

Current Situation of International Education for International Students in China

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ABSTRACT

Over the past decades, China has become the education hub for many international students due to its internalization policies, education standards, economic advantage and the technological advancement. However, due to the impact of COVID-19 pandemic which also affected the educational sector, the closure of boarder necessitated the transition from in-person teaching to virtual teaching for international students unable to come to China due to restrictions. This paper focuses first on the concept of internationalization, internationalization mechanism of China and the management model of international students and second on the current situation of international students within and without China. The source of the data for this study consists of previous literature and survey data collected using an online questionnaire. The findings of this study reveal that international students experienced minor difficulties in transitioning and adapting to online classes, although the level of satisfaction of the students is low. Based on the findings of the study it can be concluded that the Chinese internationalization agenda and corporations can be further enhanced by establishing online programs for international students, which will require rigorous adjustment of the curriculum to accommodate more people around the globe among other considerations.

1. Introduction

Internationalization can be defined as the process of integrating an international, intercultural, or global dimension into the purpose, functions, or delivery of higher education ^[1]. The internalization of higher education has over the years led by the key players in the west such as the US, UK, Germany, Canada etc. which left China and other developing countries behind. However, China has over the years joined the race and is quickly becoming a major player in the new century showing its prowess and global impacts in international students mobility (both in and out of China), major international initiatives (such as belt and

road initiative), and the Chinese universities ascendancy of major world ranking schemes ^[2]. The Chinese concept of internalization can be defined as the a nationally coordinated, institutionally integrated and comprehensive effort to import the Western-led world standards on teaching, research, management and facility development through the exposure of academic staff, students and administrators to Western practices, and to export the Chinese discourse, voice and cultural understanding in the international community through international student education in China and Chinese language/culture promotion overseas ^[2]. Research has shown that the leading rationale for Chinese institutions to actively engage in internationalization of the education was to

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become part of the world higher education community, achieve and strengthen international academic standards for teaching and research and build competitive world-class universities^[3]. China is becoming the knowledge hub and destination for international students^[4]. In less than a decade, China has emerged as a major player in global competition for international students^[5]. It is the only developing country among the ten largest hosting countries in the world. Together with fast economic growth, international mobility of students from China and to China is experiencing one of the fastest-paced periods of change^[6]. China has longstanding achievements in and commitment to innovation and higher learning^[7].

2. Evolution of International Education in China

China's reform and opening-up has over the time enabled the country to undergo a period of economic development, political stability, cultural prosperity, and social harmony which laid the foundation for the development of foreign student studying in China. The initiation of opening-up policy of China in 1978 led to an increase in number of international students patronizing universities in China which led to China's gradual internalization of its education system. According to the ministry of education of the People's Republic of China, the number of international students studying in China reached 342,000 between 1978 - 1999. By the end of 2000, the total number of international students in China reached 407,000 which are from 160 different countries. In 2017, 489,200 international students furthered their studies in China, making an increase of over 10% for the second consecutive year. The number of degree students reached 241,500 (49.38% of the total), up 15.04% year on year. Statistics from the ministry show that the number of international students who chose to study in the country for a master's or Ph.D. degree across a wide range of disciplines have increased massively over time. The Regulations of the People's Republic of China on Academic Degree promulgated in 1980 officially established the "bachelor-master-doctor" three level academic degree system, which had been adopted up to today, allowing foreign scholars studying and conducting researches in China to apply for and obtain internationally recognized mainstream academic degrees of higher education in China^[8]. The Chinese government makes big goals for education in order to accommodate economic, political, and diplomatic development^[9].

