

Supporting University Faculty With Online Assessments During the COVID-19 Pandemic: Challenges and Opportunities

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Abstract: The rapid shift to an online instructional mode necessitated by COVID-19 has been a formidable challenge for most institutions but particularly for those in which online learning was not widely implemented before the pandemic. Assessment has been an additional challenge, coupled with the accreditation requirements that higher educational institutions currently face. Remote instruction caused the Senate Assessment Council (SAC) at a mid-sized state university in New Jersey to envision assessment-related issues in the new online context to create an effective instructional system for online learning. In the spirit of continuous improvement, members of the SAC developed and disseminated a survey to the faculty to identify the kinds of assessment support they would need and to improve assessment for Student Learning Outcomes (SLOs) in online instruction. This article shares the findings from the survey, along with suggestions for other institutions that might face similar challenges.

Keywords: *COVID-19 Pandemic, Online Assessment, Online Learning, Faculty Support, Student Learning Outcomes (SLOs)*

Introduction

Higher education has experienced extensive growth in online instruction in recent years, and this shift from in-person learning and assessment to online modalities was greatly accelerated by the COVID-19 pandemic. Associated with the change to online instruction are challenges related to implementing appropriate training initiatives and providing the necessary resources to support online education and assessment.

This shift in instructional mode has been a particularly formidable challenge for institutions in which online learning was not widely implemented before the pandemic. The ongoing pandemic has forced many faculty members to change how courses were traditionally taught, thus increasing the need for new faculty training programs. In addition,

with this shift in instruction, assessment practices have been reexamined (Benson, 2003).

Khan and Jawaid (2020) note that instructors should employ valid and effective assessments in online courses to create a thriving online learning environment, along with assessment procedures, methods, and tools. Further, the need to meet accreditation requirements calls for a review and redesign of assessment systems and processes, along with faculty training and support in assessment practices.

Ongoing assessment efforts of this nature have been taking place for the past decade at a mid-sized state university in northern New Jersey. While going through this process for a recent Council for the Accreditation of Education Preparation for the College of Education and the Middle States Commission on Higher Education accreditation for the university, the

authors faced a variety of challenges regarding the measurement of Student Learning Outcomes (SLOs) and revision of curricula. In the spirit of continuous improvement along with the need for online assessments, at the end of the spring 2020 semester, several members of the university's Faculty Senate Assessment Council (SAC) and key assessment leaders decided to investigate the impact of the campus-wide pivot from in-person instruction to remote learning due to the COVID-19 pandemic, along with the kinds of support faculty members would need for assessment in general and the assessment of SLOs.

For this article, *remote instruction* is defined as the rapid switch to the continuation of teaching during New Jersey's state of emergency, which necessitated PreK-12 schools, colleges, and universities to stop teaching in-person classes. Unlike *online instruction*, in which courses and assessments are planned in detail in advance, remote instruction represents the "overnight" shift from in-person teaching to remote teaching modalities. As higher education institutions moved to remote instruction, technology researchers coined a term for this transition. Hodges et al. (2020) suggest the term *emergency remote teaching* be used to represent this rapid shift in instruction.

Background and Setting

The institution that was the focus of this study is a public comprehensive university in northeastern New Jersey, serving approximately 10,000 students, including over 8,500 undergraduate and nearly 1,500 graduate students. Known for its diversity, it is designated a Hispanic-Serving Institution (HSI) by the U.S. Department of Education, with at least 25% of its enrollment of undergraduate

full-time equivalent students claiming Hispanic heritage (I.01HSI status). Nearly 30 percent of its students are the first in their families to attend college. The university degree programs are offered through five academic colleges: Arts and Communication, Business, Education, Humanities and Social Sciences, and Science and Health. In addition, an Honors College provides a rigorous curriculum and co-curricular activities, and the School of Continuing and Professional Education offers non-credit certifications, professional training, and youth programs.

