ISSN: 2637-6067 DOI: 10.6918/IJOSSER.202202_5(2).0059

How Do Online Learning Experiences Affect Chinese International Students' Perception on Learning?

Sifan Ye[1, a], Mengyi Zhang[2, b], Lexin Chen[3, c], Weiqing Chen[4, d]

[1]University of California, Santa Barbara, Santa Barbara, 93106, United States

[2]University of California, Davis, Davis, 95616, United States

[3]International School of Nanshan Shenzhen, Shenzhen, 518073, China

[4]Hamden Hall Country Day School, Hamden, 06517, United States

[a]yesifan123@gmail.com, [b]nina990716@gmail.com, [c]lexin00@163.com, [d]helencwq77@gmail.com

Abstract

The purpose of the study was to develop a survey based on Chinese international students' perception and preference towards to online learning. Researchers found several aspects that influence students' satisfaction including students' engagement and interaction, anxiety and frustration level, preference between online learning and in-person learning, and their overall evaluation during their online study period. The survey, once developed, was delivered by research groups' members by links in WeChat to Chinese international students who are taking at least 2 university courses in the United States. Results of the survey exhibits that online learning lacks attraction and provides low motivation, due to the shortage of tracking learning system, for international students to participate comparing to traditional in-person study. Results also indicates that most of the students do not feel anxious due to the simpleness and the easiness to achieve of the online learning system.

Keywords

Distance Education; Chinese International Student; Learning system; Interaction; Socialization.

1. Introduction

According to Singh & Thurman, online learning is "defined as learning experienced through internet in an asynchronous environment where students engage with instructors and fellow students at a time of their convenience and do not need to be co-present online or in a physical space." (p. 302) [1]. Due to COVID-19, most schools had begun to use online learning methods for teaching in 2020. For the group of Chinese students studying in the U.S., starting to use a completely different teaching method in a relatively unfamiliar cultural environment will probably lead to different perception on learning. This study aims to explore Chinese students' perception when exposure to online teaching in such situation in order to fill this research gap. To summarize and analyze their perception on the unfamiliar teaching method can provide realistic basis for the construction of online teaching and remind the online teaching provider, like teachers or teaching platform, to pay attention to the opinions of those students who seldom touched online learning before. Also, it can help students know the possible factors that influence their academic achievement and find a more suitable and better learning method themselves.

The study envisions that there are six factors of online learning which affect Chinese international students' perception on learning. These factors are engagement of online learning

ISSN: 2637-6067 DOI: 10.6918/IJOSSER.202202_5(2).0059

system, anxiety and frustration, the usage of online learning, the differences between online and offline learning, value to career of online learning and preference for online courses. To address the research question, questionnaire are designed, which is about the demographic information of participants and their perception on learning affected by online learning in several aspects. After collecting the data, statistical software is used to perform statistical analysis on the data, then hypotheses of the question are being verified and experimental conclusions are generated form it. Consequently, this study aims to address the following questions:

1. What is the Chinese international students' evaluation of online learning?
2. How do those factors affect Chinese international students' perception on learning respectively?

2. Literature Review

2.1. Research on Online Learning before 2020

Research on online learning has a long history more than 20 years. As early as the beginning of the 21st century, Carr-Chellman developed an ideal type of online course covering serval aspects such as the study guide, no online textbook, assignments and course communications and emphasizes the importance of technological development for online learning [2]. "The evolving technologies provide not only more potential in this respect, but also often increase the ease of use factor, which makes participation in online learning all the more appealing and satisfying." (p. 240) [2]. Singh & Thurman studied the definitions of online learning in different researches in the past 30 years and summarized that technology, time and synonymous terms are the main elements in the definitions of online learning [1].

2.2. Factors Affecting Online Learning

Yukselturk & Bulut discovered that, similar as some existing findings, there is little difference between male and female students [3]. Lee developed a survey which was able to measure online learning service quality, acceptance and satisfaction in online support service quality, online learning acceptance, and student satisfaction [4]. The survey concluded that the online support service quality was essential in estimating the students' performance and perception on learning.

2.3. Evaluation of Online Learning During COVID-19

Dhawan praised online learning as a panacea in the time of COVID-19 because of its accessibility, affordability and flexibility [5]. But some scholars were also concerned about inequality caused by economic factors. Adnan & Anwar indicated that online learning was not able to produce desired results in Pakistan because of their undeveloped economy and technology [6]. Bacher-Hicks, Goodman & Mulhern found the pandemic made the socioeconomic gaps wider, leading to the difference in the ability to acquire online educational resources [7].

