

The Relationship between Interaction and Student Satisfaction with Online Learning in Social Work Undergraduates in China

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ABSTRACT

Little attention is paid to the association between interaction and satisfaction with online learning in social work students. Drawn on the interaction model, the purpose of the study is to explore whether three types of interaction predict student satisfaction within online learning environments during the coronavirus pandemic. Amos was used to analyze sample consisted of 145 social work undergraduates in a public university in China. Findings show that learner-content interaction and learner-learner interaction are positively associated with student satisfaction, whereas learner-instructor interaction is not. Educators and policymakers who intend to facilitate student satisfaction with online social work courses should give priority to increasing learner-content interaction and learner-learner interaction.

Keywords: Interaction, online courses, social work undergraduate, student satisfaction

1. INTRODUCTION

Unlike Western countries, online education, an approach to teach and learn by using Internet as the primary means to communicate and deliver content [1], in China is still in its nascent stage, especially social work education. Face-to-face instruction has been the dominant mode of teaching in higher education in China, while online programs are used to supplement, rather than replace traditionally face-to-face instruction. As compared with about 60% of students participating in at least one online course in Western universities a decade ago [2], fully online courses are not prevalent in China. The dominance of classroom instruction did not change until the outbreak of coronavirus. All teachers in higher education in China are asked to teach online courses in order to implement the policy concerned keeping learning amid classroom suspension. Therefore, It is the first time for all Chinese students to take online courses during the period from February 2020 through July 2020. It is also the first time for all Chinese teachers to become online teachers.

Research has shown that transition to online learning significantly reduces students' course satisfaction in university [3]. As student satisfaction, perceived leaning experience and value of a course, is related to a variety of desired outcomes, such as persistence [4] and course quality. A study which explores what factors increase students' satisfaction in online learning, especially social work students who are understudied target populations, is needed.

In the extant literature on social work education, most studies focus on the association between those

participating in distance education master's of social work programs and perceived satisfaction. Local research on undergraduates' online learning satisfaction is limited. This study intends to explain social work student satisfaction from the perspective of interaction. Cole, Shelley and Swartz [5] found that lack of communication with classmates and the teachers in university was the main source of dissatisfaction with online courses, accounting for 33.2% of total comments expressing dissatisfaction. On the contrary, convenience, clear course structure and positive interaction were the reasons of student satisfaction. A qualitative study reveals that social work graduate students also enjoy interaction with fellow students and preferred seeing instructor although other online students like the flexibility of not having to self-disclose more [6]. Quantitative research using two-wave data shows that making social work course more interactive increases students' positive perceptions towards the online learning experience. Students at Time 2 rate their learning experience more positively than their counterparts at Time 1 [7].

According to Moore [8], there are three types of interaction. Learner-learner interaction (LLI) denotes bidirectional communication between or among learners who discuss and exchange information regarding course content. Learner-instructor interaction (LII) refers to two-way communication between learners and the instructor of a course. Learner-content interaction (LCI) consists of a process of learners elaborating and reflecting on the course content. A meta-analysis by Bernard et al. [9] indicate that the three types of interaction are related to increasing achievement outcomes. Of the three types of interaction, LCI appears more important than the other two types of interaction in shaping student satisfaction among graduate

and undergraduate students [10-11]. The relationship of LII and LLI with student satisfaction appears inconsistent. Although LII is a crucial predictor of student satisfaction [10-11], the effect seems to vary according to the content of interaction. When teachers frequently talked about administrative issue such as course requirements and expectations online, social work students in the internet course tended to rate their experience more negatively [7]. Nevertheless, once teachers focused on discussing issues related to course content, students assessed their learning experience more positively. In other words, it does not matter whether teachers frequently interact with a teacher. The content of interaction matters because student may prefer discussing course content with teachers to responding to administrative issues.

Many studies reveal that LLI is not predictive of student satisfaction in fully online settings because students may not have many opportunities to communicate with their classmates [10-11]. A few studies support the positive association between LLI and student satisfaction. Previous research found that LLI and LII were significant predictor of perceived learning in an asynchronous online course [12]. A recent study using structural equation modeling (SEM) indicates that LLI is a determinant of satisfaction in online learning among undergraduates [13]. Another study pointed out that there was no difference in satisfaction with web-based instruction between teacher-student interaction group, student-student interaction group, and academic interaction group [14]. Local research conducted in Northeast Normal University in China found that LII and LCI significantly enhanced student satisfaction with online learning, while LLI did not [15].