Within the university, several faculty, staff, and other groups on campus work with assessment. One such group is the Faculty SAC, a body of the Faculty Senate, which contributes to the culture of shared governance at the university. Elected members are primarily members of the teaching faculty, with additional representation by one member from the adjunct faculty, one member from the staff, and one member from the library faculty. Other members in this group, serving as ex-officio, consist of the assessment coordinator of each of the five academic colleges.

During many discussions at the Faculty SAC meetings over the past two years, it became evident that there were enormous discrepancies in the way faculty and professional directors viewed assessments and which aspects of assessment they were familiar with, as well as members' understanding of each other's job functions (e.g., assessments for class level, program level, college level, and institution level). As time went on, these gaps slowly began to close, leading to a partial amelioration of major problems and challenges.

As the spring 2020 semester ended and the

Faculty SAC started to conclude its work, a small group within the council expressed the need for a survey to determine how faculty were responding to the unique requirements of assessing online. The Faculty SAC responded that a survey had previously been sent out to the faculty by the Office of Instruction and Research Technology, asking faculty members how they felt about transitioning to remote learning. This survey did not, however, focus on assessment.

A new survey was therefore designed by the first four authors of this article to tap into the specific issue of assessment. The group coordinated with the director of Instruction and Research Technology to ensure minimal duplication and overlap with the earlier survey, and consulted with the associate provost, who assisted in distribution.

Emerging Trends About Faculty Needs and Support for Online Assessments in Higher Education Institutions

The COVID-19 pandemic has considerably impacted assessment efforts in higher education across the United States and the

world. Its sudden, unprecedented occurrence and the severity of the pandemic provided

only a short window to pivot from in-class teaching and assessment to remote teaching and learning. As an initial endeavor, the National Institute for Learning Outcome Assessment (NILOA) conducted a survey in June 2020 to gain insight into how institutions of higher education have been responding. Survey findings showed that 97% of institutional respondents were instituting COVID-19-related changes.

While 75% of the respondents did not consider the changes made to have negatively impacted assessment work on their campus, 25% were

concerned about the increasing workload and challenges associated with assessment (Jankowski, 2020).

Converting in-class teaching to remote modalities required that university faculty pivot to the use of technology to support their teaching and assess learning. To date, several reports have been published on what technologies have been used to facilitate higher education assessment efforts during COVID-19. For example, student concerns about assessment include access to stable and reliable Internet service, access to computers, and a conducive environment to engage in assessment (Pastor & Love, 2020). Another concern regarding remote teaching and assessments pertains to policy. Guangul et al. (2020) identified a lack of clear online teaching policies at institutions of higher learning, including determining the responsibilities of faculty about the online teaching environment. Measures suggested ensuring integrity and success of online assessment include minimizing student cheating online and on the administration of assessments. This would provide clarity on expectations of online assessment in the absence of in-class

interaction in which students can ask clarifying questions. It would also minimize the

challenges associated with the use of technological resources in an online environment.

Recent studies have also looked at students' dispositions and attitudes toward learning in an online environment related to online assessment. For example, Gonzalez et al. (2020) examined the challenge associated with comparing assessment findings during COVID-19 to those completed before spring 2020. One issue was whether higher test scores during COVID-19 in an online environment without appropriate proctoring mechanisms could be

due to cheating rather than an actual improvement in performance. The study also identified possible success gaps between students with self-motivation and self-regulation, known as self-regulated learning, which is an impetus for success in an online learning environment, and students with less motivation and drive to study on their own in an online environment in the absence of interaction with faculty, peers, and face-to-face support on campus.

Singer-Freeman and Cottenoir (2020) discuss the need to ensure minimal disruption in assessment and the importance of developing curriculum maps to help faculty make determinations on course sequencing and course content. Specifically, they point out that the challenges resulting from COVID-19 made it difficult for some students to adjust to new ways of teaching and learning, including access to teaching and learning materials and juggling competing life priorities while enrolled in online courses. The most negatively affected are often low-income and first-generation students.

