

Student Participation Patterns in Asynchronous Distance Learning Courses

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Abstract

The discussion area is a major component in many asynchronous distance learning courses. This study analyzed the participation patterns of students from two different asynchronous distance learning graduate courses taught by the researcher over a five year period (2001-2005). The longitudinal data were drawn from actual student participation statistics in the courses and from the course evaluations (59.8% response rate) over the five years. The study found distinct patterns of student participation in discussions in several areas, including distribution of postings among multiple discussions, when postings were submitted each day, on which day of the week (relative to the start and end of a given week of class) entries were posted, and in student overall appreciation of the value of the discussions. Distance learning instructors should take the participation patterns into account when developing and teaching asynchronous courses so that they can adjust such courses accordingly to maximize their students' participation.

Introduction

As noted in a recent Sloan Consortium survey (Allen & Seaman, 2005), student registrations in distance learning courses are increasing in colleges and universities. The results from the survey indicated that in fall 2004 there were almost 2.4 million higher education students taking one or more distance learning courses. Those enrollments were an 18% increase from 2003. That a growing mass of students of such magnitude are enrolling in distance learning courses is cause for notice.

As distance learning course enrollments climb, many such online courses incorporate a discussion component that encourages or requires a student to submit postings to discussion forums or boards created by the course instructor. Blackboard, a leading distance learning course management system, funded a study that included data from more than 830 institutions of higher education from the spring 2003 semester to the fall 2005 semester.

Online discussion among students related to course materials and/or educational topics also expanded substantially. In the first semester of operation (analyzed in the data sample), spring semester 2003, the site saw 988,597 unique postings on its discussion boards; in spring semester 2005, there were 9.1 million postings. In the first weeks of the current academic term, there have already been 1.5 million postings by users tracked in this data sample. (<http://blackboard.com/company/press/release.aspx?id=762348>)

So since enrollments are increasing in distance learning courses and since many distance learning courses include discussions, the number of students participating in discussions also is increasing. With online discussions becoming more in use, instructors would be wise to know as much as possible about discussions. That need for knowledge would include how, when, how much, etc. that students participate in discussions in their distance learning courses.

Courses in Study

The courses that were part of the study were 100% (not blended or hybrid) distance learning graduate courses in the Division of Continuing Education at the University of San Diego run with the assistance of OnlineLearning.net (see <http://www.onlinelearning.net/>), which is part of the Online Higher Education division of Laureate Education, Inc. (formerly Sylvan Learning Systems, Inc.). Both of the two courses in the study – Mainstreaming: Teaching Individuals With Special Needs in the Regular Classroom and Computers for Educators Level I – are two semester unit graduate courses usually taken due to being requirements for California teachers to “clear” (earn) their teaching credentials.

The Mainstreaming: Teaching Individuals with Special Needs in the Regular Classroom course seeks to give general education teachers the knowledge of how to successfully work with special education students in a mainstreamed or inclusive K-12 classroom. The course includes such areas as special education laws, terminology, and research; explanation of IEP meetings; classroom accommodations and modifications; and classroom management techniques. The course meets the mainstreaming/special education requirement for the Ryan Professional Clear Credential in California. The Computers for Educators Level I course provides K-12 teachers with an introduction to integrating technology into the K-12 classroom. Such topics as spreadsheets, multimedia, and use of the Internet are incorporated in a practical approach to using technology to improve teacher effectiveness and efficiency, as well as improve student academic achievement. The course enables the students to complete the Level I technology requirement for the Ryan Professional Clear Credential in California.

Both distance learning courses are asynchronous in that they do not operate in real time. The students do not have to be online at a specified day or time. In effect, the courses are 24/7. Both courses are six weeks in length with students having weekly assignments that include readings in a textbook and discussions. Additionally, both courses include two quizzes and a final exam. Different course sections start continually throughout the year, and are not tied to the traditional semester or academic calendar. Course sections start and end on different days of the week in that a course might start on a Wednesday and finish on a Thursday six weeks later, or a course might begin on a Monday and end on a Tuesday. Different starting and ending days of the week combined with multiple sections being available throughout the calendar year provides flexibility for the students, especially when also using a 24/7 online learning methodology.

The researcher teaches these two courses as an adjunct instructor. Prior to becoming an adjunct in 2000, the researcher had to successfully complete a rigorous six week online training program. The Blackboard course management system was used to teach the course from 2000 until 2005 when a switch was made to the eCollege course management system. Initial and subsequent instructor training was provided in using eCollege upon changing to that system. Both Blackboard and eCollege allow the instructor and students to do approximately the same things (e.g., threaded discussions, online quizzes), but each does it slightly differently.

