# Testing the Value of Threaded Discussions in Online Learning

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**Abstract**

This article presents the results of a two-year study of the perceived value of threaded discussions to students enrolled in online and partially online business and education courses. Both graduate and undergraduate students were surveyed. Students were asked to evaluate the degree to which they felt that threaded discussions enhanced their ability to learn subject material. They were also asked to select the type of threaded discussion that best achieved their learning goals and to rate the usefulness of threaded discussions to learning compared with written assignments. There were statistically significant differences on the value of threaded discussions to learning based on gender and on academic level. There were statistically significant differences between full-time and part-time students with regard to the questions of enjoyment of threaded discussions and on the broader question of whether online instruction was preferable to face-to-face instruction. Results were consistent with earlier studies that found students' evaluation of threaded discussions as valuable to their learning course material to be tepid. Approximately two-thirds of the respondents felt that threaded discussions enhanced learning to "some degree" or "somewhat." Fifty percent of respondents characterized threaded discussions as "useful."

## Introduction

"Online dialogic communities have become a ubiquitous tool that transforms student learning and course delivery" [1, p. 373]. As Clarke and Kinne [2] pointed out in their comparison of threaded discussions with blogs, asynchronous discussions are a common element in online instruction. Gao, Zhang, and Franklin [3] too argued that asynchronous online discussion plays a major and important role in online instruction, in part because it helps to promote dialogue, reflection, knowledge construction and self-assessment. Online education continues to grow in importance such that it is now considered to be a critical factor in higher education [4]. Given that threaded discussions are a widely-used instructional tool in the online environment, the question becomes how effective that tool is for student learning.

Beginning with the spring 2015 term, researchers conducted a series of surveys over two academic years of both graduate and undergraduate students enrolled in online courses at Robert Morris University (RMU), a private nonprofit university in Southwestern Pennsylvania. The purpose of the surveys was to determine the extent to which students felt that threaded discussions, as used by instructors in their online courses, added value to those courses. "Value"

was defined to mean that students agreed that threaded discussions, an asynchronous tool used to stimulate engagement in the course, facilitated their learning of the course material. “Threaded discussions” as used in this paper refers to the Blackboard-supported instructional tool that allows participants - students and instructors - to interact asynchronously.

Students were asked if threaded discussions enhanced their learning and whether they would prefer threaded discussions or written assignments as assessments of learning. Students were also asked which type of threaded discussion they found most helpful to learning. Additional questions were included in the survey to determine if grading rubrics were used in assessing threaded discussions and, if they were, whether those rubrics were perceived as a fair measure of learning.

The study was prompted by a 2014 poll posted on DegreeInfo.com under the Forum-General Distance Learning Discussions [5]. Of 56 responses to the question of how much academic value the typical threaded discussion offers in an online class, the most frequent response (20) indicated that they were sometimes valuable, depending on the questions and on the participants - students and instructors.

Because much of the literature treats threaded discussions as an effective pedagogical tool in a virtual environment [6]; as a means to influence critical thinking (7, 8, 1]; as conducive to building learning communities [9]; and as a way to facilitate the assessment of learning [10], the authors wanted to test how students perceived the value of this tool.

In their studies, Best and Shelley [11, 12] examined students’ perceptions of the effectiveness of threaded discussions in online learning. In each of these studies as well as in the 2014 study [13], researchers found that students enjoyed threaded discussions but were more or less neutral on the question of their effectiveness as a learning tool.

## Research Questions

1. Do students perceive threaded discussions to be an effective learning tool?
2. Do students prefer threaded discussions to written assignments as an assessment of learning?

## Methodology

Researchers developed a 16-question survey modeled on one designed by Shelley and Best [13] to determine student perceptions of the value of threaded discussions in fully online and in blended learning courses. The first four questions were demographic questions – on gender, enrollment status, academic level, and experience with online courses. Nine questions focused on the respondents’ view of elements of threaded discussions. One question asked for the student’s preference for online or face-to-face instruction. There were two open-ended questions asking for additional comments. These last two were optional. Students were given extra credit to complete the survey. The survey instrument was developed in *Question Pro*, the

web-based survey software used at the University. Results were transferred into SPSS for analysis.

**Participants/Sample**

Students in the undergraduate and graduate business law classes, graduate students in the educational technology and education research courses, and graduate students in the MS in Human Resource Management program over the two year period were asked to participate.

Of the 332 students who began the survey, 326 completed it for a completion rate of 98.19%. Graduate students made up 61.56% of the sample. Respondents were almost evenly split between females (50.78%) and males (49.22%). Full-time students made up 56.56% of the sample. Approximately 32% of the students had taken between one and three online courses, followed by 23.44% who said that they had taken between four and seven online courses. Students for whom the particular course was their first experience with online learning numbered 59 or 18.44% of the sample. "Online" was defined to include onground courses with an online component.

