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The Value of Instructor Interactivity in the Online Classroom

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Abstract

As the number of faculty teaching online continues to grow, so has the interest in and understanding of the role of instructor interaction in the online classroom. Online education provides a unique platform in which course design and teaching are independent factors. Understanding faculty and student perceptions about the shifting role of instructor interaction in the online classroom can provide insight on policies and procedures that can support student learning through student-instructor interaction. Participants included faculty and students responding to an anonymous online survey who indicated "online" as their primary mode of teaching. Three key "value" themes emerged as significantly valuable: instructor interactivity, instructor feedback on participation, and asynchronous interaction in discussion forums. These findings illuminate opportunities and areas of consideration for three stakeholders in the student-teacher interaction equation: faculty, faculty developers, and administrators that can be used to inform quality online teaching through instructor interactivity.

Keywords: Administrative considerations, faculty development, faculty training, higher education, instructor interaction, Online teaching, student learning.

The Value of Instructor Interactivity

As the number of faculty teaching online continues to grow, so has the interest in and understanding of the role of instructor interaction in the online classroom. Online learning is here to stay; in fact, it is more relevant than ever. It is therefore important to consider the implications to instructor interactivity and the evolution of the role of faculty to support student learning through student-instructor interaction.

Research has illuminated several areas influencing instructor interactivity in the online classroom, including active learning (Chen, Bastedo, & Howard 2018; Muir, Milthorpe, Stone, Dyment, Freeman, & Hopwood, 2019), instructor presence (Ma, Wang, Wang, Kong, Wu, &

Yang, 2017), technology (DeCosta, Bergquist, & Holbeck, 2015), class discussions and Classroom Assessment Techniques (CATS) (DeCosta et al., 2015; Li & van Lieu, 2018), and instructor feedback (Bolldén, 2016) as the most prevalent topics related to the need and value of instructor interaction. Review of the literature highlights the importance of instructor interactivity in the online environment specifically in the areas of course design and online teaching, technology, Community of Inquiry (COI) framework, teaching in the online discussion forum, and the need for instructor interaction.

Distinction Between Online Course Design and Online Teaching

Instructional design strives to improve the process of instruction by providing optimal methods of instruction that result in desired improvements in students' knowledge and skills (Ko & Rossen, 2017). While learning objectives and expected outcomes will be the same, the methods and approaches to instruction will differ based on the delivery format (Chen, Jones, & Xu, 2018). Course design in the online modality strives to deliver a platform that allows for student-student interaction, student-instructor interaction, and student-content interaction (Ko & Rossen, 2017).

Active learning was identified in the review of the literature as a common theme related to course design. Research points to a well-designed online classroom as promoting engagement between students and faculty as well as course content (Aji & Khan, 2015; Chen, et al., 2018; Muir et al., 2019; Tanis, 2020). Active learning engages students in learning by doing and takes many forms including interactive multimedia, web 2.0 tools, pro-active study aids (Chen et al., 2018). These represent advances in technology, allowing curriculum to come to life in ways that were previously only available from and that were reliant upon an instructor. The ability to engage students through active learning has largely been enhanced through technology. Technology has advanced rapidly, and its applications have influenced every aspect of life, including teaching and learning (Hammond, Coplan, & Mandernach, 2018). Past research emphasized the need for instructor presence; however, it is possible that this need has changed with advancing technology thus illuminating the importance of examining the value of instructor interactivity.

Technology vs. Teaching

Technology has grown in importance and popularity as a means to engage students in learning and interaction (Cooper, Laster-Loftus, & Mandernach (2019); Duryee, 2020; Hughes, Bradford, & Likens, 2018; Nazuk, Khan, Munir, Anwar, Raza, Cheema, 2015; Waltemeyer & Cranmore, 2018; Young & Nichols, 2017). Nazuk et al. (2015) reported an increased learning and performance engagement among students through the use of

technology as a digital storytelling tool. Hughes, Bradford, and Likens (2018) used online technologies Kahoot! and Google Suite in instruction and demonstrated effectiveness for promoting high-order thinking and increased communication, collaboration, and critical thinking.

Duryee (2020) used the web 2.0 tool, Loom, to initiate immediacy in student-instructor interaction using technology through a welcome video that provided a brief introduction as well as an overview of how to be successful in class. Waltemeyer and Cranmore (2018) also explained the benefits of screencasting technology, such as Loom, for interaction and engagement. This form of instructor interaction combined audio and video elements in the form of instructional content, feedback, and demonstration (Waltemeyer & Cranmore, 2018).

Cooper et al. (2019) discussed the growing workload for online faculty demands efficiencies with expectations that include integrating technology, professional development, and research. In exploring instructor efficiencies, Cooper et al. (2019) identified faculty desire to spend more time interacting with students and noted that in addition to interaction in discussion threads, faculty also desire interaction via email, video conference, and synchronous chat. Young and Nichols (2017) explored interaction with students through social media, polling, and web-conferencing software to create more inclusive and engaging learning environments for students and found that diversification of communication within teaching and learning practice allowed for greater student choice and opportunities to interact with both faculty and peers.