Overall, LCI and LII seem to contribute to student satisfaction [10-11,15]. However, it remains unclear whether these findings can be generalized to Chinese social work students who had limited access to online courses in the past. As suggested by Kuo and her colleagues [11], it is essential to analyze the association between interaction and student satisfaction in different populations. This study aims to explore the relationship between three types of interaction and social work student satisfaction with online learning by analyzing a sample consisted of social work student at a university in China during the coronavirus disease outbreak.

2. METHOD

The study was conducted in May 2020 and surveyed 180 social work student at university in Fujian, a public university in China. After at least 12-week online courses, information on backgrounds, interaction and online learning satisfaction was collected. A total of 156 students agreed to participate in the study, with 86% response rate. They were informed that their participation was voluntary and their information was anonymous. After excluding samples with incomplete responses in the analyses, a total of 145 subjects were included in the study.

The statistical software G*Power 3.1.9.4 was used to calculate the statistical achieved power for the sample size of 145, alpha error=.05, effect size=.15, and Power=.95 for a linear multiple regression test. The analysis showed that it achieved statistical power for a test utilizing three variables.

Among the participants, there were more female students (77.2%) than males (22.8%). Most respondents were freshmen (35.2%), followed by sophomore (33.8%) and junior (31.0%). Most students had learning experience in the online classes in the last semester (75.2%).

The adapted interaction scale which was developed by Kuo et al. [16] was used to measure the perceived level of LLI, LII, and LCI. The scale was a 5-point Likert scale with 10 items ranging from 1 (strongly disagree) to 5 (strongly agree). Results from factor analysis showed three distinct factors accounting for 66.4% of the item variance. Those values of its subscales (LLI, LII, and LCI) ranged from .68 to .83.

Student satisfaction scale was a three-item scale to assess student satisfaction with their online learning experience, online course content, and online course's function. Likewise, participants responded on a five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). The exploratory factor analysis showed student satisfaction to be, basically, one dimension. The alpha coefficients for these items were .83.

This study explores the relationship between three types of interaction and student satisfaction with online course by employing SEM with AMOS 22.0 to test the measurement and the structure model.

3. RESULTS

In the structure model (see Figure 1), the model fit was acceptable because χ^2/df was 2.2 and the comparative fit index (CFI) was .91 (values of χ^2/df smaller than 3 and CFI above .9 signified a good model fit), while the value of root mean square error of approximation (RMSEA) smaller than .1 represented a good model fit based on the study [17].

Table 1 showed LLI and LCI were predictive of student satisfaction with online courses, whereas LII was not related to student satisfaction. LCI was the most important variable in shaping student satisfaction ($\beta=.59$), followed by LLI ($\beta=.18$). The two significant variables accounted for approximately 60% of the variance in satisfaction with online learning in social work undergraduates. Moreover, gender ($\beta=-.01$), grade ($\beta=.01$), and prior experience ($\beta=-.04$) were not associated with student satisfaction. To avoid reducing model fit, these demographic factors were not included in the analytic model.

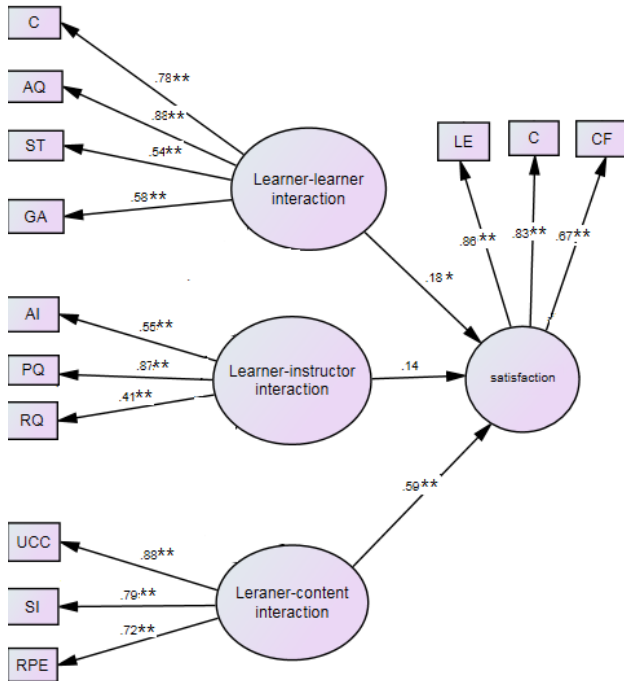


Figure 1. The standardized coefficients for the relationship between three types of interaction and student satisfaction with online learning.