Faculty have been challenged to get through all course sequences and teaching materials. To address some of these issues, faculty are advised to review teaching materials to ensure areas of mastery as indicated on curriculum maps are covered to ensure students gain the competencies needed. The challenges associated with covering all course content have also led to the introduction of pass/fail grades instead of letter grades. Singer-Freeman and Cottenoir (2020) also call for the need to examine how assignments are structured in online environments to ensure minimal limitations on students' ability to complete them, gain the competencies required, and ensure an effective process for faculty to provide constructive feedback to students.

Although touched upon in the existing literature, there is a lack of studies examining the general trends of faculty needs regarding online assessments at higher education institutions. To fill this gap, this article, therefore, aims to answer the following research questions.

RQ1. What is the university faculty's level of comfort in online assessment?

RQ2. What kinds of online assessment-related issues did faculty face during the pandemic and what kinds of support do they need to move forward in online assessment?

Methods

Realizing the urgency of fostering a better understanding of the faculty members' needs for online assessments, the team of faculty and administrators at the authors' university created a brief electronic survey using the Qualtrics XM program (Qualtrics, 2021). Administered to all full-time faculty across the university, the survey was sent via email by the associate provost for Academic Affairs to show the Provost Office's support for the survey.

The survey was disseminated toward the end of spring semester 2020. Since the semester was concluding and many faculty members were experiencing stress, health problems, and fatigue due to the global pandemic in addition to the more traditional end-of-semester challenges, the team wanted to ensure that the online survey would be brief, with five questions (three Likert-scale questions and two open-ended questions). The questions aimed (a) to explore assessment-related challenges

(both formative and summative) encountered

from transitioning to teaching remotely and (b) to understand faculty members' level of confidence in creating online assessment instruments, and ability to assess SLOs as a means of finding specific ways to support faculty with online assessment.

For the Likert-scale questions, the data were exported as an Excel file from the Qualtrics XM program, and the frequency and percentage for each answer option were calculated in Excel. For the open-ended survey answers, narrative analysis was employed to discover emergent themes (Patton, 1990). The authors of this study independently read, coded, and then discussed the emerging themes, which were subsequently identified and agreed upon. The results and recommendations were then presented to the university's Faculty Senate.

Findings

RQ1. What is the university faculty's level of comfort in online assessment?

As shown in Table 1, RQ1 was answered by three Likert-scale survey questions. For Question 1 (see Table 1 and Figure 1), 63% of the faculty agreed (strongly agree/somewhat agree) that their transition to teaching online was seamless with minimal challenges. For Question 2, asking about their confidence in developing online assessments to track their course SLOs, 73% of the faculty felt confident (strongly agree/somewhat agree) about developing online assessment instruments to track their course SLOs. Finally, for Question 3, asking about their level of preparedness to assess their course SLOs, 58% of faculty members reported being prepared (very prepared/prepared) to assess the SLOs in their courses during the shift to remote instruction.

A particular note of interest in the data is the

steep percentage gap (15%) between the number of faculty feeling confident about developing the online assessment instruments to track their course SLOs and faculty feeling prepared to assess those SLOs. While, as reflected later in the qualitative data, there were challenges, it is encouraging that many of the respondents responded positively during the rapid shift to remote instruction.