## Results

When asked if threaded discussions enhanced their learning of course-specific material, the majority found threaded discussions to be moderately helpful in learning course material. With regard to this question, there were statistically significant differences at the .05 level for males and females and between seniors and freshman. In the pilot survey, the majority of students responded that threaded discussions were of moderate help in learning course material. Only 12.5% found them to be "very useful." Twenty percent found them to be of "very little" use.

A later question (#12) framed the question more generally asking, based on prior experience with online courses, are threaded discussions useful? Fifty percent of those responding felt that threaded discussions as used in their courses to date had been "somewhat useful." The purpose of the follow-up question was to determine how students felt about threaded discussions in general as opposed to how they felt about the relationship between threaded discussions and enhanced learning.

An earlier question (#5) asked students which type of threaded discussion they preferred. Approximately one third responded that they preferred to be asked their opinion on a scenario presented by the instructor in the threaded discussion, followed by responding to controversial issues as presented in the discussion thread (25.97%). Twenty-one students (8.14%) preferred a role-playing scenario in which they were to be the decision-maker. Thirty-four students (13.18%) said they preferred specific answer discussions. Forty-two respondents (16.28%) said that they liked all formats, while nine (3.49%) said they did not like any of the formats listed.

The responses to the pilot survey in 2015 indicated a slight preference for written assignments over threaded discussions as a measure of learning. In the following surveys, when students were asked if they preferred a threaded discussion to a written assignment, 36.96% of the combined sample chose threaded discussions over written assignments as a measure of

learning. However, here too the difference was slight. Those who would prefer a written assignment represented 35.02% of the sample.

Question seven asked for the amount of time the student typically spent in participating in a threaded discussion. Seventy-one students said they spent between 31and 45 minutes; sixty-one students said they spent 46 to 60 minutes on each discussion; 57 said they spent 61 minutes or longer on each discussion. Fifty students answered that they spent 16-30 minutes. Only 14 students of the 258 who responded to this question said that they spent less than 15 minutes on the discussion.

There were two questions on the use of grading rubrics with threaded discussions. More than 35% of those responding said that a grading rubric was used in all of their online courses. The following question asked if the student felt that the grading rubric used was fair. On a scale of 0-25% to 100%, 97 of the 257 students (36.96%) responding said that in 75-99% of the cases, the rubric was fair. Sixty-nine students (26.85%) felt that the rubrics were fair in 100% of the cases. Eight students (3.11%) responded that the rubrics were fair in 0-25% of the cases. Forty-nine students (19.07%) thought that the rubrics were fair 50-75% of the time, while 22 students (8.56%) said that the rubrics were fair 25-50% of the time.

Question 11 asked if students enjoyed participating in threaded discussions. One hundred seventy-five of the 255 students (68.63%) responding answered “sometimes” or “to some degree.” Forty-two students (16.47%) did not like threaded discussions, 27 students (10.59%) said the “always” enjoyed them. Eleven students (4.31%) had no opinion.

Question 14 asked a broader question: “If given the option of taking the same course in the traditional face-to face format or in the online format, which would you prefer?” Ninety students (34.88%) said they preferred a fully online course. Eighty-three (32.17%) said they preferred the traditional, face-to-face course format. Eight students (3.1%) expressed no opinion, while 77 students (29.84%) said “either one is fine.”

There were statistically significant differences at the .05 level between full-time and part-time students with regard to the questions of enjoyment of threaded discussions (.035, equal variances not assumed) and on a preference for taking face-to-face versus online courses (.000, equal variances not assumed). With regard to the first question, the mean for part-time students was 2.98; for full-time students the mean was 2.63. On the preference for online versus face-to-face course, the mean for part-time students was 2.72; for full-time students, the mean was 2.12.

The final two survey questions were open-ended and optional. They asked for comments on respondents’ experience with threaded discussions in online courses to date and what types of threaded discussions had made an impression. Responses here were limited but did reinforce the use of discussion questions that encouraged debate and interaction between participants. The instructor’s use of videos was noted as a positive enhancement. Some commented that the value of the threaded discussion lies in the ability to gain a better perception of the opinions of the peer group. Another said that they offered a great opportunity to get feedback and to express opinions. Others noted that threaded discussions were hard to maintain and at times, forced.

**Research Question 1**

*Do students perceive threaded discussions to be an effective learning tool?*

Two survey questions addressed this issue. Question six asked students if, based on prior coursework, threaded discussions added to or enhanced their learning of the subject matter in an online course. Eighty-eight students (34.24%) responded "To some degree, somewhat helpful." Eighty-one students (31.52%) said threaded discussions were "somewhat helpful" or "help a little." Forty-eight students (18.68%) found threaded discussions to be very useful while fourteen (13.23%) replied that the discussions enhanced learning "very little."

Question 12 asked students based on past experience with online courses, how they would characterize the use of threaded discussions in general. Fifty percent or 128 students of the 256 who responded to this question said threaded discussions were "somewhat useful." Sixty-nine students (26.95%) felt that as a learning activity, threaded discussions were usually an important part of the course. Twenty-seven students (10.55%) found them to be "a waste of time. Twenty-four students (9.38%) found threaded discussions to be "a critical and important learning activity in the course." Eight students (3.12%) expressed no opinion.