3. Current Status of Education Levels of International Students Studying in China

The Ministry of Education of People's Republic of

China implemented the 2003 - 2007 Action Plan to Invigorate Education and expand the recruitment scale based on the principle of "expanding the scale, improving the level, ensuring the quality, and standardizing the management" to attract more international students to seek undergraduate and postgraduate education in China. In recent years, the number of non - degree students amount for the largest share of China's international education market while the degree students account for 46.5% and 49.4% of the total in 2015 and 2017 as shown Figure 1. The number of international students from the different continents are; Asia - 295,043 (59.95%), Africa - 81,562 (16.57%), Europe - 73,618 (14.96%), America - 35,733 (7.26%), Oceania - 6,229 (1.27%). The total number of international students enrolled in degree programs in 2018 are 258,122 which accounts for 52.44% of all foreign students, which led to an increase of 16,579 (6.86%) on 2017. The number of international students enrolled in non-degree programs is 234,063. There are 85,0662 postgraduate-level international students, an increase of 12.28% compared to 2017, of which 25,618 enrolled as doctoral students and 59,444 in master's degrees^[10]. According to the Action Plan for Invigorating Education which aimed at the significantly improving the international education by increasing the number and proportion of degree students.

International students are become diverse in their choice of specialty. In 2015, the highest portion of undergraduates in China majored in western medicine (29.02%), Chinese language (15.94%), economics (13.78%), and engineering (12.7%); for master students, the portions were management (23.01%), engineering (17.32%), and economics (11.34%); and for PhD students, 66.47% studied engineering.

Asia and Africa have a greater number of students pursuing degree programs while Europe and America prefer non - degree programs in China as shown in Table 1. The large proportion of the international students from Asia and Africa was largely due to development of high-tech industries such as industrial manufacturing, medical treatment^[8], engineering break-through etc. The stable and healthy development of the market economy and the economic growth of China, the academic level of economics and management become one of the best which therefore attract the attention of most of the international students from Asia and Africa from developing countries.

Xuezhi 2014^[11] predicted the rise in number of students furthering their studies in China by considering the China's GDP. He maintained that with high, medium, and low GDP predicted, the annual number of FSSC in 2020 will reach between 0.82 million to 1.09 million, and

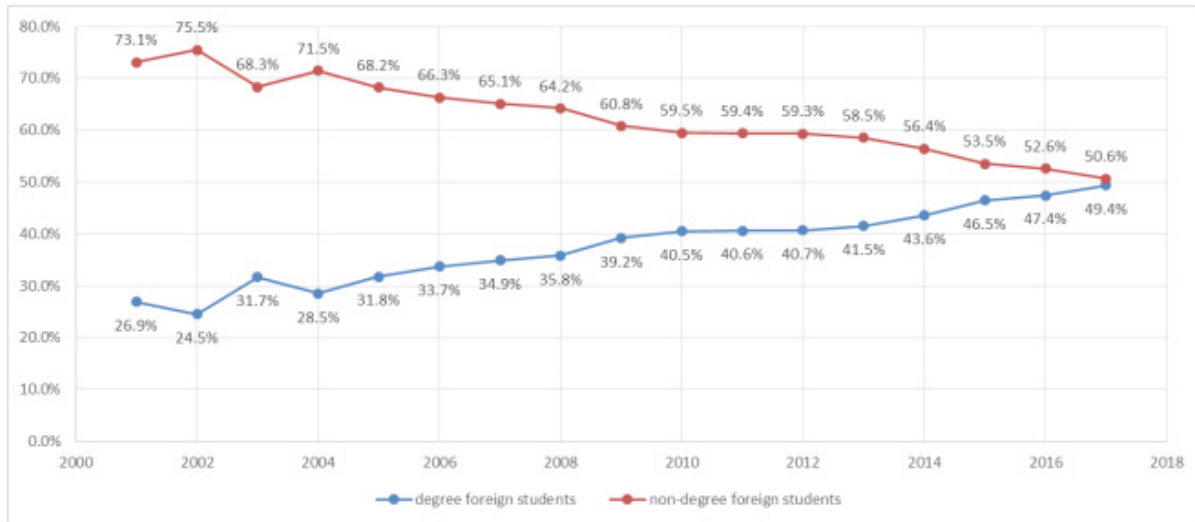


Figure 1. Trend of changes in the proportions of degree students and non-degree students [8]

the cumulative number of FSSC between 2011-2020 will reach between 5.44 million to 6.43 million as shown in the Table 2 below;