While most of the students in these two courses live in California, the courses have included students from various states (e.g., Louisiana, New Jersey) and different countries (e.g., Columbia, Japan, Germany). The vast majority of the students taking these courses are either current California teachers, former California teachers making sure to solidify their teaching credentials in case they return to the teaching profession in California, or those who aspire to be California teachers but who do not have prior or current teaching experience. The smallest class in the study had eight students, while the biggest class had 30 students, with the average being in the mid 20's. In any given course section there were 4-5 students who were new to distance learning (so-called "newbies"). There also were a same number of students who were changing professions to become teachers. For example, a nurse or retired Air Force officer would take the courses as part of their goal of becoming a K-12 teacher. Some students were on their second or third career change. Also, classes usually had at least several students who were stay-at-home mothers and were taking the online courses because they could not travel, sometimes far distances, to a traditional college classroom.

Overall Student Participation

The two courses – Mainstreaming and Computers – are six week asynchronous distance learning courses for those professionals wanting to be K-12 teachers in California. Being asynchronous, the instructor did not set a specific day or time for the students to "meet" online. Early on in teaching the courses the instructor set aside evening office hours on two days (Monday and Thursday) for students to participate in real time virtual chats. Although advertised and promoted, these meetings were not mandated. Attendance would be 3-5 students (out of maybe 25-30 in a course) for the first few sessions, but then would diminish to no participants in a matter of a few weeks or less. The instructor was online at the appointed days and times but no one else was. So the real time meetings were discontinued in favor of on-demand office hours in that students could request a specific appointment to discuss course matters. Over the five years of gathering research data, only a very few students have ever requested such a meeting. Instead, if a student had a question, he/she sent an e-mail to the instructor. On a much more infrequent basis a student might have telephoned the instructor as the instructor included his cellphone number in the course material. But only a few students have called the instructor.

The bulk of the student participation occurred online within the courses, usually inside the threaded discussions. The students might also avail themselves of using a social board that is included in both courses. The social board is set up for discussions that are not related to the assigned discussions and is strictly for general comments and questions - kind of a "social" board (or a "Class Café") for informal, non-course specific communication. For example, a student might pose a question if he/she was thinking about taking another course and wanted some input from someone who had already taken it. It would not be appropriate to pose such a question in the regular discussion forums but it could be posted and discussed in the social board. However, the social board has not gotten much participation in most courses. For example, the researcher is teaching a Mainstreaming course as this article is being written that has the maximum 30 students. It is near the end of the fifth week and there have only been 14 postings in the social board, and that number is higher than in most previous courses. One reason for the low participation might be postings in the social board do not count toward the students' weekly participation requirements in the assigned discussions. As with the weekly "live" course meetings, social board participation is probably affected by not being mandated. One common element in discus-

sion exchanges with students over the years is that unless something is mandated (e.g., participation at certain levels in assigned discussions), monitored, and enforced, then even the most well meaning and well intentioned student will fall short of the instructor's expectations. "Life" often intrudes and the students' best intentions are not fulfilled. Based on the students' own admissions and suggestions, instructors are advised to mandate a minimum level of participation through earning points toward a course grade, which serves to motivate those students with insufficient self-motivation.

So given the necessity to mandate participation, weekly discussions have set requirements in the two courses. These mandates were modified over the span of the five years of this study. Today, there are set requirements for course participation in the discussions. Over the six weeks of each course, students can receive a maximum of 84 points (out of a possible 200 total points for the course) for their participation in the weekly online discussions. So participation in the discussions can account for 42% of their course grade. Typically, there are a minimum of two discussions and a maximum of four discussions (besides the ongoing social board discussion) each week. Weekly point tallies are posted in the online gradebook after each week ends. Additionally,

