Abstract
In the online classroom at the University of Arizona Global Campus, one of the primary means of student engagement is through course discussion forums. These typically require students to post in two discussions per week with one initial post and two peer responses. In a recent redesign of ECE315: Language Development in Young Children, a modified discussion structure was implemented to allow for more in-depth learning and engagement throughout the week. Our research questions include (1) In what ways has the discussion redesign impacted student performance? (2) What are student perceptions regarding the new discussion approach compared to the traditional discussion approach? (3) What are faculty perceptions regarding the new discussion approach compared to the traditional discussion approach? (4) To what extent do faculty and students prefer the new discussion approach compared to the traditional discussion approach? Both faculty and students responded in a positive manner. Seven out of ten faculty believe that the redesign helped students better engage with the weekly and course learning outcomes and said it helped with the grading workload. Overall, the faculty preferred the redesign (70%), saying that they appreciate in-depth learning on one topic. Seventy-five percent of students felt that they were able to engage more deeply with the weekly discussion topics, and nearly 80% reported a deeper connection with the course content. Overall, 72% of students preferred the new discussion approach, and 81% of students would like to see it used in more courses.

Keywords: Online Learning, Discussion Forum, Student Engagement
**Introduction**

At the University of Arizona Global Campus (UAGC), online students complete discussion forums to take the place of face-to-face interaction. Many courses have two discussion activities per week, each requiring an initial post and two peer responses. With a redevelopment of ECE315: Language Development in Young Children, a revised discussion was implemented. The newly formatted class moved one weekly discussion to an interactive learning activity, so that no learning content was lost, and modified the remaining discussion to one in which the student creates an initial post early in the learning week, responds to three peers throughout the week, and creates a final post at the end of the week, summarizing overall learning and responding to instructor or peer questions and feedback.

**Literature Review**

The number of online courses is increasing as online learning becomes more appealing (Christensen, et al., 2011). Online courses can be just as effective as on-campus courses when the online format promotes effective peer and instructor interaction (Dixon, 2010). Course developers must find ways to craft effective discussions that promote critical thinking and active learning (Baker et al., 2005; Hew & Cheung, 2012). Students express satisfaction in discussions when they can share their points of view, learn from classmates, and ask questions of their own (Buelow et al., 2018). Students state that it can be easier to share in an online format than a face-to-face setting.

However, when there are several assignments or discussions due in a condensed time period, student satisfaction declines. Too many discussions are seen as busywork, but too few discussions leave the students feeling disconnected (Buelow et al., 2018). Students that drop out of their program state that low-level assignments and lack of interaction are two factors that contribute to program withdrawal (Willging and Johnson, 2009).

Well-crafted discussion questions take into account the student population of the college and allow for an engaging dialogue between peers (Fear & Erikson-Brown, 2014). While discussion interaction is elevated when instructors are active, peer-to-peer interaction is the most effective dialogue, as it builds classroom community (de Leon et al., 2010).

**Research Questions**

The researchers and faculty designers of the course aimed to see if the newly designed structure allowed for deeper conversation, taking away the rote aspect of typical discussion forums. ECE315 offers approximately 50 sessions per year, with 1,009 students taking the course from June 1, 2019, through May 31, 2020, which provided a rich participant pool for the study. Additionally, instructors of previous courses expressed frustration at not being able to effectively facilitate 10 discussions throughout the 5-week course, especially when enrollment numbers were high. This study aimed to discover if the redesigned discussion led to more student mastery of course learning outcomes and increased faculty satisfaction when compared to the previous course design.
Research Questions

1. In what ways has the discussion redesign impacted student performance?
2. What are faculty perceptions regarding the new discussion approach compared to the traditional discussion approach?
3. To what extent do faculty prefer the new discussion approach compared to the traditional discussion approach?
4. What are student perceptions regarding the new discussion approach compared to the traditional discussion approach?
5. To what extent do students prefer the new discussion approach compared to the traditional discussion approach?