Table 1. Degree students numbers and proportions by sending continents in 2017 [8]

Continents	Degree students	Proportion
Asia	160323	54.7%
Europe	18345	24.4%
Africa	51959	70.0%
America	9047	23.1%
Oceania	1869	25.1%
Total	241543	49.4%

Table 2. The predicted Numbers of FSSC in 2011-2020 [11]

Years	High	Medium	Low
2011	323,923	321,563	316,865
2012	371,781	366,330	355,612
2013	427,295	417,843	399,481
2014	491,784	477,194	449,200
2015	566,806	545,665	505,607
2016	644,197	610,432	556,568
2017	732,980	683,482	613,062
2018	834,930	765,937	675,727
2019	952,111	859,079	745,276
2020	1,086,918	964,366	822,510

The increase in number of international students is attributed to the economy - low cost of education and access to scholarships [7,12], technological advancement as well as political, cultural, and other social factors which are summed up as environmental factors. The rapid increase in international students would greatly benefit the Chinese

economic and social developments by promoting the China’s international development agenda and creating a stronger tie with other countries under the Chinese Belt and Road Initiative. International students have a major role in improving diplomatic relations in which the students are human resources for Chinese enterprises oversea [13]. Reputation of higher education institution which is due to the successful enhancement and advancement of the quality of a number of first-tier universities thereby raising the institutional reputation within the region can be seen as a motivation for international students to pursue education in China [12]. In addition, economic motivations include increasing human capital (knowledge and skills) and improving better job opportunities [14,12]. Fang and Wu (2016) assumed that international students not only increase the direct economic benefits but also stimulate the growth of related service industries such as catering, transportation, and tourism [13].

4. International Student Management Model in China

There are different models of managing the international students in Chinese universities. According to W. Liu and Z. Liu [15], Three models - Differential model, semi - differential model, and non - differential model - are employed in managing the international students based on his study from 39 Chinese universities. International students are often admitted into a single faculty called ‘Faculty or School of international Education (FIE)’ which is the differential model. The school has a dean which is equivalent to Dean of other faculties (schools) and is in charge of recruitment, enrollment, managing, and provision of daily services.

The FIE has to work with different academic faculties to provide academic courses as the international students are admitted into different disciplines. The advantage of this model is that they can be able to provide specialized services based on the linguistic and cross-cultural needs of international students^[2].

In semi-differential model, 'International Student Office' (ISO) is established under the international office. The International office (ISO) is in charge of international student recruitment, admission, and daily services (such as scholarship, events, immigration, insurance, and career services). Teaching and research are handled by the students' respective faculties, the registrar's office and the graduate school in a non-differential way from the local Chinese students. In this model, matters and issues relating to the international students are exclusively dealt with by the ISO. The international student office is under the leadership of a director.

The third model is the non-differential model in which the international students are fully integrated with their Chinese counterparts in the management and services. However, many schools are yet to transition to this model which is partly due to the difference in admission procedures and requirements for international students. The international students are recruited and admitted based document assessment while the Chinese students are admitted through a national examination written by everyone. However, this model has been partly implemented for international students whose major is taught in Chinese. In this way, the international students attend same classes with the Chinese students and undergo the same standard evaluation and assessment method.

5. Safety and Supportive Infrastructure

Students undergoing international education in China are expected according to the provision of the law to exercise a level of safety compliance similar to the local Chinese students. The perception of safety and expectation of the international students varies. The circumstances at home mostly dictates the student's perspective about safety. Most of the students are of the opinion that Chinese government provides relatively safe environment for international students. The international students are accorded with the treatment of international guest in which they are always provided with better living conditions compared to their Chinese students counterpart^[2].