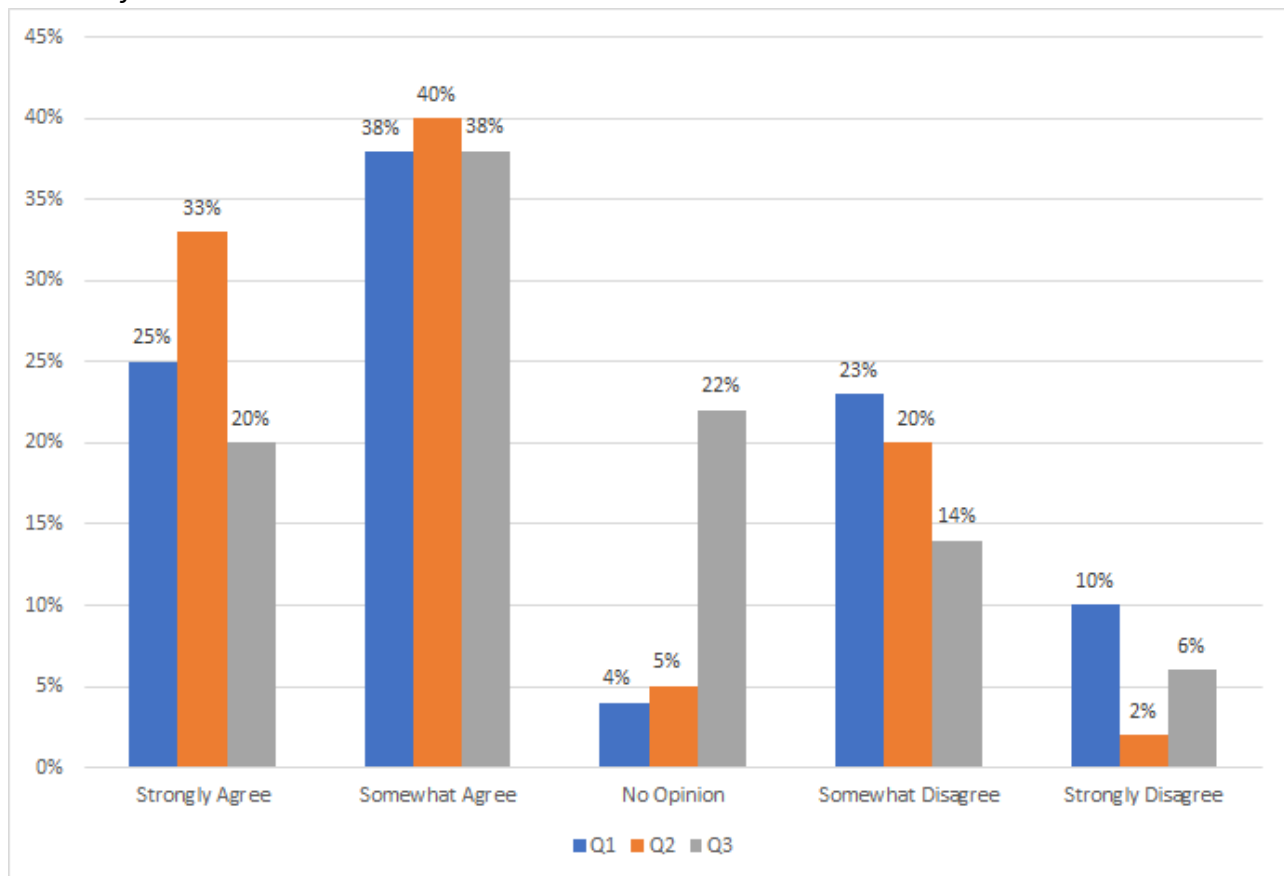
Table 1

Results of Likert Scale Questions: Number and Percentage of Responses

Question and number of respondents	Strongly agree	Somewhat agree	No opinion	Somewhat disagree	Strongly disagree
Q1. Overall, my transition to teaching online was seamless with minimal challenges	<i>N</i> = 26 (25%)	<i>N</i> = 40 (38%)	<i>N</i> = 4 (4%)	<i>N</i> = 24 (23%)	<i>N</i> = 10 (10%)
Q2. Overall, during the spring 2020 semester, I felt confident developing online assessment instruments to track my course student learning objectives (SLOs) (<i>N</i> = 107)	<i>N</i> = 35 (33%)	<i>N</i> = 43 (40%)	<i>N</i> = 5 (5%)	<i>N</i> = 22 (20%)	<i>N</i> = 2 (2%)
Question and number of respondents	Very Prepared	Prepared	No opinion	Unprepared	Very unprepared
Q3. Overall, how prepared were you to assess SLOs for your course(s) when moving to fully online instruction during the spring 2020 semester? (<i>N</i> = 100)	<i>N</i> = 20 (20%)	<i>N</i> = 38 (38%)	<i>N</i> = 22 (22%)	<i>N</i> = 14 (14%)	<i>N</i> = 6 (6%)

Note. Survey participation was voluntary. There were no required questions. This led to an uneven number of responses.