Technology has become part of everyday life. Online learning, in particular, is enabled with, enhanced by, and relies upon technology (Hammond et al., 2018). This prevailing trend challenges the role of faculty in online learning. As technology replaces some instructional tasks that have been traditionally dependent upon an instructor, it is important to consider the question: "Is the value of instructor-interactivity in the online classroom changing?"

Community of Inquiry (COI) Framework

As internet technology has advanced rapidly in the past three decades, online education has emerged and grown into an important and indispensable resource of learning. Based upon Bandura's (1977) social learning theory, Garrison, Anderson, and Archer (2000) developed the COI framework, theoretically defining a process of creating an effective and meaningful learning experience. This experience is comprised of the three elements of Teaching, Cognitive, and Social Presence. The COI framework has been used extensively in the research and practice of online and blended learning contexts (Garrison, 2009). The applications are

relevant today, as evidenced by recent publications (Kovanović, Gašević, Joksimović, Hatala, & Adesope, 2015; Ma et al., 2017; Martinez and Barnhill, 2017; Wu, Hsieh, and Yang, 2017).

Garrison (2009) developed a survey instrument based on the COI framework to explore and test the causal relationships among the three presences, with his results pointing to the key role of teaching presence in establishing and sustaining a community of inquiry. Ma et al. (2017) explored the causal relationships of the presences in a Chinese version of COI with an added learning presence and showed that teaching and social presence directly influenced the perceptions of learning presence, stating that the learning presence was a partial mediating variable of interactional relationship within COI constructs. Kovanović et al. (2015) studied the effects of different technology-use profiles on educational experience within COI. Study results indicated that there were multiple ways for students to succeed within COI, but at the same time, it was necessary to have different instructional support and pedagogical interventions for different technology-use profiles.

Martinez and Barnhill (2017) further outlined multiple strategies of social presence such as contributing to discussion boards, prompting responses to students, providing frequent feedback, sharing personal stories and experiences, and incorporating social media for directing future research of COI work to enhance online sport management education. Wu, Hsieh, and Yang (2017) reported their study results on their online learning community in a flipped classroom to enhance English as a foreign language learners' oral proficiency. Smartphones were the communication tool for their online learning community. Using this flipped instruction technique, significant differences in the teaching, social, and cognitive presences were realized. The publications cited above have shown that the validity of the teaching presence, cognitive presence, and social presence of the COI framework. The COI framework undoubtedly is successful in both blended and online teaching and learning environments where a live instructor is engaged. One may be led to consider the necessity of a live person to initiate and guide these interactions. In other words, "Can the three presences of COI model be fulfilled by using educational technologies without a live instructor being synchronously available to facilitate?"

Teaching in the Online Discussion Forum

Teaching in the online classroom has continued to evolve with the growth of online education. The view of the role has been traditionally defined as more facilitator rather than an active, present participant in the online classroom (DeCosta et al., 2015). Online instructors play a vital role in ensuring students do not feel isolated and create effective online environments (Bolldén, 2016). Teacher presence often looks into how online teachers plan, structure, and conduct teaching and student outreach. According to DeCosta et al. (2015),

signs of facilitator type roles included pre-built discussion questions, assignments, and resources. These materials provided the instructor little to no opportunity to modify the class based on student or class-wide trends.

From a student perspective, instructor presence was evident in the location where the feedback and learning took place. The instructor had the ability to not only provide a score as feedback but also combine the score with content specific teachable moments. This blending of point-based and general feedback improved student perceptions of social, emotional, and cognitive presence (Bolldén, 2016). Using these methods in the discussion forum, the online faculty can closely mimic that of a traditional classroom by providing real-time feedback and further the students' understanding and exploration of the provided content.

Just as traditional classrooms are changing, so are online classrooms. Students are engaging with technology and realizing greater computer self-efficacy; thus, positive learning outcomes are achieved through multiple learning processes (Loar, 2018). Students are not only interacting with faculty but also engaging in learning through automated learning environments such as unlimited attempt practice quizzes (Davis, Duryee, Schilling, Loar, & Hammond, 2020) and homework management systems such as Aplia (Archer & Olson, 2018). These learning resources are designed to guide and reinforce areas where students may be struggling.

Universities of today may consider a review of where and how their online instructors are interacting with the class. The online platform provides several areas for instructor-student interaction, including discussion forums and grading feedback for individual assignments. As technology continues to advance, new techniques emerge designed to increase faculty presence in the online classroom.

Need and Value of Instructor Interaction

Waltemeyer and Cranmore (2020) explained that interactive discussion and prompt instructor feedback were two potential ways that online education may exceed traditional classes in rigor and quality. Both provide opportunities for instructors to gather data in real-time related to student understanding. This information allows the instructor to further engage students within the discussion forum. Additionally, grading feedback can be used to reinforce assignment and course learning objectives.

