

The Need for Quality course Design in a Post-Pandemic World: A Case Study

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Online course instruction remains one of the fastest growing sectors in the higher education industry but has been historically stigmatized with poor quality and low standards. Early distance education programs were heavily teacher-centric in design and were used as a means to disseminate information to students at a distance. However, institutions have worked to re-envision distance education through a student-centered learning approach to improve the modality quality. In light of the rapid shift to online teaching as a result of the COVID-19 pandemic response, there is a need to improve practices for preparing quality courses to support student learning in hybrid and online learning formats. There are a variety of quality assurance frameworks and evaluation instruments, such as the Quality Matters Higher Education Rubric, that are utilized to measure the quality of course design. The purpose of this case study is to analyze the faculty and student perceptions of the impact of course design on student learning at a small public college in Central Florida.

While the realm of distance education is not particularly new to higher education, the response to the COVID-19 pandemic resulted in a rapid shift to online instruction. Nationwide, many faculty members during this period were underprepared for teaching in a fully online environment as their individual courses were not developed for this modality (Chu et al., 2021; Karam et al., 2021). Within the last year, faculty received support for adapting courses that were rapidly (re)designed to meet the growing need for online course offerings (Camacho & Legare, 2021). Although the pandemic is still prevalent throughout the world, many institutions are returning to on-campus course offerings in the 2021-22 academic year. Despite the return to campuses, the demand for fully online course instruction remains one of the fastest growing sectors in higher education (Baldwin & Ching, 2019).

Quality has become the significant factor of online instruction as institutions work to meet the growing need for such programs (Lynch & Gaston, 2020; Zimmerman et al., 2020). Historically, e-learning programs have been shrouded with poor-quality and low-standards stigmas (Avery et al., 2020; Karam et al., 2021). However, there are a number of quality-assurance frameworks and instruments for evaluating online courses, including the Blackboard Exemplary Course Program Rubric and the Quality Matters (QM) Higher Education Rubric (Shields et al., 2021). Institutions utilize such tools to ensure the quality of online course design which has been significantly linked to student satisfaction, learning, and retention (Avery et al., 2020).

Literature Review

There is an urgent need for developing and maintaining quality online courses to meet the rapidly growing demand for distance education programs (Baldwin & Ching, 2019; Lynch & Gaston, 2020). In response, higher education institutions have increased

the focus on utilizing quality assurance mechanisms to drive continuous improvement (Karam et al., 2021; Zimmerman et al., 2020). One of the more prominent tools used for developing and evaluating course design is the Quality Matters (QM) Higher Education Rubric due, in part, to its consistency with accreditation standards (Gregory et al., 2020; Sadaf et al., 2019). Founded in 2003 by colleagues of the MarylandOnline, Inc. consortium with funding from the US Department of Education, Quality Matters is an independent nonprofit organization dedicated to understanding how institutions measure and guarantee the quality of a course (www.qualitymatters.org). The internationally recognized QM framework utilizes 42 rigorous peer-reviewed, specific review standards organized within eight general standards based on research and instructional design principles to evaluate the quality of an online course (Lynch & Gaston, 2020). The review process utilizes a team of trained reviewers, including a subject-matter expert, to determine if a course meets expectations as well as to provide feedback for continuous improvement (Zimmerman et al., 2020). Although the focus of the QM review is on the course design, the model is scalable to include all aspects of online learning, though these aspects may be overlooked by educators inexperienced with online teaching (Murillo & Jones, 2020).

While using the QM rubric does not explicitly ensure the quality of the course content developed by a subject matter expert, it does provide students with well-designed courses with ideal conditions for learning (Murillo & Jones, 2020). Sadaf et al. (2019) noted improvements in student-content interactions as well as overall satisfaction in QM-certified courses. Similarly, Lynch & Gaston (2020) argued that QM-designed courses provide more opportunities to involve students in the course compared to traditionally designed courses. However, Shields et al. (2021) noted that, overall,

instruction can adversely impact students' perceptions of course design even if the course is QM-compliant.

There are a number of instructional design models used to develop courses for online instruction. Classical models, such as ADDIE and ASSURE, utilize a linear, step-by-step approach to emphasize effectiveness compared to efficiency (Dong, 2021; Stevens & Hanshaw, 2019). Often, these models are characterized with heavy front-end analysis of learners, context, needs, and objectives to produce a deliverable product at the end of the design process. Hence, feedback for improvements from stakeholders is generally provided after the design process and usually after the course is launched, thus slowing the process of creating high quality courses that meet student, faculty, and institutional needs (Dong, 2021).