- The expectation is to submit a minimum of 42 acceptable discussion postings during the courses with a minimum of seven "acceptable" postings each week, including at least one in each discussion, as either original postings or in response to another student or the instructor. "Acceptable" does not mean replying, "I agree" or "ditto" or "Thank you." Postings need to be thoughtful, insightful, and pertinent to the discussion topic.
- Not submitting at least one acceptable posting in a discussion results in a loss of two participation points per such "empty" discussion. This requirement forces students to submit postings in all the discussions, instead of loading up on only one or two and skipping the others. This is one mandate that was instituted beginning in 2005.
- A maximum of 14 points (seven acceptable postings at two points each) can be earned in any given week. So submitting 42 replies to discussions in the last two days of the course is not the expectation nor will a student earn more than the 14 possible points for that week.
- Replies must be done by the end of each week in order to receive credit. Postings submitted after a given week ends are not credited toward participation points. The instructor has resisted mandating a minimum number of postings by a specified time during the week (e.g., before the fourth day) because both Blackboard and eCollege would require the instructor to manually monitor whether or not students had met such a goal. That would necessitate much more work for the instructor. However, he does do that in other online courses that he teaches that use the State University of New York (SUNY) Learning System (SLN) course management system. It is much easier to keep track of student participation in that system, plus he uses graduate students as course assistants in those SLN courses.
- Students are advised to check their course site daily. The minimum expectation is for students to log in at least four out of every seven days. Otherwise, students would fall behind and find it difficult to participate in the discussions in a timely, coherent manner. However, this requirement is not monitored due to the extra time burden that would be placed on the instructor. As a result of not being mandated and checked, this voluntary requirement goes unheeded by many students, even after requests for voluntary compliance by the instructor. It is another instance in which the instructor has to consider the

adage, “That which gets measured, gets done” and weigh the benefits of improved student participation against the added time pressure that would result for the instructor. The instructor usually checks the discussions at least once or twice a day during each of the seven days in each week.

Patterns of Student Participation

Students in the two distance learning courses have demonstrated some general participation patterns in the discussions. Generally, students have tended to respond to participation “mandates” better than voluntary or suggested participation. For example, as noted above, without the two point penalty involved in skipping discussions, there are students who would concentrate their postings in fewer discussions than are available. Skipping discussions adversely impacted on the quality of those discussions as fewer postings and interchanges were occurring among students and between students and the instructor. The problem was most evident in the sixth and final week of the courses, especially if students had completed their final exam early in the week and then calculated their course point totals. If the students discerned that they could cut back on their discussion participation and yet still earn their desired course grade, their participation levels dropped in the last week of the course. This pattern was noted for several years before the instructor instituted a one point penalty for each discussion that was skipped (an erstwhile “empty” discussion). While this change had some positive impact, a switch to a two point penalty seems to have proven more of a deterrent. The change has had a significant positive impact on reducing the problem of empty discussions.

Getting students to continue to participate at appropriate levels throughout the entire course is important because “in a learning situation the primary goal of any discussion is to promote thinking” (Peters, n.d., ¶ 6). It is difficult at best to encourage thinking and communication if the students exercise their option of not participating in a given discussion if that participation is voluntary.

Regarding maintaining a consistent level of participation during the week leads to an additional pattern, which is observed in the amount of student postings per a given discussion when there are several (two to four) active discussions. Specifically, it was observed that when students were given four discussions, for example, with all things being equal, there were often more discussion postings in the first discussion than in the last listed discussion. Human nature? Perhaps. Student interest and subsequent participation seems to wane in the later discussions. It also seems that when asked to submit at least seven postings per week there are students who keep close accounting of how many postings they have contributed so that they meet the minimum and not much, if anything, more. These seven postings more often than not get distributed more in the first few discussions than in the last few discussions. One implication for the instructor is to position the more important discussions at the beginning or the top of a list of discussions so that they get more attention and more postings, although this action itself might serve to reinforce the disparity between the numbers of postings in early versus later discussions.

One variable to consider for future research is the impact of instructor postings on the distribution of student postings. For example, will student postings increase in later discussions in direct proportion to the amount of instructor postings? Can instructors make adjustments to overcome the propensity of students to “use up” their postings requirement in early discussions? Certainly

there are a number of variables to take into consideration, such as the quality and type of instructor postings.

Another pattern emerges when analyzing when the students submit their discussion postings during each day. This pattern concerns the time of day when the students go online and post their discussion entries. As judged by when the postings are occurring, graduate students in these two distance learning courses do a lot of their online discussion postings at work. Why? Most students relate that is because of the faster Internet connection found in the workplace (e.g., T1 line), as opposed to using a 56KB or DSL connection at home. However, contrary to having faster Internet connection speeds at work, according to the course evaluations, the most cited time to do coursework was 8-9pm, with 9-10pm being the second most cited timeslot. It would appear that the students preferred to do their online discussions at home rather than at work.