Angelo and Cross (1993) determined that Classroom Assessment Techniques (CATS) were low stakes activities embedded into a unit of study. According to DeCosta et al. (2015), CATS are often found in the discussion forums. Additionally, CATS are considered a form of teaching and learning and can be utilized throughout the classroom, including announcements,

phone calls, emails, and private messages. The key to understanding this phenomenon is to realize that teaching does not end at the conclusion of a discussion thread or assignment.

Creating learning environments that combine interaction through grading feedback, CAT's, and interactive discussions allows faculty to better understand the level of student content mastery. Additionally, web-enabled learning applications provide faculty the opportunity to understand student performance while informing and guiding students to revisit key concepts or ideas that may have been missed. As such, it is important to understand student preferences as it relates to who, or what, encourages them to engage with the learning objectives (Schilling & Hammond, 2019).

Purpose

In contrast to the face-to-face classroom in which teaching activities and course design are inextricably interwoven, online education provides a unique platform wherein course design (i.e., transmission of course content) and teaching (i.e., facilitation of learning experience) are independent factors. Advances in instructional technology, learning management systems, and open educational resources allow for the creation of dynamic, high-quality online course content. Such classrooms may include text-based resources, links, video, simulations, demonstrations, and a host of other automated opportunities for students to interact with course content. Within this context, it is important to understand the value of instructor-student interaction. The purpose of this study is to examine faculty and student perceptions about the shifting role of instructor interaction in the online classroom.

Methods

Participants

Participants included faculty and students responding to an anonymous online survey. All respondents are from a large university that has established online and campus programs; the university offers bachelor's, master's, and doctoral degrees. Only faculty and students who indicated "online" as their primary mode of teaching or learning were included in the current study. The online program is fully established and utilizes a faculty-created, centralized curriculum. Courses last eight weeks in duration and are organized into weekly, time-limited, asynchronous modules. All modules contain online lecture information (primarily text-based overviews with embedded multimedia supplements), discussion activities, and homework assignments. Course development is completed independently of course facilitation. During

an active term, faculty are responsible solely for teaching the established course. Faculty and students received parallel forms of the same survey adapted in language to be uniquely specific to their role at the institution.

Faculty

To prevent survey fatigue for faculty respondents, the original survey was divided into two parts (Form A and Form B) with a unique set of questions sent to each half of the online faculty population. Survey questions targeting the impact of course design and instructional supplements on the quality of online teaching were included in both forms of the survey. Complete demographic information of faculty receiving each form of the survey is in Table 1; the current analysis focuses exclusively on data obtained via Form B.

Table 1. *Faculty Demographics by Survey Form*

	Form A		Form B	
N	**223**		**195**	
Fulltime	30	13.5%	20	10.3%
Adjunct	193	86.5%	175	89.7%
Online Teaching Experience	6.77 years (SD=4.54)		6.98 years (SD=4.58)	
Campus Teaching Experience	6.98 years (SD=8.16)		8.19 years (SD=8.30)	
Academic Discipline				
Business	52	23.3%	42	21.5%
Education	39	17.5%	40	20.5%
Fine Arts	1	.4%	1	.5%
Humanities & Social Sciences	43	19.3%	43	22.1%
Nursing & Health Care	41	18.4%	46	23.6%
Science, Engineering & Technology	4	1.8%	1	.5%
Theology	29	13.0%	16	8.2%
Graduate Studies	14	6.2%	6	3.1%

Form A. Respondents to Form A included 227 faculty currently teaching online; 4 responses were eliminated as the individuals were online doctoral mentors and did not teach typical, asynchronous online courses. The resultant 223 faculty responses were included in the analysis; 30 (13.5%) are full-time faculty and 193 (86.5%) are adjunct. Faculty reported an average of 6.77 (SD=4.54) years of experience teaching online.

Form B. Two hundred faculty teaching online responded to Form B; 5 responses were eliminated as the faculty mentored online doctoral students rather than teaching a typical online course. Analysis of the remaining 195 faculty indicated that 20 (10.3%) are full-time and

175 (89.7%) are adjunct. Faculty reported an average of 6.98 (SD=4.58) years of online teaching experience.

Faculty Overall. Combining the participants from Form A and Form B, complete faculty survey responses include 418 respondents that currently teach online. While 50 respondents (12.0%) are full-time faculty, the majority (368; 88.0%) of respondents classify themselves as adjunct faculty. Faculty reported a wide range of online teaching experience (0 to 27 years) with a mean of 6.87 years (SD=4.56). In addition to their online teaching experience, respondents also indicated extensive campus-based teaching experience with a mean of 7.54 years (SD=8.24). Faculty represent a range of academic disciplines: 22.5% business; 18.9% education; .5% fine arts; 20.6% humanities and social sciences; 20.8% nursing and health care; 1.2% science, engineering and technology; 10.8% theology; and 4.5% graduate studies. No information was collected on faculty age, gender, or ethnicity.

Students

Student respondents included 2,386 individuals who indicated online learning as their primary mode of education. Degree breakdown indicated 1,067 (44.7%) undergraduates (205 freshmen, 211 sophomores, 284 juniors, 367 seniors), 927 (38.9%) masters, and 392 (16.4%) doctorate. Most students (48.3%) take 6 to 8 classes per year. Table 2 highlights typical course load by degree.