However, a model of rapid prototyping for instructional course design utilizes an iterative process of feedback-loops to integrate stakeholder feedback prior to a final product (Tripp & Bichelmeyer, 1990; van Heerden & Swart, 2018). As a result, the final product is designed using multiple revision cycles and is generally more efficient for producing a high-quality deliverable which meets the needs of students, faculty, and the institution (Dong, 2021; Woszczyński et al., 2021). The Hanshaw Helm-Stevens Rapid Prototyping (HHSRP) model builds on the concept of an iterative process to not only design courses for launch, but to also maintain the course over time (Stevens & Hanshaw, 2019). The HHSRP model defines three distinct levels of the design process—school/organizational, prototype course, and sustainment—each of which is connected using feedback loops as represented in Figure 1. Unlike prior rapid-prototyping models based on Tripp & Bichelmeyer (1990), the sustainment level of the HHSRP model is unique and supports the quality assurance approach of continuous improvement.

The initial design phase begins with the school/organization level using administrators and instructional designers to establish the school's and students' needs as well as to develop a master template that can be used throughout a program (Stevens & Hanshaw, 2019). Consistency in course structure and design significantly impacts students' learning experience and satisfaction in online courses as well as student retention (Avery et al., 2020; Foroughi et al., 2018; Martin et al., 2019). Furthermore, reusability of common course structure enables students to focus more on content as opposed to formatting (Woszczyński et al., 2021). However, some faculty may feel the use of an institutional template for course design hinders their academic freedom. Hutchinson (2019) argues that while instructors should be allowed to express their opinions on a subject matter, there must be both academic freedom and professional accountability as it applies to the overall design of a course. Developing a master

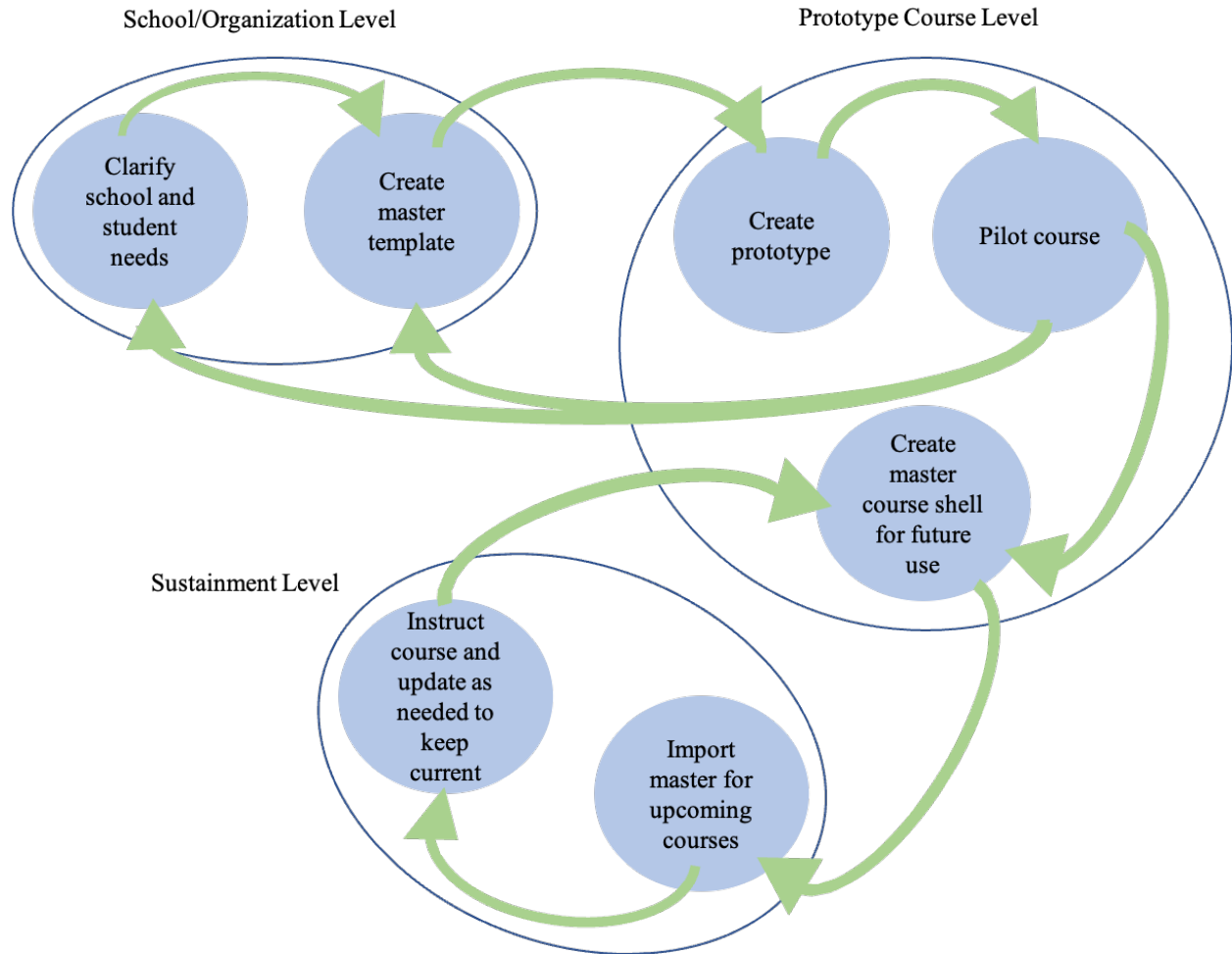
template that can be applied to courses throughout a program or institution consistently reduces the amount of time instructors must spend on routine design tasks, thus allowing instructors to spend more time on creatively thinking about means to facilitate student learning of the content (Murillo & Jones, 2020; Stevens & Hanshaw, 2019; Woszczyński et al., 2021).