6. Current Situation of International Students Studying in Chinese Higher Institutions

The COVID-19 pandemic resulted to closure of borders

by almost all the countries which brought the economy of most nations to a standstill. The rate and number of COVID-19 infections in the world forced many countries to close their schools with the sole aim of preventing the spread and transmission of COVID-19 to the university populations and eventually to the communities. To prevent a total shutdown of the educational sector, universities shift from in-person teaching activities to virtual classrooms. This also led to cancellation of many international and local conferences and workshops which was also turned virtual later. However, due border closure, most of the international students that are outside of China experienced difficulties shifting from in-person to virtual classrooms. In order to ascertain the level of satisfaction of the international students a survey was conducted among international students studying in Central South University.

7. Method of Data Collection

The survey targets the international students of Central South University studying engineering courses who took online classes during the pandemic period and post pandemic period in which some students due to the boarder restrictions were not able to come to China thereby resorting to online classes. Although China was able to contain and manage the Covid-19, the cases in other countries kept on rising which make it difficult for the students that were newly admitted to come to China as such, the only available option for them is online classes. An anonymous online survey was sent to the students via discussion groups and social media accounts such as WeChat and QQ. The survey was designed to identify the challenges encountered by international students during online classes in 2020 and 2021 which include connection difficulties, lack of reliable and high-speed internet, time management during exams, balancing work with study and family engagement, lack of quiet space to study among other things.

8. Results & Discussions

8.1 Demographic and Academic Data

The characteristics of the students that took part in the survey is summarized in Figure 1 and Figure 2. A total of 131 students participated and completed the survey questionnaire. The age range that is most represented in the survey was 25 - 30 years with a (71) 54.2% from the total percentage. The number male respondent (83.21%) was higher than the number of female respondents (16.79%). From the 131 students that responded to the questionnaire, 74 (56.49%) students are currently

in China while 57 (43.51%) represent the number of students that are outside China. The number of PhD students that completed the survey is 15 (11.45%), and those undergoing Master’s degree are 65 (49.62%). Alongside the PhD and Master’s students, 35 seniors, 9 juniors, 6 sophomore, and 1 freshman responded to the questionnaire. Majority of the students that responded are from school of civil engineering with 60 (45.8%) respondent and transportation engineering having 39 (29.77%) respondents. Other respondents are from mechanical engineering with 3 (2.29%) students and 1(0.76%) computer engineering student. Those that specify other departments apart from those listed in the questionnaire comprised of 28 (21.37%) students.

8.2 Respondent Satisfaction with Communication Software Used

To facilitate the continuity of knowledge due to closure of schools, a wide variety of freely available platforms used as a medium of communication for online classes during lockdown worldwide include Tencent meeting, zoom, Microsoft teams, Lark, and skype. There was a significant level of satisfaction from the student that responded to survey (M = 2.22, SD = 0.731) regarding the software (Tencent meeting) used to disseminate knowledge to the student from the teachers. The mean value of the response is above the midpoint of the scale (2) from 1 to 4.

8.4 Connection Difficulties and Interference Experienced by the Respondent

The internet speed used by students may vary depending on the location of the individual which would make it difficult for the student when taking their classes online. According to the respondent, 14 (10.69%) students reported that they experienced no connection difficulties

during the online classes, 60 (45.8%) students experienced occasional difficulties, 29 (22.14%) had some difficulties while 28 (21.37%) experienced many difficulties. This result may be seen as a factor that influenced the ease with which the students adapt to the online classes. This relation has been verified using the Chi-squared statistical analysis which shows that there is evidence of significant relationship between the connection difficulties experienced by the students and the ease with which they adapted to online classes ($p < 0.05$) as shown in Table 3. Moreover, the current location of the respondent maybe a contributing factor because the internet speed at different countries varies. For instance, while China has started using 5G network, some countries are using 4G network while in some remote areas in developing countries are still using 3G network. To further ascertain the relationship between the connection difficulties experienced by the students and their location, Chi-square was used to determine the relationship. The result shows that there is evidence of significant relationship between the current location of the students and the connection difficulties experienced. Those that are currently in China are might experience minor or no difficulties when it comes to connection and internet problems while those outside China were likely the ones that experienced many difficulties with regards to connectivity.

