Assessment of Institutional Readiness for Online Learning

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Abstract

Covid19 has resulted in educational institutions moving in-person courses to remote instruction. Many faculty, students, and institutional support services were not prepared to handle this abrupt switch in instructional delivery method. Using the end-of-semester undergraduate student course evaluation toolkits, questions were added to assess online instruction in the Fall 2020 through Summer 2021 semesters. While undergraduate students initially seemed generally content with online instruction, we have seen some concerning trends as we assess the responses over time, with decreased satisfaction in courses and instruction and decreased engagement and motivation. The paper recommends some tools that may help institutions increase engagement of online learners.

Keywords: Covid; Covid1;, Education; Online Readiness; Pandemic; Remote Learning.

1. Introduction

When the Covid19 pandemic hit the United States in March 2020, educational institutions reacted to the need for continued learning by moving in-person courses to remote instruction. Many institutions were not prepared to handle this abrupt switch in instructional delivery method.

With the increased vaccine mandates, decreased enrollment, and the seemingly increased demand for online courses by both students and instructors, higher education institutions are assessing the effectiveness of online learning and the readiness of institutions, faculty, and students. It is believed that online learning can enhance rather than cannibalize traditional instruction by providing a more efficient (one-to-many) and convenient platform to attract students that have left the campus or do not intend to return to traditional instruction (Sharma et al., 2017; Tarhini et al., 2016; Zhang et al., 2012).

Despite the increasing desire for online instruction, institutions and students fail to fully utilize it and many institutions and faculty are not well-equipped to deliver quality instruction online. In addition, many students are not ready for the hands-off, self-directed approach to learning. While research has been conducted to assess the use of digital learning in educational institutions (Balakrishnan, 2017; Chiu et al., 2010; Lai et al., 2012; ; Lam et al., 2008; Teo and Beng Lee, 2010), researchers have not fully assessed faculty's and students' readiness for online learning.

2. Institutional and Student Readiness for Online Learning

2.1. Purpose of Study

Educational research has investigated the adoption of online learning among students (Ahmad and Khan, 2017; Tao et al., 2009), teachers (Birch and Irvine, 2009; Motaghian et al., 2013; Teo et al., 2009), and instructors (Nikou and Economides, 2017) by identifying their demographic, behavioral, and cultural biases. Technology readiness (TR), the penetration of different technology-related products and services, has been measured using the dimensions of enablers and inhibitors. TR was measured between genders and age (Jaafar, 2007), educational level (Lai, 2008), and the propensity to adopt based on self-efficacy and self-direction (Lin, et al., 2016).

This paper focuses our students' perceptions of readiness for online learning following the Covid19 pandemic, an area that has not been readily addressed in research.

2.2. Methodology

Using the end-of-semester undergraduate student course evaluation toolkits, questions were added to assess online instruction in Fall 2020 through Summer 2021 semesters. Students were asked closed-ended and open-ended questions about satisfaction with online courses. The closed-ended questions can be seen in the tables 2, 3, and 4. Response rates to the undergraduate survey can be found in table 1.

Table 1. Response Rates

Demographic	Semester	Response Rate
Undergraduate	Fall 2020	45.7%
	Spring 2021	51.44%
	Summer 2021	100%

Source: Buffalo State Instructional Design (2021).

Graduate students were sent a separate survey. It was expected that since many graduate students look for the convenience of online programs, their assessment of online readiness would differ from undergraduates, thus results were measured separately.

Results were analyzed on a descriptive basis, semester over semester, and are being used as input into the capus strategic plan. Results are also being used to further develop an online readiness assessment across all areas of the campus.

2.3. Results - Undergraduate

While undergraduate students initially seemed generally satisfied with online instruction, we have seen some concerning trends as we assess the responses over time. Questions and responses were grouped in three main areas: Technology (table 2), Education/Learning (table 3), and Top Concerns (table 4). Responses for Summer 2022 are not shown.

Technological concerns were not a major issue Fall 2020, with the exception of students' unfamiliarity with technology or applications and reliable internet service; however, we did see an increase in various technical issues in following semesters, which contradicts expectations. Students expressed concerns with planning and delivery of courses, technical requirements and integration of software, and lack of student support services.

Table 2. Fall 2020 and Spring 2021 Technological Challenges

Survey Question (Technological Challenges)	F' 20 Freq	F' 20 %	S' 21 Freq	S' 21 %	% Change
Instructors were uncomfortable with or lacked familiarity with required technologies or applications	733	6.87	575	14.62	+7.75
My own discomfort or lack of familiarity with required technologies or applications	1362	12.77	540	13.73	+0.96
Unclear expectations around which technologies and applications I am require to use	677	6.35	408	10.38	+4.03
My access to reliable communication software/tool (e.g. Skype, Zoom, Google)	640	6.00	293	7.45	+1.45
My access to reliable internet service	1450	13.59	631	16.05	+2.46
My access to reliable digital device (e.g. laptop, mobile device)	635	5.95	247	6.26	+0.31
My access to specialized software (e.g. Adobe products, statistical packages)	541	5.07	348	8.85	+3.78
My access to library resources	692	6.49	354	9.00	+2.51
Adequate digital replacements for face-to-face collaboration tools (e.g. whiteboards)	651	6.10	440	11.19	+5.09
Other	213	2.00	140	3.56	+1.56
No issues	6999	65.61	1803	45.85	-19.76

Source: Buffalo State Instructional Design (2021).