Table 2. *Typical Course Load by Degree*

Course Load	Undergraduate		Masters		Doctorate		Overall	
1 to 3	161	15.1%	84	9.1%	33	8.5%	278	11.7%
3 to 5	193	18.1%	245	26.5%	99	25.4%	537	22.6%
6 to 8	496	46.6%	423	45.8%	230	59.0%	1149	48.3%
9 to 11	133	12.5%	112	12.1%	15	3.8%	260	10.9%
12 to 14	53	5.0%	43	4.7%	2	.5%	98	4.1%
15 to 17	11	1.0%	3	.3%	1	.3%	15	.6%
18 or more	17	1.6%	14	1.5%	10	2.6%	41	1.7%

Most students are in their first two years at the institution (56.0% in first year; 19.0% in second year) with experience in the online program (53.6% have taken 1 to 8 online classes; 23.3% have taken 9 to 16 online classes). Most students (93.0%) have a grade point average above 3.0. Students tend to be nontraditional with an average age of 43.13 years (undergraduate = 40.67; masters = 43.24; doctorate = 49.56). No information was collected on gender, ethnicity, or program of study.

Materials

Faculty Survey

The complete online survey consisted of five demographic questions, one multiple-choice question, five open-ended essay questions, and nine rating questions (each containing 5 to 15 individual items requiring independent rating) exploring various aspects of online teaching and learning. Due to the length of the survey, it was divided into two forms (Form A and Form B) that each included approximately half of the questions. Demographic questions were included in both forms of the survey; demographic questions are listed in Table 3.

Table 3. *Faculty Survey Demographic Questions*

Question	Response Options
How would you describe your primary teaching role?	Adjunct Online Instructor; Fulltime Online Faculty; Traditional Campus Adjunct Instructor; Fulltime Campus Faculty; Dissertation Faculty; Other
With regard to your primary teaching role, in which discipline area do you primarily teach?	Business; Education; Fine Arts; Humanities & Social Sciences; Nursing & Health Care; Science, Engineering & Technology; Theology; Graduate Studies
In which of the following modalities do you currently (within the last year) teach? Select all that apply.	Campus; Online; Dual Enrollment
How many years have you taught face-to-face at the college level?	Open answer
How many years have you taught online at the college level?	Open answer

Different survey questions targeting the impact of course revisions and instructional supplements were included in each form of the faculty survey; data for this analysis was obtained exclusively from Form B. The target question for this study asked respondents to "Rate the value of each of the following for fostering interactivity and engagement in the online classroom." Respondents rated nine dimensions of interaction:

- synchronous office hours via videoconference
- synchronous office hours via phone
- synchronous office hours via chat
- instructor posting instructional resources and course content in the discussion threads
- instructor posting questions and prompting conversation in the discussion threads
- instructor's use of students' names when posting in discussion threads
- instructor proactively calling students on the telephone

- instructor providing detailed feedback on the initial reply to the weekly discussion questions
- instructor providing detailed feedback on students' participation in the weekly discussions

Participants responded to rating survey items using a 5-point Likert scale (1 = no value; 2 = minor value; 3 = some value; 4 = significant value; 5 = extreme value; and 6 = not applicable).

Student Survey

The complete online survey consisted of eight demographic questions, three open-ended essay questions, and nine rating questions (each containing 1 to 15 individual items requiring independent rating) exploring various aspects of online teaching and learning. Demographic questions are listed in Table 4; the target question and response options on the student survey were identical to the faculty survey.

Table 4. *Student Survey Demographic Questions*

Question	Response Options
What year are you in school?	Freshman; Sophomore; Junior; Senior; Masters; Doctoral; Other
On average, how many courses do you take a year?	1 to 3; 3 to 5; 6 to 8; 9 to 11; 12 to 14; 15 to 17; 18 or more
How many years have you attended this institution? Please indicate to the nearest whole year.	1; 2; 3; 4; 5; 6; 7; 8; 9; 10 or more
Approximately how many traditional CAMPUS classes have you taken at this institution?	0; 1 to 8; 9 to 16; 17 to 24; 25 to 31; 32 to 39; 40 or more
Approximately how many ONLINE classes have you taken at this institution?	0; 1 to 8; 9 to 16; 17 to 24; 25 to 31; 32 to 39; 40 or more
Approximately how many HYBRID/BLENDED classes have you taken at this institution?	0; 1 to 8; 9 to 16; 17 to 24; 25 to 31; 32 to 39; 40 or more
What is your approximate GPA at this institution?	0 to .9; 1.0 to 1.9; 2.0 to 2.9; 3.0 to 3.9; 4.0
What is your age? Please indicate your answer in numeric form rounding to the nearest whole year.	Open answer

Procedure

A request to complete the survey was emailed to all faculty and students. The email was sent out from the academic affairs office as a component of a larger institutional effectiveness

initiative. The initial email requesting faculty and student participation in the survey outlined the purpose and scope of the investigation. Faculty and students electing to complete the online survey accessed it via a link embedded in the email. There was no incentive for participation, nor were there any consequences for electing not to complete the survey. The survey was administered anonymously via an online survey tool; no personal identifiers or IP address information was collected. The survey access remained open and available for participants for 30 days; there were no reminders or follow-up emails to encourage participation in the survey. Per the survey design, participants could skip questions, move throughout the survey, and/or change answers to questions at any time. Survey answers were not finalized until respondents clicked the "submit" button. At the conclusion of the survey, respondents were provided a notification with contact information in the event they had questions, comments, or desired access to survey results.

