

Instructor-Generated Interactions and Course Outcomes in Online History Courses

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Abstract

This article highlights a 2021 quantitative, correlational study examining the relationship between the weekly number of instructor-generated posts and two course outcomes within fully online, asynchronous history classes managed by one large, urban Texas community college serving a 35% Hispanic/ Latino student population. Framed by Communities of Inquiry (CoI), the study utilized archival data spanning four academic terms to answer two research questions: 1) to what degree, if any, is there a relationship between the weekly number of instructor-generated discussion posts and pass percentage rates in online history classes? and 2) to what degree, if any, is there a relationship between the weekly number of instructor-generated discussion posts and withdrawal percentage rates in online history classes? The sample contained 106 sections of History 1301 delivered via Blackboard LMS. Two data sources were collected; one showed total number of posts in the given sections, allowing calculation of a weekly mean value. The other showed course pass and withdrawal percentage rates for the sections. A positive, weak correlation was found between number of posts and pass percentage rates ($r(104) = .32, p < .001$). A negative, weak correlation was found between number of posts and withdrawal percentage rates ($r(104) = -.47, p = .001$). This article discusses the findings and provides supplemental insights for Hispanic Serving Institutions (HSIs).

Keywords: Community college, online discussion board, LMS course tools, interaction, Hispanic Serving Institutions

Introduction to Study

Earning a post-secondary degree is a milestone in any learner's life. Successful completion of college indicates social and economic success (Boylan, 2020). Community and technical colleges, for-profit institutions, online programs and other alternate paths now supplement the traditional four-year university. This increased access spurs scholarly debate and promotes opportunities to conduct empirical research which informs best practices in achieving learning outcomes. This study sought to understand if there is a relationship between the quantity of online instructor-generated interactions and two standard outcomes in the online, community college setting.

The purpose of the quantitative, correlational study was to examine if or to what extent a relationship exists between the weekly number of instructor-generated discussion board posts and course outcomes (pass percentage and withdrawal percentage rates) within fully online, community-college history courses managed by one large, urban Texas community college district. Recent studies indicated increased interaction can result in improved outcomes (Turley & Graham, 2019; Zhang & Lin, 2019). Others raised concerns of lacking student-instructor relationships (Protopsaltis & Baum, 2019), social interactions, teacher presence, and the community of learning in online delivery (Huang & Manouchehri, 2019). Yet the impacts of interaction within a specific course or discipline at the two-year community college level lacked empirical evidence. Parnes, Suárez-Orozco, Osei-Twumasi, & Schwartz (2020) observed the majority of literature on student-instructor relationships originated from four-year institutions;

minimal studies showed how these relationships may influence students enrolled in two-year community colleges. The current study supported a gap in the literature with regard to the relationship between number of interactions and course outcomes in a community college history course.

This research advanced knowledge and practice in multiple ways. While the importance of teacher presence and interpersonal interaction in online courses was well-documented, there remained a lack of consensus on the optimal frequency and use of course tools to achieve a community of learning (Hoey, 2017; Riestra-Gonzalez, Paule-Ruiz, & Ortin, 2021). Course designers needed a foundation for building courses and embedding tools supporting interactive communication between instructors and students. Online history faculty desired a model for optimizing interaction with learners. Accreditors and evaluators faced an opportunity to reflect on current guidelines and policies requiring regular interaction in distance education courses. All of these benefitted students; if there was a relationship between the number of instructor-generated interactions and course outcomes, this finding should be applied in an intentional manner to immediately support the learning process via increasing pass rates and decreasing withdrawal rates.

Cultural Diversity and Online Delivery

The study evolved from separate but related concerns in post-secondary education. First, history is a core curriculum course required for most degree plans. The discipline of history features unique traits. Students from diverse social and cultural backgrounds meeting in asynchronous classroom settings may impact online discourse via discussion boards, particularly within social science and humanities courses; the teacher's active interaction in these forums is needed to advance metacognitive discourse (Dorfsman, 2018). Second, the demand for high quality,

interactive, fully online, asynchronous classes continue to rise. In 2018, approximately 66 percent of college students in the United States enrolled in at least one online class, while 16.6% participated exclusively in distance education (U.S. Department of Education, 2019). Online delivery practices will be a relevant topic of research for the near future.