Model fit: $\chi^2/df = 2.2$, CFI = .91, RMSEA = .09. Learner-learner interaction: (C) communication, (AQ) asking questions, (ST) sharing my thoughts, (GA) group activities. Learner-instructor interaction: (AI) asking the instructor, (PQ) posting questions, (RQ) replying questions. Learner-content interaction: (UCC) understanding course content, (SI) stimulating my interest, (RPE) relating my personal experience. Satisfaction: (LE) learning experience, (C) content, (CF) course function. * $p < .05$. ** $p < .01$

Table 1. Parameter estimates of the direct effects in the structural equation model of student satisfaction.

	B (S.E.)	β
learner-learner interaction	22 (.11)	.18*
learner-instructor interaction	.24 (.17)	.14
learner-content interaction.	.61 (.10)	.59**
R^2		.60

Note. $N=145$. * $p < .05$. ** $p < .01$.

4. DISCUSSION

Confronting the spread of coronavirus, it is the first time to take fully online courses for all undergraduates in China and in other countries. This study extends prior work by exploring whether three types of interaction are linked to satisfaction with online courses in social work undergraduates. As anticipated, LCI is positively related to student satisfaction, which is in line with previous research

[10-11.15]. In contrast to these studies [10-11.15] indicating the positive association between LII and student satisfaction, such relationship is not found in the current study. According to the author's personal experience and extant literature [7], online messages about administrative issues, rather than course content, the negative impact of conveying administrative information may counteract the positive effect of discussing course content. The insignificant association between LII and satisfaction with online learning might be attributable to teachers' inexperience. This is the first time social work teachers taught students through online teaching platform such as rain classroom, QQ group classroom and so on. To prevent students from unfamiliarity with the operation of online platform and course regulations, distraction while studying, a teacher may increase time spent on discussing these administrative issues and thus reduces frequency of discussing questions pertinent to course content in which students are interested. Furthermore, random roll call is commonly used as a means to increase learner-instructor interaction and prevent student distraction. However, as mentioned above, when students who respond to these administrative messages, they do not rate their experience more positively [7].

Unlike results from some studies [10-11.15], LLI facilitates satisfaction of Chinese undergraduates with online courses. The difference might be attributed to the nature of sample. Chinese undergraduates are more satisfied with peer contribution in online learning settings than Flemish counterparts [18] and social work students like to interact with their classmates [6]. The results are consistent with these studies [12-13], LLI is positively related to student satisfaction. When teachers set a group assignment that a group work on collaboratively, increase in LLI may contribute to increase in learner satisfaction. These results provide crucial implications for educators and policymakers who intend to increase student satisfaction with online learning in social work in China. First, the study reveals that LCI plays a crucial role in affecting learner satisfaction. Teachers should design interesting course materials and select materials that benefit students' understanding of course content and relate learner personal experience to new concepts and new knowledge. Second, teachers should increase time spent on discussing issues on the content and decrease time spent dealing with the administration of the online course. According to the results, it implies that most of social work teachers would be caught in a dilemma. When a teacher frequently conveys administrative message such as doing a roll call to lower student distraction, it may decrease student satisfaction. However, if a teacher fails to monitor students, the results that focus on talking about course content with some students may give some students an opportunity to skip class. With the accumulation of experience of online teaching, perhaps social work teachers would find the optimal strategy to deal with this dilemma. Furthermore, teachers should create a group assignment or internet class discussion list for increase in LLI.

Although the study is the first to explore the relationship between interaction and satisfaction with online education courses among social work students in China, its results are subject to several limitations. First, the results of this study come from undergraduates in a university, which may limit their transferability to other social work undergraduates. Second, the results cannot be made into causal claims due to the nature of cross-sectional data. At least three waves of data can appropriately examine whether LLI and LCI promote student satisfaction. Finally, failing to include some important variables, such as learning self-efficacy, self-regulation, student engagement, might affect the results on association between three types of interaction and student satisfaction. Future work which considers these important predictors is also needed.

5. CONCLUSION

The study examines the association between three types of interaction and satisfaction with online learning in social work undergraduates in China during coronavirus. Of the three types of interaction, LCI appears the most important predictor of dependent variable, followed by LLI. The results uncover the importance of LLI and LCI in increasing student satisfaction. Educators and policymakers who intend to facilitate student satisfaction with online social work education should give priority to increasing LCI and LLI. Based on social work literature, decrease in time spent on discussing administrative issues and increase in time spent on course content might be an effective way to enhance satisfaction with online learning among social work students.

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