The prototype course design is developed based on the master template with the support of subject matter experts (SMEs) to prepare a pilot course. Stevens & Hanshaw (2019) note it is important to limit the number of stakeholders involved in the prototyping phase to support quicker progress due to the iterative nature of the process. Once launched, the pilot course serves as a medium to develop and refine a master course shell for use in future course sections. Quality control and time savings are key benefits of utilizing the pilot course to develop the master shell (Dong, 2021; Martin et al., 2019; Murillo & Jones, 2020; Stevens & Hanshaw, 2019). In addition, the continued application of the master shell in subsequent terms by SMEs and/or instructors can inform updates as needed to keep the course current, which should be done regularly (Woszczyński et al., 2021). This level of sustainment not only maintains the quality of the course design, but it also enables instructors to spend valuable time teaching and learning practices as opposed to mundane design tasks (Avery et al., 2020; Stevens & Hanshaw, 2019).

Site Profile

This study utilized a small, 4-year public college serving less than 5,000 students located in Central Florida. The institution has a 26:1 student-to-faculty ratio and employs 161 faculty combined between full-time (49.7%) and adjunct (50.3%) instructors. The student population consists of 62% females and 38% males with 78% of students under 25 years of age. Demographically, Caucasian students account for 55% of the population, 23% are Hispanic/Latino, 10% Black, 4% Asian, and 8% Other. More than half, 51%, of the student population is enrolled in some distance education and nearly one-third of students are enrolled full-time at the college. Based on the outcome measures which are reported for 8-year periods, more than a quarter of students classified as first-time degree-seeking enroll at another institution before degree conferral (National Center for Educational Statistics, 2020).

The present course design process at the institution relies on the Instructor to develop their own course using Canvas software with support from the e-Learning department as requested. As a master template is not utilized by the institution, courses developed by each instructor result in multiple iterations of any given course. Instructors are encouraged to work with an instructional designer and have their individual course

Figure 1. *Hanshaw Helm-Stevens Rapid Prototyping Model*

Note. From “The Hanshaw Helm-Stevens rapid prototype instructional design model: Examining the dimensions of structure and dialogue within the framework of higher education” by R. Stevens, G. Hanshaw, and J. Kim, 2019, *American Journal of Economics and Business Administration*, 11(1), 35-46. CC BY.

internally peer reviewed using the QM Higher Education Rubric. To date, only 49 unique courses are currently QM-certified, accounting for less than 14% of unique courses offered by the institution. Although QM was adopted by the college as a means for quality assurance in 2018, efforts for internally reviewing courses have been plagued with lack of voluntary submissions from faculty as well as significant restructuring of the e-Learning department.