8.5 Correlation between the Student Preference of Online Learning/Teaching and the Variables Included in the Study

The correlations between the student preference to online learning to the quality of online teaching compared to in-person teaching, overall experience with online classes, student - interaction, academic level, ease of adapting to online classes, current location and nationality are presented in Table 4 below.

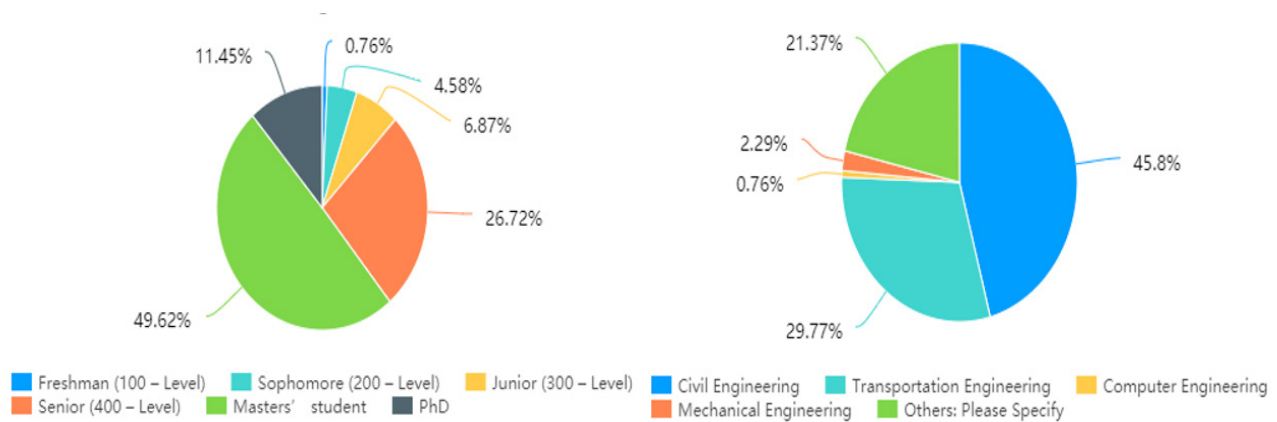


Figure 2. Demographic data from the survey

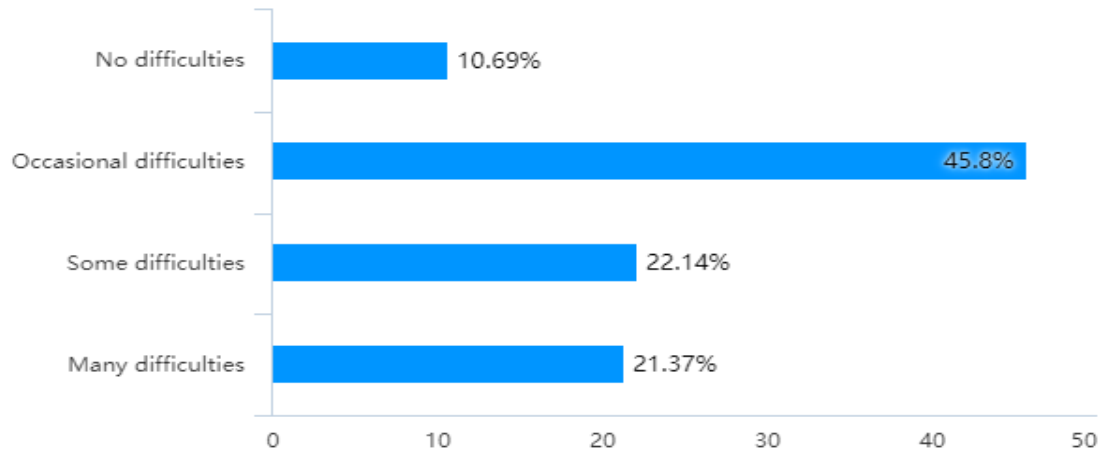


Figure 3. Difficulties experienced by the students

Table 3. Relationship between the connection difficulties experienced by the students and the ease with which they adapted to online classes

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	45.036 ^a	12	.000
Likelihood Ratio	46.571	12	.000
Linear-by-Linear Association	.313	1	.576
N of Valid Cases	129		

a. 12 cells (60.0%) have expected count less than 5. The minimum expected count is .60.

