tinto, 1993; Astin, 1993), and student attrition (Bean, 1983; Tinto, 1993). Other research projects examining students' perceptions of the QM criteria specifically have been sponsored by Quality Matters (Iyengar, 2006; Mott, 2006; Bowen & Bartoletti, 2009, all as cited in Shattuck's (2012) study.

Overall, researchers investigating students' perceptions of the QM criteria report that students perceived the elements incorporated in the QM rubric to be important. For example, You, Hochberg, Ballard, Xiao & Walters (2014). investigated the differences between students' and QM peer reviewers' perceptions of essential (ranked as a 3) QM standards in online courses, whereby students either did not see or did not value the standard related to clearly stated learning objectives within the course. While their findings asserted general similarity between students' and QM reviewers' ratings, it was suggested that student satisfaction with the instructor or with the online course might have affected their evaluations.

In an earlier study, Ralston-Berg and Nath (2008) found that students valued QM standards rated as essential (3) and very important (2), but they were not as likely to value less those standards marked as important (1). They also found that the more students were satisfied with their online courses, the more likely they were to value all QM standards. A similar result was confirmed in Ralston-Berg's (2011) study.

Hixon, Buckenmeyer and Barzcyk's (2015) study extended the work of Ralston-Berg (2014) whereby they determined that quality as defined by QM, applies to traditional and blended courses as well as to online courses. Students generally valued those items ranked as essential and important by QM. Surprisingly, interaction and collaboration in courses were not highly valued by students in courses, although QM rates these as essential. While research confirms the value of these elements in courses, students do not appreciate their value for learning.

The authors of the current study build on previous research by Ralston-Berg (2014) and Hixon, Buckenmeyer, and Barczyk (2015) and aim to determine whether the differences between students' perceptions of what is valued in a course and QM's ratings for what is

considered a quality-oriented course are practically significant. Understanding these differences has the potential to help institutions of higher learning with the development and promotion of quality course offerings. Further, understanding how students perceive course experiences can provide suggestions for instructors on how to promote improved learning outcomes (Rodriguez, Ooms, & Montanez, 2008).

METHOD

Participants

The participants in this study included n = 3,160 students who had taken or were currently enrolled in online for-credit courses at one of 31 colleges or universities located in 22 states. All of the participants indicated that they were comfortable or very comfortable with technology. Their ages ranged from 18 to over 65, with the largest group consisting of individuals between the ages of 26 and 44. The sample was comprised of undergraduates (n = 1,520), graduate students (n = 711) and some for whom class standing did not apply (n = 300). The participants represented 25 academic disciplines and had varying amounts of online course experience ranging between 1 and 9 or more completed courses. A majority of the participants were enrolled in four-year institutions and were attending on a part-time or full-time (four or more courses) basis.

Survey Instrument

The survey instrument consisted of 43 items derived from the Quality Matters rubric associated with the 2008-2010 QM Standards.[B] The items were structured in student-centered language and they were designed to allow the participants to rate the extent to which each course characteristic contributed to student success.[C] Each course characteristic was rated as a four-point Likert-type item where: 0 corresponded to being not at all important – does not contribute to my success; 1 corresponded to important; 2 corresponded to very important; and 3 corresponded to essential – could not succeed without it. When providing their rating to each course characteristic question, participants were instructed to consider only the online course environment. The survey instrument also contained several demographic items and open-ended questions on course quality, however this information and associated outcomes will be presented in a separate study.

[B] "Standards and point values of the Fifth Edition of the QM Rubric can be found at https://www.qualitymatters.org/rubric. The wording and placement of a few standards has been changed from the 2011-2013 standards used in this study." [for example 6.3.]

[C] The adaption of the QM Rubric standards into the current study's survey was previously approved in 2011 by QM.

Procedure

The survey instrument was administered electronically through a unique URL furnished by a designated contact person at each cooperating institution. The participants received the URL by means of an e-mail message or a link posted to the home page of the institution's course management system. They also received URLs by means of an announcement in the online course in which they were enrolled. Data were collected from all cooperating institutions and aggregated into a cumulative data file.

RESULTS

To determine how students' ratings of each QM statement relate to the point values assigned by the 2011-2013 edition of the QM rubric, one-sample *t*-tests were conducted. Additionally, effect sizes were calculated for each item using Cohen's *d* to indicate the practical significance of the differences. Table 1 shows the survey items that correspond to a QM indicator assigned a point value of "3 – Essential" on the 2011-2013 QM rubric.