Methods

Research Question One was answered using correlations between student performance on the previous discussions as compared to the newly formatted discussions, using non-identifiable data in the course learning management system. The remaining research questions were answered through survey links sent to students and teachers who had interacted with the course since the redesign. All data collected was analyzed through PowerBI and Qualtrics. IRB approval was received before the study began. Additionally, the proposal was submitted to the Office of Research and Creative Scholarship (ORCS) for its approval to use institutional data. Informed consent was received by all students and faculty who completed the survey.

Faculty Results

Ten out of fifteen faculty members completed and returned the survey. The survey results significantly supported the future implementation of this curriculum design model for discussion with seven participants (70%) stating that they would favor or strongly favor seeing this model implemented in more courses at UAGC. Seventy-percent felt there was a positive impact on the students and that the curriculum design format with one discussion post per week with three peer responses and a final summary post provided the students with the greatest opportunity to achieve the desired weekly and course learning outcomes. The majority of the faculty (80%) saw students engage in deeper discussion with the newly designed forum. Overall, 70% of surveyed faculty preferred the new format of one discussion per week with three peer responses and a final summary post. They stated that this approach allowed for more in-depth conversation on one topic, faculty enjoyed interacting with one in-depth learning topic each week, and grading one discussion post takes less time than the traditional two posts per week.

Student Results

Regarding research question one, in what ways has the discussion redesign impacted student performance, no significant differences were found. While there was an overall course grade increase (2.31%), it was not statistically significant.

Of the 203 student survey invitations, 102 responses were returned, for a completion rate of 50%. The results showed that 71.57% of students indicated a preference for the newly designed format. The biggest reasons that students prefer this model over the traditional are that it allowed for more in-depth conversations on one topic (34.33%) and that they preferred
to respond to three peers in one discussion rather than two peers in two separate discussions (32.09%). Over one quarter (26.87%) indicated the final summary post furthered their learning. One student stated, “I wish all the classes were set up like this. I finally was learning and had time to learn the material instead of just getting it over with.” Another claimed, “the single discussion allowed me time to focus on the topic and really focus on my learning.” Out of the 37 students who believed the traditional format of discussion to be more desirable, the main reason given was they disliked completing a final post (45.95%), followed by preferring to discuss two topics briefly over one more in-depth (21.62%), and they disliked completing three peer responses in one discussion (21.62%).

Seventy-five percent of respondents this course design helped them with discussion forum engagement and allowed them to engage more deeply with the course content. Most respondents (81%) of this survey indicated they would like to see this model introduced more frequently in other courses at UAGC. One respondent wrote, “Please change all the courses to this format, as soon as possible. I learned the material and we had more in-depth engagement.” Another student stated, “I feel like it helped me to continue to think about my learning, hold on to the information I gained throughout the week and definitely was more engaging with peers.”

Summary and Conclusions

Both faculty and students responded in a positive manner. Seven out of ten faculty believe that the redesign helped students better engage with the weekly and course learning outcomes. While faculty were split on whether the redesign helped with facilitation workload, which could be in part due to the extra reminders students require, 70% said it helped with the grading workload. Overall, the faculty preferred the redesign (70%), saying that they appreciate in-depth learning on one topic.

Seventy-five percent of students felt that they were able to engage more deeply with the weekly discussion topics, and nearly 80% reported a deeper connection with the course content. Overall, 72% of students preferred the new discussion approach, and 81% of students would like to see it used in more courses.

Due to the fact that both faculty and students prefer the redesign, and the survey results supported a positive impact on student learning and outcome attainment, we believe (1) the university should consider making similar changes to discussions in other courses, (2) faculty conversations and development should occur to help explain the value of changes to discussions, and (3) pre-written reminders for students could be provided to faculty to lower the extra work perceived. Future research can repeat the study with other courses and determine what other student-oriented changes might be appropriate in making more engaging classes.
References