The student preference to online classes compared with in-person classes was found to be positively correlated the current location of the students. It was also found that the overall experience with online classes is positively correlated with ease of adapting to online classes. Moreover, student - teacher interaction was found to be inversely correlated with the nationality of the students suggesting that the students from countries with connection problems and low internet speed find it difficult to interact with the teacher especially during the class.

8.6 Student-Student and Teacher-Students' Interaction

The communication pattern between the students and the teacher as well as student to student plays an important role. This may be among the determinants of how the students would concentrate during the classes without losing interest and becoming bored during the class which will ultimately affect the effectiveness of the process. In traditional higher education where the learning process is face -to -face, the teacher is expected

to accomplish certain functional duties to ensure successful learning which requires the presence of the teacher. Teaching presence can be defined as the design, facilitation, direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes^[16]. However, online learning is based more on materials (readings, videos, exercises, etc.) than on direct personal interactions (discussions, presentations, etc.). The presence of teachers in virtual teaching environment is paramount which is a major determinant of how successful the learning outcome would be. Rapanta C. et al^[17] developed a tripartite frame-work considering the educators as designers, the tutors and the evaluators of the learning experience which consist of three sub-presences of the teaching presence, namely: cognitive, social and facilitatory presence. The sub-presence considers the level of preparedness of the students, introducing and maintaining ways to enhance the student-teacher and student-student interaction, and to teachers' facilitatory discourse, direct instruction embodying tools/resources and mentoring activities as shown in the Figure 4 below.