2.4. Chinese Students' Attitudes Towards Online Learning

Zhao & Mei found the motivation differences in online learning between American and Chinese college students such as course relevance, reinforcement, affect & emotion [8]. The study showed that American students' motivation was significantly higher than Chinese students' one. Chen, Bennett & Maton suggested that the challenges Chinese students faced in online learning "may have their roots in their fundamental beliefs about the nature of knowledge and the way to acquire knowledge." (p. 27) [9]. According to a survey of 12 Chinese students studying in the United States by Zhang, online learning can help them participate in classroom discussion but also may increase their anxiety [10].

ISSN: 2637-6067 DOI: 10.6918/IJOSSER.202202_5(2).0059

3. Methodology

3.1. Participants

The sample of the study was constituted of college students in the United States, whose first language is Mandarin. 33 online students, including 12 men, 20 women, and 1 preferred not to tell, participated in this study. The mean age of participants was 21.4 years and ranged from 19 to 24 years. Among the participants, the majority was seniors (78.8%), and the proportions of Freshman, Sophomore and Junior were 3%, 9.1% and 6.1% respectively. Several academic disciplines such as humanities and art (12.1%), social science (36.2%), natural science (24.2%), formal science (6.1%), and profession and applied science (21.2%) were represented in the sample.

A majority of participants have been taking online courses for 4 to 9 months (82.8%). Only two (6.1%) participants have been taking online courses for less than 4 months and 4 participants (12.1%) have experienced online courses for more than 9 months. 22 students (66.7%) were taking 4 to 6 online courses, and some remaining students took 1 to 3 online courses (21.2%) or more than 6 online courses (12.1%) at the same time. Among the subjects, most participants conduct synchronous courses and asynchronous courses at the same time, including recorded lectures, tests, and assignments that can be done at any time before the deadline. Therefore, the participants of the study satisfied the sample requirements.

3.2. Survey—Data Collection Instruments

The questionnaires used in this study is based on existing questionnaires from three well-developed research articles. The first questionnaire is called Online Course Impression (OCI), which is proposed by Keller, H., and Karau, S. J in 2013[11]. Accorder Lee, J. W., the second questionnaire contains two relevant surveys -- Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) -- identifying the underlying predictors of behavioral intention toward online learning acceptance and student satisfaction with online classes.[12] The third questionnaire is originated from Students Perception of Online Courses (SPOC) of the article by Young, A., & Norgard, C., which includes questions about course design, course interaction, course content, course support, online course vs. face-to-face courses).[13]

Based on these three existing studies, the questionnaires of this study are generated by selecting the relevant questions from these questionnaires, to assess students' perceptions of online courses and to compare their different opinions on different learning styles (online or in-person.)

3.3. Procedure

(1) The survey was administered after college students had been quarantined at home for months due to the outbreak of COVID-19. All the students had gained substantial experiences with online learning. The participants were invited to complete this online survey conducted on Qualtrics. The participants were clearly informed throughout the study that participation in this research was completely voluntary, and they could withdraw their participation at any time without any reason.

(2) A demographic survey on the background information of the participants will be conducted at the beginning. The questionnaire collects the demographic information of the participants and the questions include the participants' grade, gender, time spent on online learning, number of courses, annual family income etc. A detailed demonstration of background information is presented in Table 1.

(3) Then, the second questionnaire -- Online Learning Perception questionnaire will be distributed to the participants. The questionnaire includes students' perception and assessment on online-learning, which is established based on four existing questionnaires: 1.

ISSN: 2637-6067 DOI: 10.6918/IJOSSER.202202_5(2).0059

online course impressions (OCI); 2. Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) that was developed for determining the student perceptions of ease of use, and usefulness of online learning systems, their behavioral intention toward online learning acceptance and student satisfaction; 3. A questionnaire about student perception of online courses (SPOC) (course design, course interaction, course content, course support, online course vs. face-to-face courses).

(4) Participants are asked to complete the two questionnaires within 10 to 20 minutes.

Table 1. Demographic statistics.