Results

A one-way ANOVA was conducted to examine differences between faculty and student perceptions of the value of various instructional activities for fostering interactivity and engagement in the online classroom. Results indicated that students rated synchronous office hours via telephone [F (1, 2569) = 9.39, p = .002], synchronous office hours via chat [F (1, 2557) = 9.30, p = .002] and instructor providing detailed feedback on the initial reply to weekly discussion questions [F (1, 2565) = 4.65, p = .031] significantly higher (i.e., more value on fostering interactivity and engagement) than did faculty. In contrast, faculty gave significantly higher ratings than students to the value of the instructor posting questions and prompting conversations in the discussion threads [F (1, 2567) = 3.95, p = .047] and the instructor's use of students' names when posting in discussion threads [F (1, 2571) = 37.07, p = .000]. Table 5 provides the mean value ratings by faculty and students for all instructional activities.

Table 5: *Mean Ratings for Instructional Activities for Fostering Interactivity and Engagement*

Instructional Activities	Faculty			Student		
	N	Mean	SD	N	Mean	SD
synchronous office hours via videoconference	194	2.80	1.15	2386	2.98	1.45
synchronous office hours via phone	192	2.83	1.18	2379	3.15	1.40
synchronous office hours via chat	191	2.92	1.19	2368	3.25	1.44
instructor posting instructional resources and course content in the discussion threads	192	3.96	1.09	2379	4.00	1.12
instructor posting questions and prompting conversation in the discussion threads	194	4.28	.93	2375	4.13	1.08
instructor's use of students' names when posting in discussion threads	195	4.03	1.11	2378	3.41	1.38
instructor proactively calling students on the telephone	193	3.06	1.28	2374	3.05	1.45
instructor providing detailed feedback on the initial reply to the weekly discussion questions	193	3.68	1.17	2374	3.87	1.14
instructor providing detailed feedback on students' participation in the weekly discussions	195	3.66	1.22	2370	3.80	1.19

An examination of mean rating scores finds that an instructor's interactivity in the discussion forums (posting questions, instructional resources, etc.) and the feedback provided by instructors (to the initial discussion questions as well as students' participation) was rated as having significant value by both faculty and students. Using a rating of three (indicating "some value") as a cut-off point, students rated everything except videoconference office hours as offering varying levels of value for interactivity and engagement; in contrast, faculty rated all synchronous office hour opportunities (videoconference, phone, or chat) below this threshold.

While faculty and students provided different value weightings to the various instructional components, there was general agreement on the relative value. As indicated in Table 6, when instructional activities are ranked according to perceived value for fostering interactivity and engagement in the online classroom, both faculty and students agree that an instructor posting questions and prompting conversations is the most valuable instructional activity. Then, except for views on the value of instructors using students' names in the discussion threads, there is ranking agreement in the value of instructors posting instructional resources in the discussion threads and providing detailed feedback on discussion activities. There is also widespread agreement that synchronous instructional activities (phone, chat, and videoconference) are valued much lower than asynchronous interaction in the discussion forums. While students rated synchronous office hours via phone or chat higher than faculty, these were still ranked low in value compared to the other student ratings. Videoconference office hours were perceived to have particularly low interactivity value by both students and

faculty; students also provided low value ratings for phone calls (either proactive contact from the instructor or via office hours).

Interestingly, faculty perceived the use of students' names in the discussion forums as being particularly valuable (providing ratings to indicate "significant value"), whereas students gave lower value ratings only indicating "some value." While faculty rated the use of students' names second in interactivity value, this dimension was ranked fifth by students.

Table 6. *Comparative Ranking of Faculty and Student Perceptions of Value of Instructional Activities for Fostering Interactivity and Engagement*

Rank	Faculty	Students
1	instructor posting questions and prompting conversation in the discussion threads	instructor posting questions and prompting conversation in the discussion threads
2	instructor's use of students' names when posting in discussion threads	instructor posting instructional resources and course content in the discussion threads
3	instructor posting instructional resources and course content in the discussion threads	instructor providing detailed feedback on the initial reply to the weekly discussion questions
4	instructor providing detailed feedback on the initial reply to the weekly discussion questions	instructor providing detailed feedback on students' participation in the weekly discussions
5	instructor providing detailed feedback on students' participation in the weekly discussions	instructor's use of students' names when posting in discussion threads
6	instructor proactively calling students on the telephone	synchronous office hours via chat
7	synchronous office hours via chat	synchronous office hours via phone
8	synchronous office hours via phone	instructor proactively calling students on the telephone
9	synchronous office hours via videoconference	synchronous office hours via videoconference