Table 1 *Comparison of participant ratings to QM point values for items ranked "3 - Essential" by QM*

QM #	QM statement	N	Mean	SD	*t*	*p*	Mean Diff.	*d*
1.1	Clear instructions tell me how to get started and how to find various course components.	3154	2.66	0.60	-31.58	.000**	-0.34	0.56
3.3	Criteria for how my work & participation will be evaluated are descriptive & specific.	2984	2.52	0.64	-40.42	.000**	-0.48	0.74
6.3	Navigation throughout the online components of the course is logical, consistent, and efficient.	2685	2.51	0.67	-37.94	.000**	-0.49	0.73
3.2	The grading policy is stated clearly.	2998	2.49	0.65	-43.12	.000**	-0.51	0.79
3.1	Assessments measure the stated learning objectives and are consistent with course activities and resources.	2997	2.48	0.66	-43.46	.000**	-0.52	0.79
2.4	Instructions on how to meet the	3038	2.30	0.77	-49.88	.000**	-0.70	0.91§

	learning objectives are adequate and stated clearly.							
4.1	Instructional materials contribute to the achievement of the course and module/unit learning objectives.	2893	2.29	0.72	-52.62	.000**	-0.71	0.98§
5.3	Clear standards are set for instructor response (turn-around time for email, grade posting, etc.)	2878	2.29	0.78	-48.44	.000**	-0.71	0.92§
2.5	The learning objectives (my expected learning) are appropriate for the level of the course.	3047	2.18	0.77	-59.16	.000**	-0.82	1.07§§
4.2	The relationship between the instructional materials and the learning activities is clearly explained to me.	2886	2.17	0.79	-57.08	.000**	-0.83	1.06§§
5.3	Clear standards are set for instructor availability (office hours, etc.).	2793	2.16	0.83	-53.32	.000**	-0.84	1.01§§
6.1	Tools and media used support the achievement of learning objectives.	2687	2.05	0.83	-59.28	.000**	-0.95	1.14§§
7.1	Course includes or links to a clear description of the technical support offered to me.	2676	2.05	0.83	-58.81	.000**	-0.95	1.14§§
1.2	A statement introduces me to the purpose of the course and its components	3149	2.04	0.83	-64.97	.000**	-0.96	1.16§§
5.1	The learning activities promote the achievement of the stated learning objectives	2825	2.01	0.78	-67.67	.000**	-0.99	1.27§§
5.2	Learning activities encourage me to interact with content in the course.	2746	1.96	0.82	-66.82	.000**	-1.04	1.28§§
2.1	The course learning objectives describe outcomes that I am able to achieve.	3048	1.84	0.88	-72.79	.000**	-1.16	1.32§§

2.3	All learning objectives are clearly stated and written from my perspective.	3041	1.83	0.90	-71.13	.000**	-1.16	1.29[§§]
2.2	The module/unit learning objectives describe outcomes that I am able to achieve and are consistent with the course-level objectives.	3048	1.80	0.89	-74.05	.000**	-1.20	1.34[§§]
5.2	Learning activities encourage me to interact with my instructor.	2799	1.53	0.94	-82.67	.000**	-1.47	1.56[§§]
5.2	Learning activities encourage me to interact with other students.	2710	1.24	0.98	-93.09	.000**	-1.76	1.79[§§]

$^{**}p < .001$, $^{\S}d > .8$, $^{\S\S}d > 1.0$

While each item assigned a point value of "3" by QM was rated significantly less than 3 by participants, there were several items with an effect size less than .8 which indicates low practical significance. The five items where there was not a practically significant difference between participant ratings and QM's rank related to course navigation and assessments and grading (QM 1.1, 3.3., 6.3, 3.2, and 3.1). Participants' high ratings of these items indicate that students place great importance on the inclusion of clear instructions for getting started in a course and consistent and logical navigation, just as does the QM criteria. Similarly, like QM, students greatly value clear articulations of evaluation criteria and the grading policy, as well as the inclusion of assessments that aligned to the other course components.

For all other items ranked a 3 by QM, participants' ratings were statistically and practically lower than the QM rank, with many items having an effect size greater than 1.0, thus indicating high practical significance.