While this study built upon similar empirical research, it addressed unique needs, traits, and questions. Previous studies raised concerns of social interactions, teacher presence, and the community of learning in online delivery (Huang & Manouchehri, 2019). There was limited research examining disciplinary differences as a potential factor in student outcomes (Lim & Richardson, 2021). Community college students were twice as likely as university students to prefer fully online courses (Gierdowski, 2019); yet they also had unique attributes, learning needs, and challenges (Briggs, Gebrekristos, & Spaulding, 2020; Smith, 2019; Xu & Xu, 2019). Qualitative studies, relying heavily on surveys and interviews, indicated both students and faculty perceive interaction as an important part of the learning process; however, Cung, Xu, and Eichorn (2018) noted quantitative evidence on the benefits of increased interpersonal interactions on student learning outcomes was limited.

With regard to course outcomes, Akos & James (2020) reported that while course completions were critical to on-time progress and persistence in college, there was a lack of quality research specifically on course withdrawal. This study focused on these outcomes rather than the more commonly used outcome of final grades. Finally, there was a lack of consensus on how to monitor and evaluate the quality of online programs; the regular use of interactive tools for communication is one element addressed at the federal, regional, state and institutional levels.

Determining if there is a relationship between the quantity of instructor-generated discussion posts and course outcomes informed this discussion.

Impact on Hispanic Serving Institutions (HSIs)

Hispanic student enrollment at the post-secondary level increased 281% since 1996, with the highest concentration of HSIs located in Florida, Texas, Illinois, New Mexico, New York, and California (Espinosa, et al., 2019). The institution providing data for this study is an HSI serving approximately 14,990 Hispanic/ Latino students in Fall 2020. This represents approximately 35% of the institution's total enrollment (Hispanic Outlook, 2021). While specific demographics of students and faculty were not collected as part of the given sample, generalizations can be made. This institution ranked second regionally- and fifth nationally- on Hispanic Outlook's lists of best two-year colleges where associate degrees are the highest degree granted for Hispanic/ Latino students (2021).

Although Hispanics are the fastest growing population and possess the largest and youngest racial ethnic group in the United States (Free Library, n.d.), they are enrolling at a lower rate than their counterparts in fully online courses. This suggests a lack of social integration, online readiness, understanding of course design, and other factors that may hinder their success in an online learning environment (Free Library, n.d.). Social presence and interaction are critical for this population. Hispanic students come from strong communities of engagement. Creating this type of environment in a virtual context promotes a social structure that provides an anchor for them in online learning (Arbelo, 2019).

A study of California community colleges reported low completion and success rates, plus an increased achievement gap with regard to Latinos, for online learners (Protopsaltis &

Baum, 2019). Understanding how the quantity of instructor interactions correlates with student success and retention is timely and relevant for all HSIs delivering online courses and programs.

History Discipline

History is the study of the past. Yet applying the methodological skills of history requires dynamic interpersonal relationships and interactions between course participants. Academic discourse within a community affords opportunity to weigh evidence, appreciate different perspectives, and construct arguments. As Alphonse de Lamartine lamented, "History teaches everything including the future" (Silvestri, Baraglia, Lucchese, Orlando, & Perego, 2008).

The Communities of Inquiry (CoI) framework was well-represented in educational studies; however, researchers rarely examined disciplinary differences as a potential factor in student outcomes (Lim & Richardson, 2021). The discipline of history featured unique traits. Students from diverse social and cultural backgrounds meeting in asynchronous classroom settings may impact online discourse via discussion boards, particularly within social science and humanities courses; the teacher's active interaction in these forums is needed to advance metacognitive discourse (Dorfsman, 2018). Humanities professors may have an advantage optimizing discussion boards because, unlike natural sciences and math, their content is open-ended and privy for debate.