Figure 1
Results of Likert Scale Questions



RQ2. What kinds of online assessment-related issues did faculty face during the pandemic and what kinds of support do they need to move forward in online assessment?

As shown in Tables 2 and 3, RQ2 was answered with two open-ended survey questions. The authors reviewed the responses together and analyzed them to derive trends, themes, and popular ideas. It should be noted that only about half of the respondents completed the qualitative questions.

For Question 4, Table 2 lists the themes identified by the authors regarding issues about online assessments encountered by the faculty. Faculty reported that they were concerned about the academic integrity of

online assessments and had difficulty creating formative assessments and summative assessments online as well as technology-based assessments. They also reported that it was too time-consuming to develop online assessments.

For Question 5, 48% ($N = 51$) of the faculty shared the need for resources to strengthen their online assessment capabilities. Table 3 lists the themes with example quotes, including requests for assistance with creating online assessments and with SLOs and having opportunities for collaboration and conversations with other faculty, as well as learning about accessibility and equity in online assessment.

Table 2

Open-Ended Questions and Themes Derived from Survey Responses

Q4. What were the issues you encountered this semester in relation to formative and/or summative assessments for your online courses?		
Category	Subcategory	Example Quotes
Issues with academic integrity pertaining to online assessments		<i>"Difficulty in ensuring integrity of remote testing."</i> <i>"Tests take a lot longer now that they are open book and students take more time looking for answers. There is more opportunity for students to cheat."</i> <i>"Academic honesty."</i> <i>"Worry about academic integrity (i.e., cheating) during tests/exams."</i>

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Challenges with assessing online	Difficulty with formative assessments online	<i>"I had to rely solely on assignments, not observation."</i> <i>"There are a number of hands-on skills that are difficult to teach and assess during the class."</i>
	Difficulty with summative assessment online	<i>"Developing assessment tools online that genuinely reflect final student learning outcomes."</i> <i>"It is harder to deal with assessment issues in the online format because you can really not use the same instruments to measure student learning in the end. And, I always worry about rigor."</i>
	Difficulty with creating technology-based assessments	<i>"Lack of knowledge and practice with recent technology to create assessments."</i> <i>"Creating final tests on Blackboard is not that easy."</i>
	Time-consuming to develop online assessments	<i>"Creating final tests on Blackboard is time-consuming."</i> <i>"In the courses I taught, students were assessed based on tests. These tests were traditionally closed-notes and proctored. In the online setting under the circumstances this past semester, the tests really had to be open-notes and unproctored. While an assessment may be possible that way, I did not have the time to alter all of my assessment tools for the new setting. So, I was using assessment methods that did not sync with the setting."</i>

Table 3

Open-Ended Questions and Themes Derived from Survey Responses

Q5. What would you like to learn to increase your knowledge and or skills pertaining to online assessments?	
Category	Example Quotes
Assistance with creating online assessments	<i>"I need help using resources and tools available for creation of assessments outside of Blackboard."</i> <i>"I would like to have some concrete examples of assessments processed using the tools we have, and having these documented in a clear, concise fashion."</i> <i>"I would like to know more about online testing."</i> <i>"I would like to know more alternative and authentic assessments to conduct online (i.e., portfolio, individual interview, performance assessments, etc.)."</i> <i>"It feels like there is no support system for assessment on campus. We get documents and software, but there are no consultants we can approach to get feedback or support to improve our assessments."</i>
Assistance with SLOs	<i>"I would like to get training on how to assess online as well as feedback on what we have developed (SLOs, assessments, etc.) and is in place."</i>
Collaboration and conversation with other faculty	<i>"I would like to learn from colleagues about more creative ways to evaluate students in online formats, especially for clinically based courses that have had to go to simulation/remote formats."</i> <i>"Generally, I would just love to know what is working well for other professors. Also, any tips on holding students accountable for assignments and meeting deadlines. I want to improve the ways we can be empathetic with the current state of the world, but also ensure that students excel and meet the expectations of the college and the department."</i>
Accessibility and equity in online assessment	<i>"I would like to learn whatever is necessary to make online assessment equitable."</i> <i>"Making sure that I am meeting all of the regulations for students with disabilities for online assessments."</i>