Learning and educational issues were significant in all semesters and increasingly so over time. Students found difficulty in balancing workloads, engagement and motivation, and felt expectations were either not communicated or too high.

Table 3. Fall 2020 and Spring 2021 Learning/Educational Challenges

Survey Question (Learning/Educational Challenges)	F' 20 Freq	F' 20 %	S' 21 Freq	S' 21 %	% Change
Finding time to participate in synchronous classes (e.g. live-streaming lectures or video conferencing at a set time)	1651	15.48	801	20.37	+4.89
Unclear expectations around course/assignment requirements	1414	13.25	869	22.10	+8.85
Competing class meetings and schedules	1204	11.29	538	13.68	+2.39
Personal preferences for face-to-face learning	3371	31.60	1367	34.77	+3.17
Course lessons or activities that have not translated well to a remote environment	1656	15.52	993	25.25	+9.73
Difficulty focusing or paying attention to remote instruction or activities	2913	27.31	1373	34.92	+7.61
Instructor availability/responsiveness	700	6.56	529	13.45	+6.89
Personal motivation/desire to complete coursework	3073	28.81	1355	34.46	+5.65
Once online I did not know how to find academic support services such as tutoring	534	5.01	248	6.31	+1.30
Other	182	1.71	92	2.34	+0.63
No issues	4768	44.69	1091	27.75	-16.94

Source: Buffalo State Instructional Design (2021).

The most expressed overall issues revolved around the feeling of isolation, technology, and perceptions of online coursework. Undergraduate students felt disconnected from campus, peers, and also felt overwhelmed by personal responsibilities. Technology, including the

Internet, software, and equipment, along with lack of support, hindered student performance. Finally, students' perception was that learning objectives were not realistic and achievable, and faculty made the self-directed courses more difficult and time-consuming.

Table 4. Fall 2020 and Spring 2021 Biggest Challenges

Survey Question (Biggest Challenges)	F' 20 Freq	F' 20 %	S' 21 Freq	S' 21 %	% Change
Grades/performing well in class	4557	43.75	1520	38.66	-5.09
Completing my internship or practicum requirements	1087	10.00	421	10.71	+0.71
Changes to grading structures (e.g. pass/fail, credit/no credit)	1306	12.24	489	12.44	+0.20
Not being able to see classmates	2200	20.62	959	24.39	+3.77
Not being able to communicate with instructors	2340	21.93	1035	26.32	+4.39
Possible delays in graduating/completing my program	1431	13.41	528	13.43	+0.02
Missing out on extracurricular-campus activities	1838	17.23	859	21.85	+4.62
Online privacy, protection of my personal data	571	5.35	297	7.55	+2.20
Security/privacy in taking online exams	320	3.00	178	4.53	+1.53
Housing security	311	2.92	89	2.26	-0.66
Food security	306	2.87	111	2.82	-0.05
Receiving the academic support services I need (e.g. tutoring)	727	6.81	301	7.66	+0.85
Desire for synchronous (live, online) classes as opposed to asynchronous (non-live, online) classes	1019	9.55	544	13.84	+4.29
Awareness of student support services available on campus and in the remote environment (e.g. tutoring, peer mentor)	438	4.11	193	4.91	+0.80
Supplemental instruction, EOP, etc.	200	1.87	93	2.37	+0.50
Other	147	1.38	85	2.16	+0.78
No issues	4290	40.21	1156	29.40	-10.81

Source: Buffalo State Instructional Design (2021).

2.4. Results – Graduate

As expected, graduate students were generally much more satisfied with online instruction, and the majority completed at least one course remotely prior to the pandemic. In converse to undergraduates, most were satisfied with the quality of instruction and felt they were performing well in the course. In addition, unlike undergraduate students, most graduate students were not seeking the on-campus and social connections.

2.5. Results – SOSSI (SUNY Online Student Success Inventory)

SOSSI is an independent study of student engagement of online learning. The 2020 report compared our institution's online learning to a sample of ten similar institutions and provided statistical comparisons on instructional design and delivery of online courses. Our institution scored at the mean across all questions for both first-year and last-year students. This indicates that design and delivery are at par, even though student satisfaction is decreasing.

3. Conclusion and Recommendations

Faculty are encountering many challenges in keeping the undergraduate online learners engaged. Challenges include an increased feeling of isolation, with little connection to campus and peers, technical issues and a lack of support, and student perception of online learning, in general. To remain engaged, students need to be motivated, have attention and interest in the topic, be actively involved in the course materials, and perceive the right level of academic challenge. Student engagement is best defined based on individual perception.

Online learners spend almost twice the amount of time working on assignments and course work as the traditional student. Faculty should consider this when designing the course, and not overload the student with "busy work." Faculty should also include engaging activities such as discussion boards, writing about topics, step-out-of-class projects, short audio lectures, virtual field trips, and group activities. They should provide motivators as ways to improve grades (e.g. in video quizzing, multiple attempts, etc.), diversity and choice of activities and assessments, and ways for students to achieve personal gratification (eg. choice of assignments). Faculty and institutions can reduce students' feeling of isolation by increasing interaction via discussions, emails, and video and written announcements, providing virtual technical and support services, and helping students manage time and responsibilities. In general, faculty and institutions need to increase their awareness of student engagement.

This research is a starting point on assessing how our online students are supported and what they want and need. While we understand that the past two years of online learning have been a semi-false reality, we also are aware that our institution needs to assess what our future online environment will be. Next steps include an improved survey instrument, assessment of services, assessment of student and faculty preparedness, and standard online faculty training, development, and certification across all courses.

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