The need for teaching civil communication, especially computer-mediated, has never been greater; a healthy society relies upon engagement with others in an ethical and socially appropriate way (Cline, 2020). Debate is a common instructional technique used in courses where there is more than one correct answer or perspective (Mitchell, 2019). An online discussion forum, effectively facilitated by an active instructor, allows for the debate to occur

asynchronously; this also presents an opportunity for students to transition towards digital citizenship. A study concluded only 36%, approximately one-third of Americans, would pass a basic multiple choice U.S. citizenship test modeled after the one taken by immigrants in the process of naturalization. Notably, only 19 percent of test-takers 45 and younger passed (Escobar, 2018). Given that community colleges enroll a higher proportion of first-generation college students, students of immigrant origin, and students from racial and ethnic minority backgrounds compared to four-year institutions (Parnes, et al, 2020), establishing best practices in history instruction and delivery at this level is critical.

Much of the existing literature on post-secondary student success and course outcomes focused on math and English content areas. Yet history represents a core curricula discipline required for most post-secondary degree plans, including an associate degree at a two-year institution. The specific courses required vary by state and institution. The Texas Higher Education Board (2020) required a core curriculum of 42 semester credit hours (SCH); a minimum of 6 SCH must be in the American History category known as Foundational Component Area 060. Table 1 shows five core history courses offered to attain an associate degree.

Table 1

Core Curricula: Sample Texas Community College

Course	Title	Semester Credit Hours (SCH)
HIST 1301	United States History I	3
HIST 1302	United States History II	3
HIST 2301	Texas History	3
HIST 2327	Mexican American History I	3
HIST 2328	Mexican American History II	3

Source: THECB (2020).

The given site for the current study offered three of these courses (1301, 1302, and 2301) via fully online modality in 2019-2020 (TCC, 2020). Two of the three courses, 1301 and 1302, were considered high-enrollment courses; this means more than 500 students enrolled. 1301 reported the lowest pass rate at 60.9% and the highest withdrawal rate at 17.5% (TCC, 2020). This research focused on individual sections of HIST 1301 reflecting its status as core curricula, online modality, high-enrollment, low pass rate, and high withdrawal rate.

It is worth noting that HIST 2327 and 2328 were not offered online during this time. Therefore, consideration of student outcomes regarding Mexican American history content is not possible. This could be a future research opportunity.

Structure of Study

The role of the online instructor, and its impact on student and course outcomes, drove this research. While prior studies indicated a positive correlation exists between instructor to student interaction and student performance (Protopsaltis & Baum, 2019), a definitive solution or recommendation regarding the optimal quantity of interactions was not evident. There were also conflicting findings in the current literature (Riestra-González, et al, 2021). Two factors added to the confusion. First, many studies were course-agnostic. It was not known if regular discourse or interaction needs vary between content subject/ discipline. Second, there was a wide range and scope of study participants; much of the literature focused on high school students or formally admitted, four-year university, degree-seeking learners. Community college students have unique challenges and needs (Chen, 2020; Dunnigan, 2018; Smith, 2019). This study intentionally focused on community college faculty and outcomes. Table 2 aligns the variables, data sources, and theoretical foundation utilized.

Table 2

Alignment of Variables and Data Sources to Theoretical Foundation

Variable	Data Source	Communities of Inquiry (CoI)
Average number of instructor-generated discussion board posts per week	Activities and Interaction Report	focus on teaching presence/ behaviors; documents frequency and types of interaction using course tools allows opportunity for increased social presence and community-building
Final course pass percentage rates	Course Outcomes Report	focus on cognitive presence; passing a course with a grade of A, B, or C indicates success
Final course withdrawal percentage rates	Course Outcomes Report	focus on cognitive presence; completing a course indicates success

The study examined the weekly number of instructor-generated discussion board posts promoting dialogue between student and instructor within community college history courses. This dialog represented one psychosocial resource that may potentially reduce student stress (Yao & Yap, 2020). In a 2018 survey, learners reported their greatest challenges in the community college setting. Online classes ranked number four on the list, with 44 percent of students reporting the lack of interaction with faculty is a problem (Smith, 2019).