There were also several items where participants' ratings were at least one full point lower than QM's rank of 3 (QM 5.2, 2.1, 2.3, 2.2). Participants' ratings of these items indicate that students do not place as much importance on clearly stated learning objectives that describe achievable outcomes as does the research on which QM's criteria are based. Similarly, participants do not value learning objectives that encourage interaction at the same level as the QM framework.

Table 2 shows the survey items that correspond to a QM indicator assigned a point value of "2 – Very Important" on the 2011-2013 QM rubric. Again, participants' ratings of these items were significantly different than the rank of 2 assigned by QM, with some items rated

higher than 2 and others rated lower than. However, all but one item had an effect size less than .8 indicating low practical significance of those differences. The one item with a practically significant difference (QM 6.4) indicated that students place greater importance on ready availability of required technologies than does the QM framework.

Table 2 *Comparison of participant ratings to QM point values for items ranked "2 – Very Important" by QM*

QM #	QM statement	N	Mean	SD	*t*	*p*	Mean Diff.	*d*
6.4	Technologies required for the course are readily available – provided or easily downloadable.	2681	2.62	0.64	49.65	.000**	0.62	0.94§
3.4	Assessments (quizzes, exams, papers, projects, etc.) are appropriately timed within the length of the course, varied, and appropriate to the content being assessed.	2991	2.49	0.65	41.26	.000**	0.49	0.75
5.4	Requirements for my interaction with the instructor, content, and other students are clearly explained.	2839	2.35	0.76	24.34	.000**	0.35	0.46
7.3	Course includes or links to a clear explanation of how the institution's academic support system can assist me in effectively using the resources provided.	2662	1.83	0.87	-9.98	.000**	-0.17	-0.19
4.3	All resources and materials used in the course are appropriately cited.	2886	1.79	0.95	-12.14	.000**	-0.21	-0.23
8.2	Course includes equivalent alternatives to audio and visual content.	2668	1.65	1.06	-17.15	.000**	-0.35	-0.33
1.3	Etiquette (or "netiquette") guidelines for how to behave online are clearly stated.	3150	1.43	0.93	-34.01	.000**	-0.57	-0.61

**$p < .001$, §$d > .8$

Table 3 shows the survey items that correspond to a QM indicator assigned the point value of "1 – Important" on the 2011-2013 QM rubric. With one exception, these items were rated significantly higher by students than they were ranked by QM. The item about student self-introductions (QM 1.8) was the only item on the survey to be rated the same by students and QM. This item received the lowest rating by participants, indicating its relative lack of importance to students.

While there was a statistically significant difference for item 7.4 (related to the inclusion of how to access the institution's student support services), the effect size was less than 0.8 indicating low practical significance. Students' rating of this item was more similar to QM's rating than other items assigned a value of 1 by QM.

The analysis of three other items assigned a value of 1 by QM (QM 1.5, 1.6, 1.7) produced a difference that was both statistically and practically significant. Specifically, students gave greater weight than QM to the minimum preparation, prerequisites, and technical skills being clearly stated. Similarly, students rated the item related to the instructor self-introduction markedly higher than the value assigned to that item by QM.

Table 3 *Comparison of participant ratings to QM point values for items ranked "1 – Important" by QM*

QM #	QM statement	N	Mean	SD	*t*	*p*	Mean Diff.	*d*
1.5	Minimum preparation or prerequisite knowledge I need to succeed in the course is clearly stated	3148	2.08	0.82	73.74	.000**	1.08	1.31§§
1.6	Minimum technical skills expected of me are clearly stated.	3152	1.99	0.87	63.53	.000**	0.99	1.13§§
1.7	The instructor introduces her-or himself.	3141	1.91	0.87	58.88	.000**	0.91	1.05§§
7.4	Course includes or links to a clear explanation of how the institution's student support services can help me reach my educational goals.	2668	1.69	0.93	37.78	,000**	0.68	0.73
1.8	I am asked to introduce myself to the class.	3149	1.00	0.96	.00	1.00	0.00	0.00

**$p < .001$, §$d > .8$

DISCUSSION

The results of this study validate the standards and indicators for assessing the quality of online courses included on the Quality Matters rubric. The mean student rating for each item was at least 1.0, indicating that students value the QM criteria as important to a course's success. Students do discriminate among the items with their mean value ratings ranging from 1.00 to 2.66 on a scale of 0 to 3. While students' ratings on all but one item differ in statistical significance from the QM rankings, the practical significance of the differences varies.