Independent samples t-tests were performed on both questions to determine if there were statistically significant differences based on gender, enrollment status or academic level. On the question of the value to students of threaded discussions in learning course material, there were statistically significant differences at the .05 level between females and males (.039, equal variances assumed) and between seniors and freshman (.017, equal variances not assumed). The mean for females was 3.31. For males, the mean was 2.95. The mean for seniors was 2.8. For freshmen, the mean was 2.00.

On the question of how to characterize the use of threaded discussions in online courses, there were no statistically significant differences found based on gender, enrollment status or academic level.

**Research Question 2**

*Do students prefer threaded discussions to written assignments as an assessment of learning?*

Question ten of the survey asked students which of the two assessments tools, written assignments or threaded discussions, they preferred. Of the 257 responding, 95 (36.96%) chose threaded discussions. Ninety (35.02%) chose the written assignment. Twenty-one percent said they had no preference since they were "about the same." Those with "no opinion" represented 4.67% of those responding. The remaining six respondents (2.33%) did not like either form of assessment.

The independent samples t-tests conducted on Research Question 2 to identify statistically significant differences in the preference for written assignments versus threaded discussions, based on gender, enrollment status, or academic level, found none.

## Conclusions

This study focused on students' perceptions of the effectiveness of a significant instructional tool used in online instruction, threaded discussions. Results support earlier

research on the effectiveness and usefulness of threaded discussions in e-learning. Students' responses in this study underscore the need for thoughtful, if not innovative approaches to the use of threaded discussions to deliver more value and better enhance the online experience.

Taken together, the responses to the questions on the perceived value of threaded discussions to learning, the usefulness of that particular instructional tool as part of the instructional design, and students' enjoyment of threaded discussions reinforce the findings in the Shelley and Best studies [11, 12, & 13]. In each of these, the authors report that students mostly enjoyed participating in threaded discussions, but were somewhat neutral in their assessment of the usefulness and/or the effectiveness of threaded discussions. On the issue of which assessment tool was preferable, written assignments or threaded discussions, their conclusions were similar to those in this study. In each case, there was a clear preference for threaded discussions.

In their study of the nature of online interaction, Garrison and Cleveland-Innes [14] suggest that participation in online discussions without adequate structure and leadership is insufficient to achieve course learning goals. Asynchronous, text-based online learning, they said, was well adapted to deep approaches to learning. The challenge, Garrison and Cleveland-Innes maintained, was how to best design and facilitate online learning to support deep approaches to learning. Specifically with regard to threaded discussions, Shelley and Best [13] emphasized the need to focus on design and application to maximize its potential as a useful instructional tool for student learning.

Poole [15] argued that course design needed to provide a flexible environment in which students could participate fully in the learning process and suggested that studying student participation patterns could enhance online instruction.

Researchers in this study investigated the question of student learning as facilitated by the use of threaded discussions. The focus was on student perceptions of the value of threaded discussions as an instructional tool, not on the measurement of how well the students learned the course material. The study's results with regard to the perceived value of threaded discussions in online courses support the opinions expressed in the informal poll on distance learning [5]. A majority of students did find some value in threaded discussions in learning course material.

The authors would argue that "some value" is insufficient to support the learning goals set, that is, to advance critical thinking and to nurture thoughtful, reflective conversation in order to achieve what Garrison and Cleveland-Inness [14] characterize as deep and meaningful learning.

## International and Managerial Implications

As Volery and Lord [16] noted in 2000, the internet has reshaped universities world-wide. Online education not only opens doors to new audiences for learning but also has the potential to transform learning delivery. In their view, online education would expand access, alleviate capacity constraints, capitalize on emerging market opportunities, and serve as a catalyst for institutional transformation.

Allen and Seaman [4] continue to track the growth of online education and its impact on universities in the United States. In their 10 year summary of trends in online education, they reported an all-time high of 6.7 million students enrolled in online education. That number translates to 32% of all students having taken at least one online course. As reported, overall enrollment in many institutions has declined while enrollment in online course continues to increase. The implications for higher education are clear. When asked if online learning was strategic, 69.1% of chief academic leaders in the United States reported that online learning is critical to their strategic planning [4].

Discussing the managerial implications of online versus onground platforms for business education, Smith and Rupp [17], recognizing that online business education has become more common in response to the needs of a changing student population, conclude that future leaders in management and education - current students - will certainly be educated differently than their predecessors. These students will be trained in a more flexible environment, one moreover that is focused on lifelong learning.

Managing the integration of threaded discussions into the online learning environment is seen by many as crucial to achieving learning goals by providing a forum for critical thinking and reflective learning [1, 8], as well as to encouraging and facilitating students' active involvement in the course [6]. This would suggest that additional research into the effective design of threaded discussions is needed to supplement the work on teaching presence and enhancing student engagement with course organization.

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