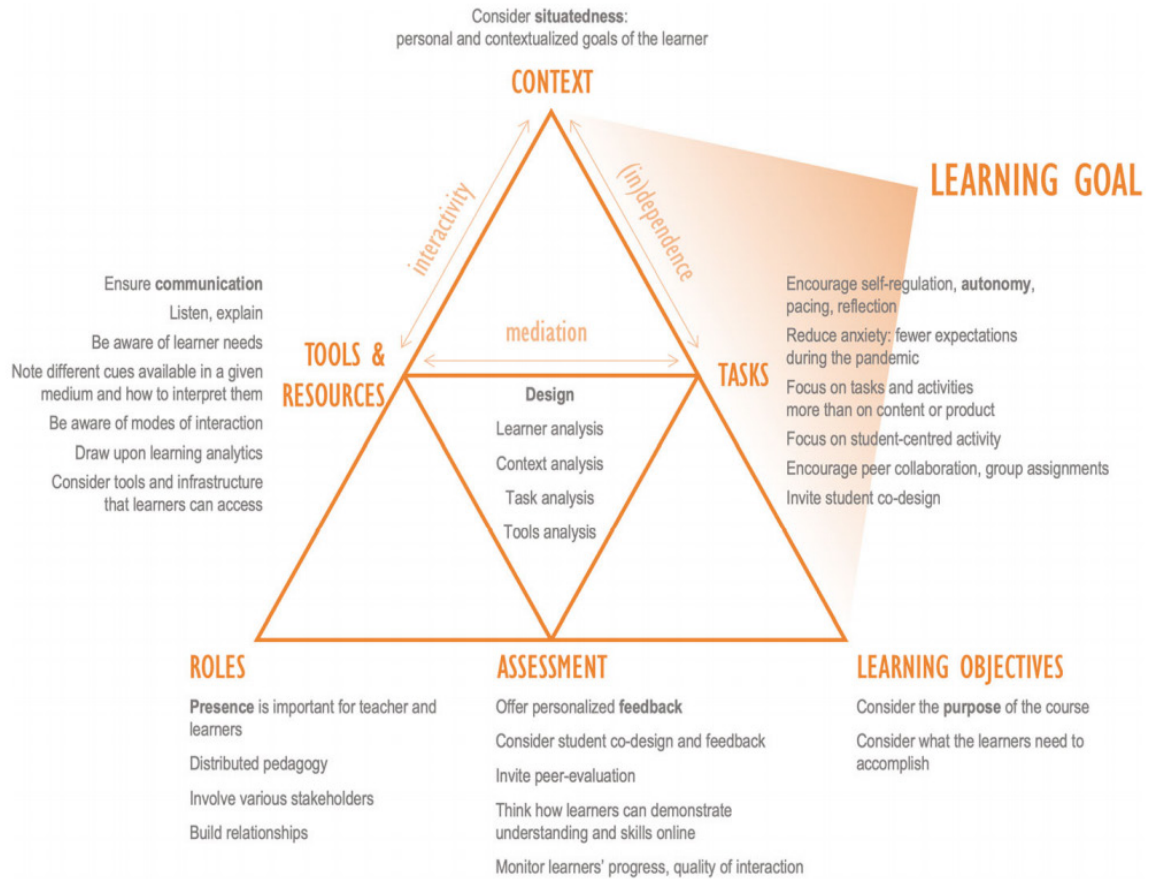


Figure 4. Emerging aspects of the online learning activity focusing on teachers as the main actors ^[17]

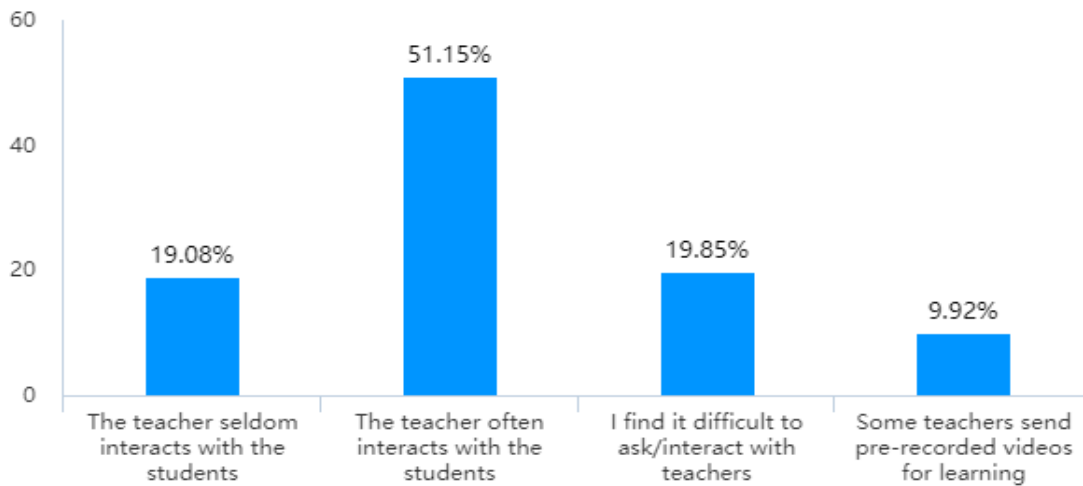


Figure 5. Students - Teacher Interaction during online teaching

Table 4. Correlation analysis between the variables considered

Correlations		Student preference about online classes	Quality of online	Overall experience with online classes	Student - Teacher Interaction	Academic level	Ease of adapting to online classes	Nationality	Current location
Student preference about online classes	Pearson Correlation	1	-.163	.098	.035	.108	.009	.023	.223*
	Sig. (2-tailed)		.065	.267	.691	.225	.921	.794	.011
Quality of online	Pearson Correlation	-.163	1	.019	-.146	.058	.001	-.051	-.132
	Sig. (2-tailed)	.065		.832	.098	.516	.995	.568	.137
Overall experience with online classes	Pearson Correlation	.098	.019	1	.158	.030	.319**	.045	.101
	Sig. (2-tailed)	.267	.832		.073	.733	.000	.614	.255
Student - Teacher Interaction	Pearson Correlation	.035	-.146	.158	1	-.139	.031	-.182*	.161
	Sig. (2-tailed)	.691	.098	.073		.117	.726	.039	.069
Academic level	Pearson Correlation	.108	.058	.030	-.139	1	.077	.104	-.068
	Sig. (2-tailed)	.225	.516	.733	.117		.386	.240	.445
Ease of adapting to online classes	Pearson Correlation	.009	.001	.319**	.031	.077	1	-.054	.011
	Sig. (2-tailed)	.921	.995	.000	.726	.386		.546	.898
Nationality	Pearson Correlation	.023	-.051	.045	-.182*	.104	-.054	1	-.140
	Sig. (2-tailed)	.794	.568	.614	.039	.240	.546		.114
Current location	Pearson Correlation	.223*	-.132	.101	.161	-.068	.011	-.140	1
	Sig. (2-tailed)	.011	.137	.255	.069	.445	.898	.114	