Discussion

Research indicates that instructor interaction is important in the online classroom (Martin, Budhrani, Kumar, & Ritzhaupt, 2019). However, as technology has advanced and gotten better, it is important to consider how that value may have changed. Do students still value instructor interaction, or has the value decreased? The findings indicate that the diminishing value of instructor interaction is simply not the case. Faculty and students tend to agree on this point, which makes life easier for faculty, faculty developers, and administrators, particularly as efforts are made to identify what most benefits students and subsequently collaborate on best practices for interaction in the online classroom. Faculty and student perceptions of the value of instructor interaction in online courses revealed three key "value"

themes. First, both students and faculty identified instructor interactivity in the discussion forums as significantly valuable. For example, faculty identified posting additional questions and prompts in the discussion forum as well as the use of student names in the discussion threads as a way to provide more value in fostering interactivity and engagement.

Second, findings indicate both students and faculty find instructor feedback to student initial discussion question responses and feedback on student participation posts significantly valuable. For example, students identified detailed feedback on their initial discussion question responses as providing significantly high value in fostering instructional interactivity and engagement. Finally (Third), both faculty and students viewed synchronous instructional activities (video conference, chat, phone) as rating lower in value compared to asynchronous interaction in the discussion forums.

These findings illuminate opportunities and areas of consideration for three stakeholders in the student-teacher interaction equation: faculty, faculty developers, and administrators. As roles and teaching strategies have evolved, so has technology. Yet instructor interaction is still valuable to both faculty and students. As such, it is important to extend this discussion to explore ways in which technology and interaction can marry and ultimately support student learning and improve teaching effectiveness. Current research echoes the importance of creating best practices (Schilling & Hammond, 2019) and opportunities for faculty to augment interaction in the discussion forum (Hammond et al., 2018)

In short, faculty still matter, and so does interaction. Faculty, faculty developers, and administrators each play an important role in creating an environment that supports instructor interaction in the online classroom. Best practices still hold, but best practices can be further explored to ensure maximum impact of instructor interaction efforts and at the same time foster a culture of collaboration and sharing of best practices. Pivoting from here is an opportunity to get creative as we consider the three "value" messages from faculty and students (instructor interactivity in the discussion forum, instructor feedback on discussion questions and participation posts, and asynchronous interaction) in the context of each of three stakeholders: faculty, faculty developers, and administrators.

Recommendations

Faculty

Student engagement is an essential component of online learning. This is how students feel connected to their classmates and faculty, as well as the university. Due to the nature of online learning, faculty are faced with the challenge of not having face-to-face interaction with

their students. As such, faculty members have a great responsibility to create a learning environment that is engaging, personal, and welcoming. The following section includes a discussion on three recommendations for faculty:

1. Personal communication
2. Model the behavior you want to see in the classroom
3. Set clear expectations at the beginning of class (feedback, DQ participation from faculty, grades, etc.)

Personal communication

One way that faculty can connect with and interact with online learners is through welcome calls. Welcome calls provide the opportunity for faculty to introduce themselves to their students on a personal level, answer any questions, and provide an overview of expectations and resources. Students benefit from this type of interaction as it puts a voice with a name and further connects the student to their online learning experience.

Another way that faculty can connect with learners is through the use of a welcome video. The purpose of a welcome video is to introduce the student to the faculty member and generate excitement about the start of the course. Faculty may choose to post the welcome video in the announcements, in the discussion forum, or in the private forum. Another option is to use a text messaging app such as Remind to send the welcome video to the students. The video shows the student that their instructor is a real person, just like them, and that they are there to help.

Finally, faculty can use personal email as a means to interact with students throughout the term. Many faculty use email quite regularly for interaction with adult students, as it allows for quicker receipt and response. Many adult students also work full-time and are not always logged into the online classroom. However, oftentimes they do have their cell phone at arm's reach. Faculty may use email interaction to reach out to students about missing assignments, to answer questions, and to just check in.

Several faculty report using several or all of these interaction approaches to reach students. One approach to using all three of these in tandem may involve sending the welcome video via Remind before the class starts. Then follow up with the welcome video during week one in the private forum for those students who did not sign up for Remind. In week two, faculty can make a personal phone call to students to check in, see how things are going, answer questions, and discuss expectations. Then, in week four, faculty can follow up via email with any students who are struggling. Another nice touch is to email all students who are getting a

90% or higher in the course at the midpoint of the course to congratulate the student on their academic performance to date.

Model the behavior you want to see

An important aspect of faculty interaction in the online classroom occurs in the discussion thread. Faculty play an important role in guiding discussion to lead students to deeper learning. One way to accomplish this is to model the behavior that you want to see. For example, if a faculty member expects a certain level of quality and content, they can model the expectation.