Several items were rated highly by both the participants in this study and QM. As is supported by research and considered to be a best practice in online courses (Chen, 2007; Conrad, 2002; Ko & Rossen, 2010), students in this study emphasized the importance of having clear instructions for how to get started in the course and find various course components. In fact, the item related to this (QM 1.1) received the highest rating of all survey items, with 72% of respondents rating it as Essential to their success in an online course. Often times, courses include a "Start Here" or "Welcome" area that provides an obvious starting point for the course. The findings of this study suggest that including such an area or communicating to students in another way exactly what they need to do to get started in the course is something that students view as critical to their success in an online course.

Related to this, participants in this study were in agreement with QM about the importance of a course's navigation being logical, consistent and efficient (QM 6.3). Principles of instructional design support ease of navigation in an online environment as being critical to a successful learning experience (Ko & Rossen, 2010; Swan, 2012). When navigation becomes an issue in a course and students cannot locate necessary course components within a course site, student satisfaction--as well as student learning, are in jeopardy (Miller, 2012). It's possible that participants in this study encountered navigational issues at some point in their educational careers, and therefore fully appreciate the ease of course navigation as critical to their success in an online course.

To ensure consistent and efficient navigation, institutions and/or programs should consider applying a common navigation system to all courses, as much as possible. A course design with common names and consistent location of common elements reduces the learning curve between courses (Dykman & Davis, 2008). Students who take more than one course in the program/institution do not need to spend time learning to navigate each course's unique setup and can instead, focus on learning content. When creating a common navigation system within a learning management system, students should be consulted to

validate design choices and inform necessary revisions to ensure that the course is tailored to how students will use it.

Also related to experiencing a smooth start in an online course, students want to have the prerequisite knowledge and skills clearly stated. The survey included items related to minimum preparation and prerequisite knowledge (QM 1.5) and minimum technical skills (QM 1.6), each of which received QM's lowest rating of 1 point. Participants in this study rated those items one point higher indicating a difference with the QM rating that is both statistically and practically significant. While including clear statements on these topics may be just a box to check off for instructional designers and faculty, this information is more important from a student's perspective. It makes sense that students want to be sure that they have the prerequisite knowledge and skills to be successful in a course before they devote their time and energy to it. Given the value students place on this information, instructional designers and instructors should ensure that this information is prominently placed and easy for students to locate at the start of the course.

Other items that were rated highly by both students and QM were related to assessment and grading. Two of the top five items rated most highly by students involve the grading policy (QM 3.2) and criteria for evaluating student work (QM 3.3). QM rightfully views as essential that all courses include descriptive and specific criteria for how work and participation will be evaluated, as well as a clearly stated grading policy. Students are often highly motivated by grades, and often view a good grade as the primary indicator of their success in a course. Therefore, it makes sense that they would also consider these items to be critically important to their success in an online course. This notion is consistent with previous research which shows that students in online courses emphasize the importance of expectations--especially related to assignments and evaluation being clearly communicated (Durrington, Berryhill, & Swafford, 2006; Sheridan & Kelly, 2010).

Similarly, students and QM both place great value on courses including assessments that "measure the stated learning objectives and are consistent with course activities and resources" (QM 3.1). This statement addresses the concept of instructional alignment. Designing courses where there is strong alignment among learning objectives, assessments, and learning activities is fundamental principle of effective instructional design and is well supported in the research literature (e.g., Cohen, 1987; Fink, 2003). Instructional designers know that if there exists misalignment between any of these elements, the learning experience falls apart. Apparently, students are aware of this as well, perhaps because they have been victims of poorly aligned instruction at some point in their educational careers. This item may seem less obvious in importance to students than some of the other top-rated items related to course navigation and grading, so it is validating to see that students also recognize the impact of well-aligned instruction on their success in a course.

Given that students seem to value the importance of well-aligned instruction, it is interesting that they don't give nearly as much weight to the quality and relevance of the learning objectives that are stated. The QM framework includes a standard devoted to Learning Objectives (Standard 2), and all five of the indicators within that standard are ranked a 3 – Essential. Of those five indicators, participants in this study rated three of them more than one point lower than QM. Specifically, students did not feel it was as important as QM that learning objectives describe achievable outcomes (QM 2.1), be clearly stated from the student's perspective (QM 2.3), or that there be consistency between module/unit learning objectives and course-level objectives (QM 2.2). Although effective instructional design demands the statement of clear, measurable, behaviorally-oriented learning objectives, it is curious that students do not recognize their importance in their learning experience.