Research Question

The existing literature on the impact of course design and quality assurance identified several related needs for further research. Zimmerman et al.

(2020) indicated the need for institutions to investigate how standards and processes are implemented, specifically as it applies to faculty development, course design, and course review. Furthermore, there is an expressed need for research focusing on faculty and student perceptions of the impact of course design on student learning (Avery et al., 2020; Foroughi et al., 2018; Lynch & Gaston, 2020). Additionally, the use of master templates to improve course design with consistency, time savings, and quality has been suggested repeatedly (Murillo & Jones, 2020; Stevens & Hanshaw, 2019; Woszczyński et al., 2021). As such, this study was guided by the research question: *What are the faculty and student perceptions of consistency in course design as it impacts student learning?*

Method

Participants for this study will include all current instructional faculty as well as students that are 18 or older. As such, this study utilizes two distinct survey questionnaires—one for each population—consisting of both quantitative and qualitative items. The faculty survey was composed of seven demographic questions, six Likert response items, and four open-response questions for a total of 17 items. Similarly, the student survey consisted of five demographic questions, eight Likert response items, and two open-response questions for a total of 15 items. Each survey was designed to be completed in a single setting lasting 15–30 minutes. A link to the survey on Google Forms platform was emailed to all participants in each population group along with an explanation of the purpose of the study and informed consent to participate. Data collected via the survey was anonymous to minimize potential risk to participants. Quantitative items are measured using a 5-point Likert scale. Descriptive statistics were used to analyze the responses for each item independently. Qualitative items were measured with open-ended responses to allow participants to express their thoughts in an unbiased manner. Responses were coded using recurring key words and phrases, then analyzed for emergent themes. Demographic items were included to disaggregate the results. Incomplete surveys were removed from the analysis.

Findings

Faculty Responses

Approximately half, 48.4%, of the faculty responses were from full-time faculty with the slight majority of responses coming from adjunct faculty, 51.6%. Faculty responses were nearly evenly distributed by department among general studies and workforce development programs with 32.3% of responses from Arts & Letters, 32.3% from Mathematics & Sciences, and 29% from Workforce Development. The remaining 6.5% of faculty responses stemmed from the Nursing department. Nearly 94% of faculty responding possess at least 5 years of collegiate teaching experience, with 70.9% possessing at least 10 years of experience. However, in contrast, just under half of respondents, 41.9%, possess 4 years or less of online and/or hybrid teaching experience with only 32.2% possessing 10 or more years. Approximately two-thirds of respondents, 67.7%, teach four or more unique courses at the college. However, more than half of the respondents, 51.6%, have not had their course reviewed using the Quality Matters rubric. Further, less than 20% of faculty respondents indicated teaching only at the institution.

The majority of faculty, 83.9%, agreed that the design of a course is important to student learning experience and the delivery of the course. From participant comments, sentiments of course design focus on the students' ability to easily navigate a course to locate information and materials. As one participant noted, "Better design produces better learning." Faculty feel strongly about the organization of a course as it relates to student success. For example, one participant stated,

I think the overall usability/ design of a course is critical to student success. It must be easy for students to navigate and information/ instructions clear, obvious, and easy to follow. Time and energy should be spent learning the content and not on trying to navigate the course.

In addition, some participants expressed a desire for increased consistency between different courses to support student success. As noted by one participant, "I would like to see consistency among the Canvas courses throughout the college. I think that would have a tremendous impact on student learning." Based on the Likert responses, 58.1% of faculty participants indicated they would probably use a template for common course design, with 19.4% stating they would definitely use a template if one was provided. Another 25.8% of faculty indicated they would possibly use a template. Related comments focused on the common elements that should be included on a potential template. For example, one participant stated,

In addition to the obvious (home page, syllabus, modules, assignments/assessments, module overview, module assignment checklist, etc.) then a template would provide a consistent (for those who choose to use it) format for each Module overview page and for each "assignment checklist" so students get used to navigating a certain way.