Findings and Discussion

While the increase in number of instructor-generated posts weakly correlated with the increase in pass percentage rates, the findings were complex. Looking at the data by section provided additional context. For example, only 6 percent (6 of 106) sections reported the highest weekly average of three or more instructor posts. Within this small group, the pass percentage

rate was definitively higher (71%) when compared to the other average number of posts/groupings. Only one of the sections with three or more average weekly posts had a pass percentage rate under 70%. The seven sections including a weekly average of two to three weekly instructor posts had a similar percentage rate. As the average number of weekly posts began to decrease, so did the pass percentage rate. 93 of the 106 total sections included two or less weekly instructor-generated posts. The average pass percentage rates for those groups fell below 70%. Notably, the largest group of 40 sections did not include any instructor-generated posts. This group's pass percentage rate was 65%, a full six points lower than the highest two groups. Table 3 summarizes this relationship by group.

Table 3

Distributive Correlation between Weekly Average Posts and Pass Percentage Rates

Weekly Average Posts	Number of Sections	Pass Percentage Rates
3 +	6	71%
2-3	7	71%
1-2	22	68%
0-1	31	67%
0	40	65%

The findings support existing literature associating online interaction between faculty and students with final course performance. Interaction is routinely cited in literature as the only course design element that predicted grades (Protopsaltis & Baum, 2019). The success of online courses often relates to the quantity and quality of interactions (Mehall, 2020). Academic success can be positively impacted by students' level of engagement with the content, their peers, and faculty (Picton, et al, 2017).

Grouping the data for the second research question resulted in a consistent trend. Initial results showed the higher the weekly average number of instructor posts, the lower the withdrawal percentage rate. The group averaging three or more weekly posts reported the lowest withdrawal rate of 10%. The group averaging two to three weekly posts reported a withdrawal rate of 11%. 22 sections with one to two average weekly posts reported a withdrawal rate of 13%. The remaining two groups reported a similar withdrawal rate of 15%. The three unique sections reporting withdrawal rates over 20% all shared a weekly average number of zero instructor posts. However, contradictory results emerged when considering the lowest withdrawal rates. Three sections reported the lowest withdrawal rate of 8%. Of these three sections, consistency between average weekly posts varied. One section included a weekly average of 3.1875 posts, one a weekly average of 2.1875 posts, and one a weekly average of zero posts.

Table 4

Distributive Correlation between Weekly Average Posts and Withdrawal Percentage Rates

Weekly Average Posts	Number of Sections	Withdrawal Percentage Rates
3 +	6	10%
2-3	7	11%
1-2	22	13%
0-1	31	15%
0	40	15%

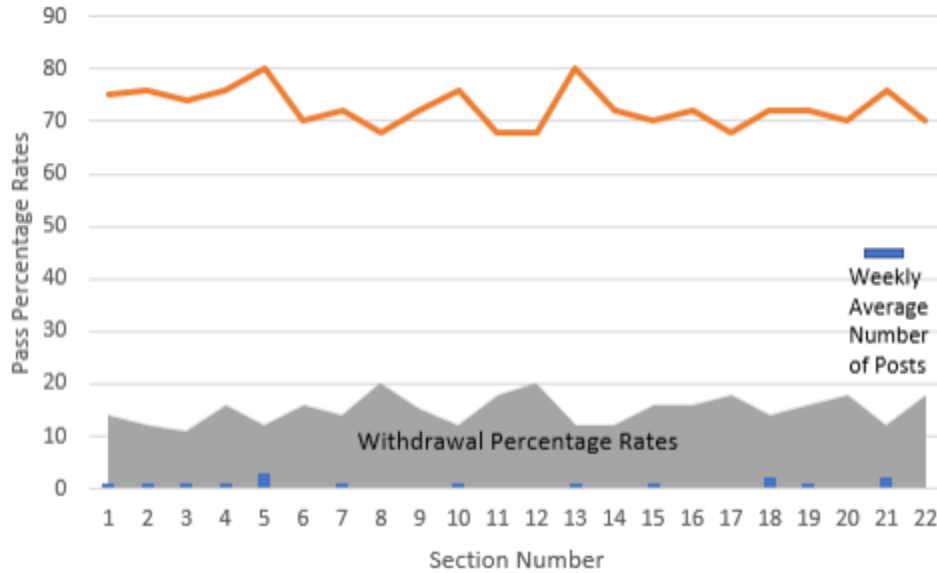
The findings align with existing literature that posits instructors need to be actively involved in activities within the LMS platform. Regular involvement and participation of instructors may be linked to self-efficacy and commitment on the part of students (Aderibigbe, et al, 2021).