Also interesting is that students do not place nearly as much importance on interactive learning activities as does the QM framework, particularly when it comes to interacting with other students. In fact, participants in this study rated an item about learning activities encouraging interaction with other students almost two points lower than the QM ranking. Although research unequivocally supports the inclusion of interactive activities in online courses (Anderson, 2003; Darabi, Liang, Suryavanski, & Yurekli, 2013; Palloff & Pratt, 2007; Swan, 2001), previous research suggests that students may be apprehensive about, or reluctant to participate in, activities that require interaction (Brinkerhoff & Koroghlanian, 2007; Marshall, Greenberg, & Machun, 2012). This reluctance by students may also be experienced in group-based work where their grade may depend, at least in part, on the actions of others. Having their success dependent on a variable outside of their control may be concerning, especially to adult learners who have an increased sense of responsibility for their own learning and success (Knowles, 1975, 1980). Helping learners understand the point and value of such activities, and providing a good balance of individual and group accountability, may mediate the impact of possible negative attitudes and allow learners to more productively engage in interactive activities that may enhance their learning.

Related to the low value students place on interacting with other students in the class, it is perhaps not surprising that the lowest rated item on the survey was about students introducing themselves to the class. If students do not see value in interacting with others, then it is unlikely they would deem introductions among class members a valuable component of an online course. While students do not see the importance of introducing themselves to the class, they *do* however, see an instructor's self-introduction as being important. Participants in this study rated the item related to instructor introduction as almost one point higher than the item related to self-introductions. QM assigns both of these items 1 point, and while students agree with that rating for self-introductions, their rating for instructor introduction was both statistically and practically higher. Online courses can

sometimes feel isolating and best practices in online instruction emphasize the importance of the instructor being "present" in the course (Garrison, Cleveland-Innes, & Fung, 2010; Shea, Li, Swan, & Pickett, 2005; Swan & Shih, 2005**)**. An instructor introduction is a key first step in creating a sense of social presence in an online course.

CONCLUSIONS

The results of this study reveal two overall themes of what students value most in their online courses. The themes encapsulate many of the criteria emphasized as important by QM, as reflected in their rubric. Those responsible for designing courses (instructional designers, faculty members, etc.) can benefit by keeping these ideas in the forefront of their design process.

The first theme relates to "clarity." When designing a course, reducing unknowns, anticipating questions and trouble spots, and proactively addressing areas of concern during the design process can help ensure a smooth student experience throughout the course. Similarly, a well-designed course with a consistent navigational structure can also enhance the student experience. It should be made very clear to students how/where to start in the course and that clarity in navigation should continue throughout the course site. Another way of promoting clarity that is viewed by students as essential to their success is setting clear expectations, especially related to grading and evaluation policies. Rubrics that are well-aligned to the objectives and student products can help to communicate evaluative information clearly and concisely. Course designers can benefit from including the student point of view in the design process and by conducting formative assessments prior to and during the course being taught.

The second theme that emerged emphasizes that course elements must be "appropriate and relevant." Everything included in an online course should be there for a specific reason. There should be no "busy work" or extraneous effort required. Online students often have jobs, families and other responsibilities. It is important that everything in an online course has a specific purpose and makes good use of student time. Ensuring that there is strong alignment between instructional elements (learning objectives, learning activities, assessments, resources) can help focus student learning and ensure the appropriateness and relevance of instructional components. Similarly, being deliberate in the use of tools, media and resources is important. The relevance and instructional usefulness of the media is more important than the media itself. That is, adding video to a course does not inherently increase quality; the video must be relevant, appropriate, and aligned with objectives and activities to add value.

In conclusion, course designers who build clarity into their courses and focus on ensuring all course elements are appropriate and relevant can build a better course from the student perspective. Course designers are encouraged to incorporate the student perspective into their course design. This may be accomplished by conducting student focus groups and/or student pilots of the course, especially when making design decisions that impact a group of courses within a program or institution. When making higher-level design decisions (e.g., navigation menus, getting started exercises, interface design), it is best to have a formal formative evaluation process that includes students/potential users as part of that process (Aleckson & Ralston-Berg, 2011).

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