One more pattern of participation concerns the day of the week in which discussion entries are posted. With these two courses, the “day of the week” is not a specific day of the week, like a Tuesday, but rather a function of when a given instructional week starts and ends. As noted previously, these six week courses do not always start and end on the same days. That is, some course sections start on a Monday and end on a Tuesday six weeks later, while other sections begin on a Thursday and stop on a Friday. The study findings show that absent a mandatory requirement to submit postings by a certain time during the week, there are a disproportionate number of student postings in the last day or two of the week, regardless of which day of the week it is. When the online discussions last a week, there can be more than 40% of the postings occurring in the last two days of the week, especially the last day. For example, the study statistics indicated that when a course week started on a Wednesday, 44.58% of the weekly postings occurred on Monday and Tuesday (week ended on Tuesday). When a course week started on a Friday, 44.45% of the postings happened on Wednesday and Thursday (with the week ending on Thursday). The patterns were fairly consistent also in showing little activity in the first few days of the week, perhaps indicating that the students were taking a breather from all their postings in the last few days of the just concluded week and/or that the students wanted to do the textbook readings first before doing the discussions.

What is the reason for this pattern? The flip answer might be to say that students procrastinate. But another reason might be that not all online students have sufficient internal self-motivation or self-discipline. Yet another reason could be related to the assigned course reading, where students might feel an obligation to do the reading prior to participating in the discussions, whether or not the discussions have any direct connection to the reading. An inordinate number of late postings might satisfy a requirement for a minimum number of postings for the week, but does little to engender communication among participants when too many students are more concerned with meeting the letter of the requirements instead of the spirit of the requirements.

One other overall student pattern relative to their online discussions is that the students appreciate their participation in the discussions. While individual students might suggest particular modifications to the discussion requirements (e.g., mandate fewer postings), the vast majority of students enthusiastically endorse the use of discussions. When asked in the two course evaluations to compare their online learning experience to a traditional classroom, 60.45% of the student respondents indicated “better than usual” (i.e., traditional classroom) while 28.75% saw no difference, and only 5.05% thought their online learning course was “worse than usual” (5.75% had no opinion). Additionally, 91.64% indicated that they would take another online course from

the University of San Diego. These statistics are over the time period of 2001 through 2005 from 574 student respondents (representing a 59.79% response rate) who took either the Mainstreaming or the Computers course with the researcher. These statistics would seem to indicate an approval of the asynchronous distance learning courses. However, there are other factors to consider, such as the quality of the performance of the course instructor, in a future study.

To better understand why the students in these two courses preferred online learning, here are some selected student quotes that are representative of their views on discussions.

- “I agree that we learn so much more through our discussions than through projects and research reports. It is very insightful to read what others are learning and to use suggestions and ideas from others in our own teaching experience.”
- “It's good to have a lot of input from people from different districts. I enjoy reading posts because it allows all of us to have a forum to discuss and share ideas. Being able to get input and feedback from teachers at other schools is also very helpful, since the dynamics of a school can vary so much...and that can provide a lot of different viewpoints that might not be thought of at other schools. I really do like this collaborative approach much better.”
- “I really really like the opportunity to discuss the different viewpoints and opinions! It's great to see what other teachers are doing in their classroom and what works best. It is also confidence building when you see that other people have similar game plans as you.”
- “The discussions have been great. The sheer volume was overwhelming at first, but I would say that it is much better than the alternatives. I am taking another online class that involves two projects. I've gotten more out of our discussions than my other projects.”

The five year study found recognizable patterns in how students participated in their asynchronous online discussions. Additional study is indicated that would dig deeper into these patterns to find their root causes, rather than rely on speculation on the part of the instructor or researcher. For now it is sufficient to know that students evidence distinct patterns of participation in discussions in several areas, including distribution of postings among multiple discussions, when postings are submitted each day, on which day of the week (relative to the start and end of a given week of class) entries are posted, and in their overall appreciation of the worth of the discussions. One of the often cited advantages of taking asynchronous distance learning courses is their inherent flexibility -- anytime and from anywhere there is Internet access. Balancing the student's desire for maximum flexibility (e.g. being able to submit discussion postings anytime during the week) with the instructor's need to employ a workable course format and methodology (e.g., leveling out the volume of postings) is an issue.

Summary

Several noteworthy student participation patterns have been observed in the two graduate distance learning courses - Mainstreaming: Teaching Individuals with Special Needs in the Regular Classroom and Computers for Educators Level I – offered by the University of San Diego. As taught by this researcher, these 100% online asynchronous courses include a discussion board component. As enrollments in distance learning increase and as distance learning courses incorporate such discussions, the importance of understanding how students use (i.e., participate in) these discussions assumes more importance. Distance learning instructors need to be aware of such patterns of student participation when designing and delivering their courses.

References

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