Additional Challenges

As shown in Table 4, several respondents also asked for assistance with technology, but without specific reference to assessment. Regardless of the assessment or teaching approach, technology challenges always become evident when it comes to the online

learning environment. One needs to be equipped with the technical skills and technology devices and software needed before thinking about teaching or assessment effectively in an online environment. Other relevant issues include student engagement, which is always an important aspect regardless of the teaching modality.

Table 4

Additional Challenges Reported

Category	Examples
Student and faculty issues with technology	● Internet connectivity: Slow internet connection ● Lack of technology devices such as webcams ● Rapid, timely professional development on using technology to transition from in-person to remote teaching effectively
Difficulty with student engagement	● Students' tardiness ● Students' lack of participation ● Students' hardship in their lives ● Students' lack of preparedness

Discussion and Implications

In this study, we examined how one state university, where online instruction was not widely implemented before the pandemic, attempted to assist faculty members in online assessments more systematically and collaboratively.

The results of a faculty survey highlighted that faculty level of confidence and level of preparedness for online assessments should be checked and supported with subsequent training and resources before anyone is asked to develop effective online assessments. This finding is in line with Cutri et al.'s previous work (2020) on online teaching. It is also consistent with the results of other researchers noting that professional development of online teaching, additional training, and technological support is needed to help faculty succeed in teaching in an online environment (Brooks & Grajek, 2020; Daumiller & Rinas, 2021; Moralista & Oducado, 2020).

As shown in the responses to RQ1, it is important to note that self-confidence, which is generally defined as "confidence in oneself and one's powers and abilities" to perform a task (Merriam-Webster, Inc., 2021), does not always lead to preparedness, referring to a "state of being prepared" or "ready for some purpose, use, or activity" in advance (Merriam-Webster, Inc., 2021). Thus, as illustrated, a high level of confidence alone may not lead to a high level of preparedness for a new task. However, with adequate training and the provision of resources and guidance, preparedness can be fostered.

The responses to the survey also revealed a fundamental need for improvement of faculty members' online assessments so that they are

prepared for successful assessment activities.

The analysis of the open-ended responses demonstrated that there was no common ground on language around assessments regardless of the format of the instruction, whether in-person or online. Some faculty were uncertain about the type of formative and summative assessments that could be implemented and how they are tied to their instructional processes. This comports with findings by Ghaicha (2016) showing that despite several publications on assessment, its definition is still confusing because of the different contexts within which terms associated with the assessment framework and concepts are used. Ghaicha (2016), therefore, advocated for the development of common language to explain the key terminologies in assessment to make them easy to understand.

Moreover, even though assessment resources were available to them, faculty in the current study were not always aware of how they could be accessed. Further, it became evident that technology hardware, software, and technological literacy were fundamental needs for creating online assessments. This is consistent with the findings of Brooks and Grajek (2020), who identified significant gaps in faculty comfort levels regarding the use of basic technology to convert face-to-face instruction to remote teaching. They also found that before COVID-19, a significant number of faculty had not used software for online teaching. This, in their view, impacted the ability of faculty to develop quality online course experiences for students.

Based on our survey results, we have made the following recommendations to our university.

First, the university's most imperative goal moving forward should be to develop a

common language of assessment, since each college and its professional directors are often siloed with their languages around assessment.

Second, the majority of faculty have not been aware of the existence or location of important online resources on assessment; therefore, the university should strengthen communication about existing resources on campus and where and how to access them.