Some participants noted that any potential template needs to be developed as discipline-specific as opposed to a generic "one-size-fits-all" template. For example, one participant stated,

The master should not be too generic as this requires too much customization and negates the advantage of saving time (and thus rendering it nearly pointless). Master templates need to be tuned to each discipline, although not to the point of being restrictive. A master template for a STEM course would likely be useless for a Political Science class (and vice versa). Therefore, the master should be developed by the discipline with assistance from the technical experts.

On the topic of current practice for preparing a course for an upcoming term, 61.3% of faculty indicated they are likely or very likely to copy a previously taught course into their course for the upcoming term. However, in contrast, 70.9% of faculty participants indicated using a master shell to prepare their course for the upcoming term. This stark contrast in methods for preparing a course for an upcoming term indicates there may be confusion about the purpose and application of master shells. Similarly, participant comments about the pros and cons are mixed. For example, one participant stated, “Whenever I see an enhancement to an existing course, I always change to the Master course, this enables me to keep the Master current at all times.” Comments from other proponents for master shells similarly agree on the usefulness of maintaining the master shell, such as,

I update the master shell all of the time with things I learn and things I want to change or incorporate into future classes. I can do this as I think of them or when time allows and I do not have to wait until the few weeks between semesters and try to do it all at once.

In contrast, opponents to using master shells echo the following participant’s sentiments.

I don't like using a master shell because it means making changes in two places—the current course I'm teaching and then the master. Of course, I only make changes to a course I'm teaching if it helps the current students. Otherwise, I make a note of the change I need to make and then make the change to the course once I have copied it to the next semester shell.

However, some participants’ comments support the notion of confusion between copying existing courses (referred to by their course reference numbers [CRNs]) versus master shells. For example, one participant noted, “Copying from CRN back to master and then copying from master to new CRN. Easier to just copy from existing CRN.” Similarly, another participant indicated,

Every semester, I reset the master and import the most recent section I have taught of each course. I then tweak the master, verify all links are working, and set the upcoming semester dates before importing the updated master into the section of that course I am teaching in the new semester. The pros are I do not have to go into the master to update it during a semester when I am updating/improving information/materials in my current course. Another advantage is that if I need to make major revisions and I accidentally mess up the master, I can reset it

and re-import the most recent CRN. No disadvantages.

Student Responses

More than half, 52.5%, of the students surveyed were in the 18–24 years old age range. The remaining respondents were in the age ranges of 25–30 (15%), 31–39 (15%), 40–49 (10%), and 50 or older (7.5%). Similarly, more than half, 55%, of the students surveyed were enrolled full-time, while another 40% were part-time enrolled. Only 5% of respondents were classified as dual-enrolled. Approximately 42.5% of students have completed two to three terms at the college, while nearly a third (30%) completed four to five terms with the remaining 27.5% having completed six or more terms at the college. All students reported completing at least one online course at the college with 72.5% having completed four or more online courses. Also notable is that nearly 58% of students have taken courses at other institutions.

Based on the participant responses, students feel strongly about the need for quality course design. Approximately 93% of students indicated the design and structure of an online course is important to the overall quality of the course. Similarly, 90% of students indicated the design and structure of an online course directly impacts their learning of the course concepts. Students also indicated specific components of the course are key elements that contribute to the quality design, including getting information (82.5%); use of modules to organize content (95%); weekly announcements for communication (75%); and the use of rubrics to provide grading criteria on assignments (95%). Echoing the Likert responses, student comments emphasized quality stems from consistency of design and timely communication. Students specifically noted the importance of weekly announcements, weekly assignments, and modules designed in a weekly format. Participants also noted that timely responses from instructors impacts their learning experience in online courses. One such comment echoed by multiple participants states,

A quality course includes consistency in deadlines for assignments and tests, list assignments in modules (weekly) as well as in the syllabus, weekly announcements are posted including “To Do” reminders, last but certainly not least, Professor response within 24–48 hours.

Less than half, 47.5%, of student participants indicated that courses are consistently designed. Despite this split consensus on design consistency between courses, 80% of students are generally satisfied with their online course experience at the college, though only

25% indicated being very satisfied. Some students noted their experiences with online courses rivaled in-person classes if the online course was consistently and intentionally designed. Meanwhile, others noted they felt if a course was created from a traditional in-person design, it lacked the flexibility and quality needed for online instruction. According to one example participant comment,

I often feel as if online courses suffer in quality more if they are not intended to be online courses initially. As in, a curriculum is set up for in-person or hybrid classes, but is then converted to online work. In these situations, the quality is quite poor and it makes it hard to work with the information at times. That being said, other courses that HAVE been properly set up and tweaked to work for online circumstances can be engaging and generally of high quality.