Participants	Groups	N (%)	Mean	Standard Deviation
Year in college	Freshman Sophomore Junior Senior Gap Year	1 (3.0) 3 (9.1) 2 (6.1) 26 (78.8) 1 (3.0)	3.70	.81
Age	19 20 21 22 23 24	3 (9.1) 4 (12.1) 10 (30.3) 9 (27.3) 6 (18.2) 1 (3.0)	21.42	1.28
Gender	Male Female Prefer not to tell	12 (36.4) 20 (60.6) 1 (3.0)	1.67	.54
Annual family income	Less than 100,000 USD Between 100,000-200,000 USD Between 200,000-300,000 USD More than 400,000 USD	10 (30.3) 12 (36.4) 7 (21.2) 4 (12.1)	2.88	1.34
Time they have been taking online courses	Between 1-3 months Between 4-6 months Between 7-9 months More than 9 months	2 (6.1) 14 (42.4) 13 (39.4) 4 (12.1)	3.58	.79
Number of courses	1-3 4-6 More than 6	7 (21.2) 22 (66.7) 4 (12.1)	2.03	.85
Academic Discipline	Humanities & Arts Social Science Natural Science Formal Science Professions & Applied Science	4 (12.1) 12 (36.4) 8 (24.2) 2 (6.1) 7 (21.2)	2.15	1.0
Time spent on synchronous courses per day	Less than 2 hours Between 2-4 hours More than 4 hours	11 (33.3) 18 (54.5) 4 (12.1)	1.79	.65
Time spent on asynchronous courses per day	Less than 2 hours Between 2-4 hours More than 4 hours	6 (18.2) 22 (66.7) 5 (15,2)	1.97	.59

ISSN: 2637-6067 DOI: 10.6918/IJOSSER.202202_5(2).0059

3.4. Data Analysis

This study is interested in obtaining information on how participation in online learning systems affects the learning attitudes of Chinese international students. In addition, the researchers were interested in Chinese students' satisfaction with online learning. Therefore, a series of descriptive statistical analyses were carried out, which enabled the research to visualize the impact of online learning systems on the learning concept of Chinese overseas students. Measures of dispersion and variation are also reflected in the analysis, such as standard deviation, variance, and mean values, thus highlighting the impact of online and tradition class learning on the sample studied.

3.5. Survey Limitations

This study has some limitations. Firstly, due to the COVID 19, our group only collected 33 feasible samples in this study that may not fully represent the actual impact on most Chinese students studying abroad. The total samples we got was fewer than what we expected before the survey. Among them, 16 pieces of data are in incomplete state due to network and other problems. Thus, the limitation due to the insufficient samples objectively exists. In addition, there are many external factors that influence the experiment, such as the slightly different online courses adopted by different universities. Besides, our group did not take students' various personality into consideration, which may cause the imprecise data in the students' engagement and interaction part. Lastly, questions about the comparison between online courses and face-to-face courses do not directly reflect and illustrate the difference and impact of the two courses.

4. Results

4.1. Online Learning System

In this category, students were asked how motivated they were by online courses and how engaged they were with them. When asked about the degree to which students are motivated and attracted to online courses, about 56% of students either neutrally or at some point deny that they are motivated by online courses and think that online courses are not attractive enough. Also, most students deny that online courses can motivate them to do their best. These data suggest that online courses have a strong motivational impact on Chinese students studying abroad. In addition, 60% of students denied that online discussions motivated them to participate, but most showed no significant bias toward leaving the online course. There was also no significant bias in the presence or absence of students to motivate them to take online courses.

4.2. Engagement of Online Learning System

In this sub-section, students were asked about their perception of the uncertainty of online courses and how it affected their anxiety. About 67% of the students were either neutral or in some way denied that online courses made them anxious. In addition, about 73% of the students agreed that the anonymity of online classes made them less anxious than traditional face-to-face classes. Also, about 76% of students were either neutral or denied that they were losing sleep worrying about online courses. This further suggests the comfort that online courses bring to Chinese students. However, 67% of students still agree that online courses involve too much uncertainty, either neutrally or at some point. There was also no significant bias towards whether online courses reduced students' anxiety about study.

4.3. Value to Career of Online learning

Students were asked how they felt about the online course overall, from how easy it was to manipulate to how easy it was to use. About 70% of students agree neutrally or at some point

ISSN: 2637-6067 DOI: 10.6918/IJOSSER.202202_5(2).0059

that using an online learning system can easily achieve what they want to do. Furthermore, about 81% of the students agreed neutrally or at some point that the online learning system was clear and understood to them. About 70% of students agree that it is easy to become proficient in online learning systems at some point or another. Also, around 76% of students agree that online learning systems are easy to use at some point or another. According to these data, for the majority of Chinese overseas students, there is no negative experience or negative impact on the operation of online courses. In addition, although there are still about 76% of the site or part of the students agree with the online learning system is very useful to their learning, but the students did not think of online learning system, strongly enhance their ability to complete professional task, the efficiency of learning tasks and professional tasks, and participants did not particularly agree or disagree with online learning systems that allow them to complete courses more quickly. This highlights that although online learning systems are easy to master, they do not significantly improve students' academic performance.