Third, the Office of Institutional Effectiveness (IE) should populate the assessment repository on its website and share it with faculty and staff across the colleges.

Fourth, workshops and one-on-one consultations for faculty should be provided on how to develop online formative and summative assessments to measure SLOs and technology-focused workshops and personalized one-on-one consultations.

Lastly, workshops or instructional videos should be developed for students so that they can learn to be successful in online courses in general, including ways to foster online etiquette and how to best complete assessments in online environments. This recommendation is consistent with the literature as evident in the work of Berumen (2020), whose faculty-administered survey showed that 48.5% of the faculty respondents were not familiar with the technology required to transition from face-to-face to remote teaching and viewed efforts to capture videos for online learning as challenging. Further, 62.2% of faculty who taught face-to-face had difficulty transitioning to remote teaching and 48% indicated that their face-to-face instructional content did not translate well into the online domain.

Given that the university has recently partnered

with an Online Program Management (OPM) company to launch several online programs and is currently working on eight undergraduate online programs, efforts are being made to expand offerings in online learning.

Implications for Other Institutions

Based on the findings and conclusions drawn from this study, assessment professionals can apply the following ideas to assessment work at their respective institutions. It is critical to first determine the key players for assessment at colleges and universities and what infrastructure and communication mechanisms are available. It is also important to foster collaborative faculty and professional staff networks and then decide who can offer training sessions and design resources for the university faculty regarding online assessments.

Institutions also need to ensure the availability and accessibility of assessment resources for faculty, including those related to online assessments, such as documentation on common assessment terminologies, materials on the basics of assessment, and videos demonstrating assessment approaches and processes. The availability and location of assessment resources need to be communicated to faculty using a wide range of avenues, including department meetings, college meetings, campus announcements as well as outreach from the Office of Institutional Effectiveness (IE) to colleges and departments on assessment-related matters.

Faculty need to be provided adequate training on the assessment process and the integration of online assessment into remote teaching and learning. Such training should include explanations of formative and summative assessment and on the different perspectives

on assessment, such as course-related assessment, program assessment of student learning outcomes, college-level assessment, and institution-level assessment.

The implications from this survey apply to other institutions and their development of assessments of remote learning. Assessment affects everyone on campus; people may not be comfortable with it and may not feel comfortable voicing their opinions. A campus may benefit from surveys such as this, in which anonymous feedback on assessment is shared with an appropriate subgroup of people. In this instance, the authors were affiliated with a faculty assessment group on campus, the Faculty SAC. Other institutions can utilize stakeholders from a variety of assessment groups to design and distribute a survey and then share the results with their colleagues.

Implementation Recommendations

The following measures were taken based on the findings and recommendations of the study.

The office of IE added common language related to the basics of assessment and terminologies to its website to support faculty assessment efforts. These are now easily accessible to faculty. The institution's accrediting body visiting team commended the institution on these resources during a recent self-study visit.

Further, the IE office has added more

assessment resources to its website with more to come, including audio recordings on the steps involved in the use of assessment software. The office has also organized more assessment-related training sessions for colleges and program assessment coordinators coupled with the dissemination of information on available resources to support assessment efforts. These contributed to a 100% program SLO assessment report submission rate in the 2019-2020 academic year.

Since the administration of the survey, the IE office has increased its outreach to college and program assessment coordinators on training. Several new and refresher assessment training sessions have been organized for faculty, which has increased program outcome assessment report completion rates.

In conclusion, we would like to note that many of the sudden changes that occurred due to the pandemic will likely become permanent elements of instruction for years. It would be timely and prudent to recognize that many of the responses to this unfortunate situation do not represent a temporary shift because of the pandemic but should be considered as an opportunity to switch to different media of instruction in the 21st century. Universities should re-examine the online learning environment, and, accordingly, design high-quality instruction for online student learning, as well as create a culture of assessment that ultimately improves online instruction and learning.

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