Discussion

The need for quality course design to support students' learning experiences has never been greater as a result of the challenges presented by the COVID-19 pandemic. Both faculty and student findings in this study emphasize the importance of providing learners with courses that are easy to navigate and predictably designed. A consistent course design significantly impacts students' learning experience and overall satisfaction with online courses (Avery et al., 2020; Foroughi et al., 2018; Martin et al., 2019). Nearly 84% of faculty and 90% of students agreed that the design of a course is important to student learning. The general sentiments of the faculty comments were best summarized by one participant who stated, "Better design produces better learning."

Master shells provide instructors with the opportunity to design and maintain courses for future iterations, revising content as necessary to keep courses current (Woszczyński et al., 2021). While there was some confusion about the purpose and application of master shells, the faculty generally indicated a willingness to utilize master shells. Some participants even indicated the need for greater design consistency between online courses. Additionally, the majority of faculty, 58.1%, indicated they would probably utilize a template for common course elements if one was provided. According to current literature, a course template enables instructors to shift their focus from routine design tasks to spending time on facilitating student learning of the content (Murillo & Jones, 2020; Stevens & Hanshaw, 2019; Woszczyński et al., 2021). However, as noted by some participants, any such template should be designed to be discipline specific and with support from technical experts.

Moreover, the courses provided by the institution must meet high quality expectations to support student learning experiences as well as student retention (Avery et al., 2020). Student feedback about their learning experiences in online courses was mixed, with some students indicating they felt online courses rivaled on-campus courses. However, not all students shared this view, expressing that the quality of the online course was lacking due to the inappropriate design of a traditional on-campus course for online delivery. Additionally, more than half, 51.6%, of the faculty participants noted their courses have not been reviewed using the Quality Matters rubric, indicating a need for increased quality assurance reviews of online course offerings.

Recommendations

The purpose of this case study was to analyze the faculty and student perceptions of the impact of course design on student learning at a small public college in Central Florida. Based on the findings of this study as well as the literature reviewed, there are three key recommendations that would benefit practitioners.

The first recommendation is to provide training and support for understanding the purpose and application of master shells. While some faculty comments indicated a clear understanding of the use and maintenance of master shells, several other comments as well as survey data suggests there is a deep misunderstanding among faculty. Providing training about the purpose of using master shells to design and maintain a course by making periodic updates may benefit the faculty as well as mitigate any routine design tasks faculty encounter while preparing a course for an upcoming term. Emphasizing the maintenance of a master shell during the semester will be a key element in the training offered as this will enable instructors to utilize student feedback and curriculum updates to keep their courses current.

The second recommendation is to create discipline-specific templates consisting of common course elements and structure. While the majority of faculty indicate they would probably use a course template if one was provided, several suggested any such template should be discipline specific as opposed to institutionally generic. As suggested by Stevens & Hanshaw (2019) and supported by faculty responses, a template should be created with technical experts to meet the instructional needs while providing consistency across multiple courses. The increased consistency in online course design would result in students spending less time in trying to navigate the course while spending more time learning the content.

Last, the third recommendation is to increase the volume of quality assurance course reviews at the college. As indicated from the findings, more than half of the faculty respondents have not had their courses

reviewed using the Quality Matters rubric. As noted by Avery et al. (2020), the quality of online course design is significantly linked to student satisfaction, learning, and retention. Increasing the volume of courses that are internally reviewed at the institution will help to ensure courses meet the latest quality assurance expectations based on the QM framework.

Limitations & Suggestions for Future Research

Due to the nature of this research, this case study was isolated to a single institution, thus limiting the generalizability of the conclusions and recommendations to the study site. However, future researchers should consider increasing the generalizability on the application and faculty perspectives of using master shells. In particular, a potential focus may target institutions that utilize course templates that have either been designed institutionally or for specific disciplines. Additionally, due to the unique nature of the COVID-19 pandemic, many institutions have expanded their online course offerings. Investigating students' perspectives of their online learning experiences in the later stages of the pandemic and/or in the post-pandemic setting could be beneficial to improving course design.

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