Modeling the behavior that you want to see can take many forms. For example, faculty can provide an example of an acceptable participation post. This can be accomplished by posting an example of a sample discussion question response with the course policies. In addition, faculty can use this same approach by providing examples of appropriate participation posts and placing these in the course policies section of the classroom. Examples of acceptable participation posts may include professional examples, citing content from the textbook and peer-reviewed journals, providing opinions, and asking questions.

Faculty can also model the behavior that they want to see by posting responses in the discussion forum in response to the initial discussion responses made by students. These posts can include specific examples, supporting citations, and questions to help advance the class discussion. Students can glean a lot related with regard to how they should interact in the classroom through modeled behavior of faculty. Additionally, faculty can guide the interaction through their modeled behavior to ultimately enhance student learning.

Set clear expectations at the beginning of class

Finally, faculty can set clear expectations at the beginning of class to set the tone for interaction and expectation for the duration of the course. The beginning of a class is one of uncertainty for a student. Online classes include a diverse mix of students who have a diverse background in online learning. Some students may have just transferred to the institution, others may not have been in school for years, and others may have already completed several courses at the institution. Setting clear expectations results in everyone on the same page.

There are several ways that faculty can set expectations at the beginning of class. Faculty may consider posting a "course policies section" in the announcements or create a separate discussion thread to post policies. Regardless of the location, students can benefit from this added level of interaction that will ultimately set them up for success.

There are several types of policies that an instructor may want to include in the course policies. To ensure that all students have read and agree to the policies, faculty can include a "read and reply with acknowledgment" notice within the subject line of each policy thread. Examples of policies that faculty may consider including in the course policies that can set the tone for classroom interaction and expectation include: grading expectations, initial discussion response expectations, participation requirements, how to reach me, tips for success, publisher resources, exam policy, instructor created resources, late policy, assignment submission policy, instructor grading expectation, and originality expectations.

Faculty Training and Development

1. Expectations and guidance on appropriate interaction, communication, and feedback
2. Training on web 2.0 tools for asynchronous learning
3. Best practices for time on task

Expectations and guidance on appropriate interaction, communication, and feedback

To ensure consistency in the online classroom, faculty training and development can provide tremendous support by providing guidance on how to interact with students through communication techniques, as well as through training on the role of feedback in interaction to further engage students in the content and further learning. When expectations and guidance are provided, faculty know how they should interact.

There are many ways that this can be accomplished. For example, faculty training and development can provide examples of appropriate interaction with sample announcements, sample phone call scripts, sample course policies, and sample discussion and participation posts. Similar to students, faculty benefit from this type of guidance and the opportunity to see appropriate interaction behavior modeled.

Faculty training and development can also provide direction to faculty on the appropriate way to give students feedback. For example, training and development can partner with the lead faculty for each course to develop grading expectations and identify the appropriate level of feedback to provide. Resource guides can then be provided to faculty to ensure that faculty understand and are able to grade to the learning objectives; and provide the level and depth of feedback expected.

Web 2.0 training

Another way that faculty training and development can support faculty interaction is by providing training to faculty on web 2.0 delivery for asynchronous learning. In a synchronous learning environment, students are able to experience faculty live and in person. Discussions happen in real time, and instructors are able to gauge student learning in real time through verbal and non-verbal cues. In addition, synchronous learners benefit from the physical nature of the face-to-face learning environment. It is easy for the instructor to divide the class up into small groups and instruct each group to engage in discussion while the instructor walks the room and monitors the collaborative learning. Instructors can put a problem in front of students and oversee them while they solve the problem together or individually. The real-time attribute of synchronous learning is hard to duplicate in an asynchronous environment. Yet that environment is still necessary for individuals like the adult learner who works full-time and has a family.

Web 2.0 tools provide faculty with the opportunity to 'fill in the gap' between the asynchronous and synchronous environments. To bridge that gap, faculty should understand what web-enabled tools are available, and how to use them. This is where faculty training and development can truly shine and support faculty.

Faculty training and development have the understanding of the latest and greatest tools and resources that can be used in the online modality including Padlet, Basecamp, Remind, Zoom, Loom, YouTube, Prezi, Slideshare, and Flipgrid, to name a few. Faculty training and development can support faculty interaction in the online classroom by providing workshops, job aids, training seminars, and discussion forums focused on the use of these resources. Many web 2.0 tools provide free access for educator use. Faculty training and development can assist faculty in account setup and training of use. Faculty benefit from the support and students benefit from the added level of engagement.

Time on task

Finally, faculty training and development can support instructor interaction in the online classroom through targeted training on time on task. Faculty face many demands on a daily basis. They are grading papers, they are planning lessons, and they are serving their college by serving as faculty advisors for student clubs, and by serving on committees for the college and the university. In short, they are short on time. To juggle these demands, faculty can benefit from time on task training. Faculty training and development can support faculty in this area by providing resources and tools related to time management and best practices. For example,

training and development can provide resources for mapping the day. Setting priorities can also benefit faculty in time management strategy.