Contradictions and Limitations

The Spring 2020 data (shown as Figure 1) provided compelling yet contradictory findings. The overall pass percentage rates in this term were higher (72.6%), yet so were the overall withdrawal percentage rates (15.1%). While the students who finished the class did well, many students did not choose to stay in the class. Two potential opportunities for further analysis exist related to this academic term. This was the semester first interrupted by the global pandemic. The online classes were approximately half-way complete when the interruption occurred. An unexpected two-week break resulted. It is possible that the higher pass rate may be related to extra flexibility, leniency, and communication on the part of faculty. Lack of experience and preparation among online faculty is documented in existing literature (Bryson & Andres, 2020; Chen & Lowenthal, 2018). Meanwhile, the higher withdrawal rate could be due to students' reactions to the pandemic and subsequent life/ routine changes. Unique challenges facing community college students are reported in existing literature (Briggs, et al, 2020). Balancing work, family, financial, and other obligations may compound during a global crisis.

Figure 1

Relationship of all Variables, Spring 2020



The results of this research appear to confirm previous study findings; facilitators who are present and post regularly to discussions enhance student learning outcomes (Douglas, et al, 2020). Although correlation among variables was evident, the results also reflected minimal fluctuation and small values among the average weekly number of posts by term. The highest average number of weekly instructor-generated posts (.9643) occurred in the most recent term, Spring 2021. The lowest average number of weekly posts (.5703) occurred in the oldest term, Fall 2019. The site did not require the utilization of a discussion board within online sections; some faculty may utilize another LMS tool for interacting with students. The site also did not require a specific quantity or frequency of interactions with students. Instructors had autonomy in how to meet the federal regular and substantive provision for distance education courses.

Recommendations for Future Practice

Two recommendations for future practice are based on the results and findings of the study. As mentioned, regular and substantive instructor-student interactivity is a key determinant of quality in online education, leading to improved student satisfaction, learning and outcomes (Protopsaltis & Baum, 2019). Results of this study support that a higher number of weekly instructor-generated posts may reduce course withdrawals. Retention is a major concern facing community colleges- particularly HSIs- in the United States; a recent survey of community college provosts indicated graduation rates, retention rates, and course completions are the top three metrics/ course outcomes for determining success at their respective institutions (Blankstein & Wolff-Eisenberg, 2021).

Instructors are encouraged to post in the discussion forum on a weekly basis. Given the gap in the literature with respect to the optimal frequency of instructor-generated discussion posts within online courses, current accreditation and evaluation practices at the local, regional, and federal levels should be reviewed and reconsidered on an annual basis. Distance learning programs must provide “regular and substantive” interaction between students and instructors (Office of Inspector General, 2017). This language was open to interpretation for many years until additional clarification was provided in 2021. During that time, local institutions were left unsupported and guessing as to what compliance looked like. The results of this study showed most instructors chose not to utilize a discussion forum for regular interaction. Institutional leaders are encouraged to communicate with accrediting agencies, share analytics, adopt a national standard for quality measures, and voice any concerns as they arise.

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