4.4. Online Learning vs. Face-to-Face Learning

In this section, questions were collected from participants about the comparison between online and face-to-face courses. Although 85% of the respondents hold neutral, somewhat opposed, and strongly opposed attitudes toward the idea that online courses are more conducive to their learning than face-to-face courses, most students have no strong preference over these two courses. Further analysis showed that 82% of the students were more comfortable neutrally or identified with online class discussions than with face-to-face class discussions. This suggests a partial preference for online courses. In addition, most students think there is no strong difference in the amount of time required to study for an online course and a face-to-face course. However, 76% of respondents found it more difficult to be neutral or deny online courses than face-to-face. This further highlights the majority of students' preference for online courses.

4.5. Anxiety and Frustration

Students were queried about questions on how the online courses had affected their careers. About 79% of the participants agreed that online courses had helped their careers neutrally or in some way, and none strongly agreed that online courses had helped their careers. Furthermore, the data showed no significant bias toward the value of online courses to the careers of the respondents. In particular, students showed no significant bias towards whether online courses would help them find a better job. In addition, about 76% of students are neutral or deny to some extent that online courses will make them more competitive when it comes to promotions and raises. About 60% of students were neutral to doubts about the relevance of online courses to their jobs.

4.6. Overall Evaluation and Preference for Online Course

In both sections, respondents were asked about their preferences for online and face-to-face classes, as well as their overall evaluation of online courses. About 79% of students either neutrally or deny that they learn better online than in a traditional classroom. Still, 76% of students either neutral or deny that they would choose an online course over a traditional one. In addition, 76% of the students either agreed or said they preferred to participate in online discussions. In general, students have no obvious preference for online courses compared with traditional courses. Furthermore, about 73% of the students were neutral or agreed that the online course experience was positive. About 79% of the students either agreed or agreed that they would recommend online courses to family or friends. About 85% of students either agree that online learning is valuable. About 76% of the students either agreed or said they liked taking classes online. And about 76% of students said they were neutral or denied that they hated online courses. All these data show that most students have a positive experience of

ISSN: 2637-6067 DOI: 10.6918/IJOSSER.202202_5(2).0059

online courses, and the experience brought by them makes their attitude towards online courses positive. The last data shows that not all students have taken online courses during the epidemic. A summary of students' overall perception and satisfaction with online courses is shown in Figure 1.

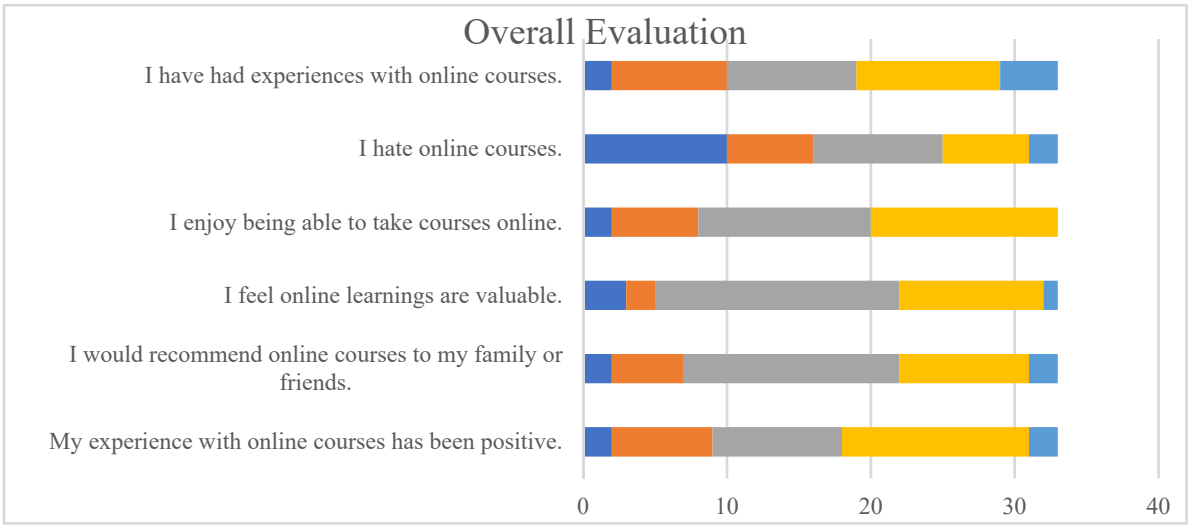

Figure 1. Students' Overall Evaluation of online courses.