Another way that faculty training and development can assist faculty in time on task is through the development of best practices. For example, training and development can train faculty about tools such as TypeItIn, a repository of sorts that holds a bank of feedback responses that faculty can use to store frequently used responses to students. Another best practice opportunity for time on task is that of pre-written discussion responses. Faculty training and development can assist faculty in discussion interaction through teaching the development of content related discussion resources. These resources can be pre-written and stored in a bank for faculty to use as specific content is brought up in the discussion forums. Faculty can access the content from the bank, and personalize the interaction with a bridge to engage the student further in discussion.

Administrators

Recent research on administrative considerations related to effective teaching practice supports the role of administrators in encouraging faculty teaching effectiveness (Hammond et al., 2018; Hammond & Waltemeyer, 2020) that can be applied to best practices related to faculty interaction in online classes. Three key areas have been identified that may be helpful to administrators in encouraging instructor interaction in the online classroom:

1. Set policies that ensure positive interaction
2. Maintain a level of accountability
3. Create a culture of collaboration and consistency

Set policies that ensure positive interaction

Policies that support faculty interaction create a climate in which clear and realistic expectations guide a positive interaction experience. Policies can be developed related to response times, level of expected interaction in discussion forums, types of contact, and assignment feedback. For example, administrators can set expectations for faculty to be reached via multiple methods (phone, email, LMS, text messaging) and within a specific time period, such as 24-hour turnaround (Hammond & Waltemeyer, 2020). Administrators can also set policy related to frequency of instructor participation in the discussion forum, such as two posts per day on five days each week. Finally, administrators can also support online faculty feedback interaction by creating policies and expectations related to assignment feedback turn-a-round, such as four workdays for FTF and seven calendar days for adjunct (Hammond & Waltemeyer, 2020). In addition, administrators can set expectations for personalized feedback.

Students in this study indicated appreciation for personalized feedback as a form of instructor interaction. Planar and Moya (2016) also boasts the importance of feedback that is personalized.

Maintain a level of accountability

Setting policy and expectation is only as good as the level of accountability maintained. In other words, what gets inspected, gets done. Administrators can hold faculty accountable to quality and quantity interaction standards in the online classroom through ongoing performance management. This can be accomplished through weekly spot checks, office training visits, monthly one on ones, goal setting, and Management by Objectives (MBOs). Administrators can also utilize scholarly engagement as an area for goal setting within the performance management process. Both traditional and adjunct faculty want to expand their skills by conducting research, pursuing certification through additional coursework and degrees (Luongo, 2018). This can aid in faculty confidence as they approach content interactions with their students. Finally, as part of the performance management process, administrators can utilize seasoned faculty to mentor less seasoned faculty on best practices related to classroom interaction. Faculty want to interact with their peers (Cross & Polk, 2018). Peer interaction can be an excellent means by which observation and mentorship can lead to improved faculty-student interaction in the online classroom.

Create a culture of collaboration and consistency

Finally, administrators can influence instructor interaction with students by creating a faculty culture of collaboration and consistency. Collaboration for content consistency can occur between instructors who teach the course both prior and following their course, and instructors teaching the same course. For example, administrators can ask and encourage collaboration on classroom expectation, including student and faculty participation (days and posts) as well as assignment grading turn-around. Students coming from a class with an instructor who has significantly different practices related to interaction and feedback may be disappointed in the next course (or pleasantly surprised).

When administrators set a culture for collaboration centered on instructor interaction, students benefit through consistency (Waltemeyer & Cranmore, 2020). Administrators can also support same-course collaboration for the development of class discussion content. Administrators can facilitate collaboration on content for student-faculty interaction during scheduled retreats, faculty meeting breakout sessions, conference calls, or web-enabled meetings. Additionally, administrators may present the collaboration efforts aimed at student-faculty interaction as a team-building activity or work sessions in which faculty teaching the

same course review the entire syllabus and map content needs for discussions. Then administrators can divide out the work, and post it in a shared access web 2.0 location for all course-specific content, such as Basecamp or Padlet.

In addition to using web 2.0 tools to store and organize instructor interaction content, administrators can also encourage collaboration using web 2.0 tools as part of efforts to encourage faculty-student interaction in the online classroom. For example, faculty can be divided up based on course content to create video lecture highlights. The faculty would each record their assigned lectures and create content for the discussion forums for faculty to post to engage students deeper in content and discussion. Another option is to create course content using a web 2.0 tool such as Flipgrid. Flipgrid is a video-enabled tool that allows student-faculty and student-student interaction through short video clips. Administrators can encourage faculty to collaborate together to create video content for each week of the course, allowing for greater interaction in the classroom using video.

Conclusion

The current study identified three themes as significantly valuable in fostering interactivity and engagement in the online classroom. These included instructor interactivity, instructor feedback on participation, and asynchronous interaction in discussion forums. Recommendations for three key stakeholder groups including administrators, faculty developers, and faculty were provided. These recommendations combined technology and instructor interaction to ultimately support student learning and teaching effectiveness. As such, opportunities exist for stakeholders to consider the needs of their institutions and identify and integrate these recommendations as appropriate.

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