5. Conclusion

According to the survey results, Chinese overseas students reported that the online course system lacked motivation and the design of the online course system was not attractive enough. Some of these factors include that online courses contain too much uncertainty, and that online courses do not have a specific tracking learning system to improve students' learning ability and efficiency in completing tasks. In this regard, universities need to consider how to make online courses more conducive to student learning than face-to-face courses during the COVID-19 period. In addition, most students do not feel strongly that online courses will help them in their future career and make them more competitive in terms of promotions and raises. Therefore, the education bureau and teachers need to give students more instructions and help in this regard.

The results so far suggest that most students deny that online courses make them anxious or lose sleep over their worries, in part because of the anonymity of online courses. While the anonymity of online courses may have contributed to their low motivation for students, there is no denying that it also led most students to agree that they liked online courses. Many students also participated in the discussion for the online course, and the majority of students reported preferring neutral or consenting to online class discussions over face-to-face class discussions. Based on these data, teachers need to have a deep understanding of the characteristics of online courses to help adjust the way offline learning systems will be developed in the future. In addition, part of the reason why students agree that the online course experience is positive is that the online learning system can easily achieve what they want to do, and is easy to master and use. Therefore, teachers should take advantage of this feature of online courses to make online learning more valuable, so that students will be more willing to recommend online courses to their family or friends.

All in all, analyzing the data from the questionnaire reveals that the opinions of Chinese students studying abroad are valuable to institutions and teachers developing online courses and programs. Obviously, the experience of online learning system on students' system use, management anxiety, career value and other aspects all influence the concept of learning. As

ISSN: 2637-6067 DOI: 10.6918/IJOSSER.202202_5(2).0059

can be seen from the data in the table, there are differences in the degree of experience and influence of Chinese overseas students on online courses. This shows that online courses are influenced not only by experience, courses and peers, but also by other factors.

The goal in the future is to refine and manage the survey, as well as to increase participation in the survey and adopt other forms to ensure the quality of results. In addition, many external factors were found in this study, so it is possible to develop a more focused online course on the impact on people with different personalities. Online education is a new medium of instruction, and as COVID-19 continues to occur and becomes more important, this research can improve all aspects of it. Current research has found that online courses face a number of adjustments to increase student satisfaction with online courses. In order to effectively use the online learning system for teaching, teachers must strengthen research and discussion to adjust teaching strategies and methods.

References

[1] Singh, V., & Thurman, A. (2019). How many ways can we define online learning? A systematic literature review of definitions of online learning (1988-2018). American Journal of Distance Education, 33(4), 289-306.

[2] Carr-Chellman, A., & Duchastel, P. (2000). The ideal online course. British journal of educational technology, 31(3), 229-241.

[3] Yukselturk, E., & Bulut, S. (2009). Gender differences in self-regulated online learning environment. Journal of Educational Technology & Society, 12(3), 12-22.

[4] Liu, X., Liu, S., Lee, S., & Magjuka, R. J. (2010). Cultural differences in online learning: International student perceptions. Educational Technology & Society, 13(3), 177-188.

[5] Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. Journal of Educational Technology Systems, 49(1), 5-22.

[6] Adnan, M., & Anwar, K. (2020). Online Learning amid the COVID-19 Pandemic: Students' Perspectives. Online Submission, 2(1), 45-51.

[7] Bacher-Hicks, A., Goodman, J., & Mulhern, C. (2020). Inequality in household adaptation to schooling shocks: Covid-induced online learning engagement in real time. Journal of Public Economics, 193, 104345.

[8] Zhao, C., & Mei, Z. (2016). A Case Study of American and Chinese College Students' Motivation Differences in Online Learning Environment. Journal of Education and Learning, 5(4), 104-112.

[9] Chen, R. T. H., Bennett, S., & Maton, K. (2008). The adaptation of Chinese international students to online flexible learning: Two case studies. Distance Education, 29(3), 307-323.

[10] Zhang, Y. L. (2013). Power distance in online learning: Experience of Chinese learners in US higher education. International Review of Research in Open and Distributed Learning, 14(4), 238-254.

[11] Keller, H., & Karau, S. J. (2013). The importance of personality in students ’perceptions of the online learning experience. Computers in Human Behavior, 29(6), 2494-2500.

[12] Lee, J. W. (2010). Online support service quality, online learning acceptance, and student satisfaction. The internet and higher education, 13(4), 277-283.

[13] Young, A., & Norgard, C. (2006). Assessing the quality of online courses from the students' perspective. The Internet and Higher Education, 9(2), 107-115.