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

8.7 Student Assessment and Performance

The assessment of the students takes various forms ranging from online examination, closed book examination, open book examination and take-home examination. Some of the courses were project based thereby students are asked to write a technical report. The respondents reported some challenges that they experienced mostly during the examination in which time

management (54.96%) and reliable internet connection (34.35%) was reported as the biggest challenge to the students. Other challenges include inability of the students to focus and concentrate (29.01%), feeling of social disconnection (24.43%), and feeling of not being engaged (23.66%). These challenges are among the factors that can result to lack of motivation, physical discomfort^[18] with working with poor network in a poor environment as well as feeling the stress of writing the examination online.

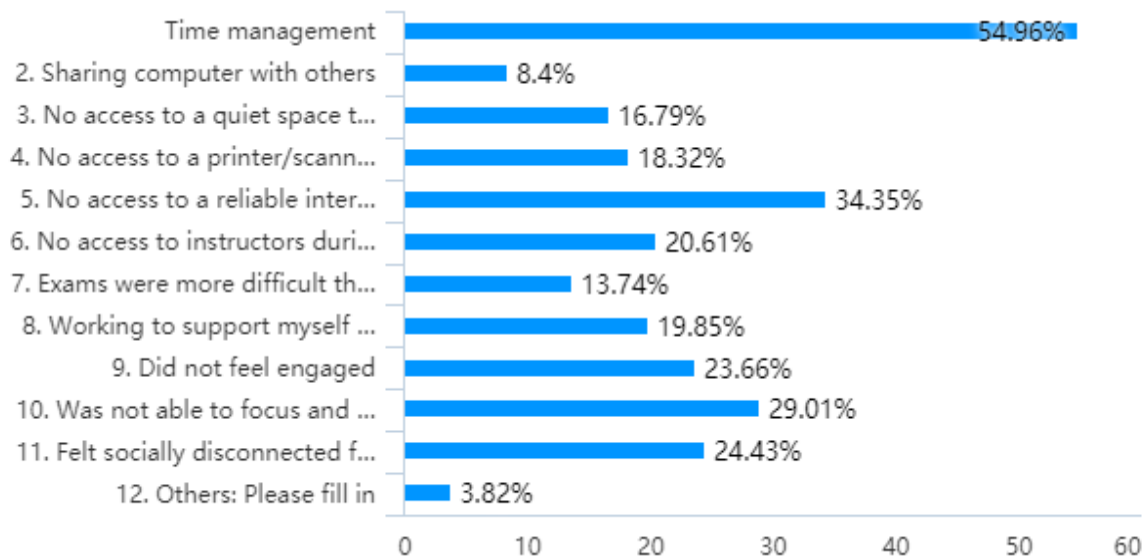


Figure 6. Difficulties experienced during online examination

8.8 Transfer of Technology

The geometric growth rate of engineering knowledge has been reflected in an accelerating rate of technology introduction and adoption ^[19]. With the advent of technology in 21st century, artificial intelligence (AI) and other robotic technology are gradually taking over the jobs performed by the human beings ^[20] which therefore necessitate the need to prepare and train the students for a job that does not exist. It is expected that engineering students upon graduation will be able to harness their potentials and create solutions to future problems which are more or less similar to the problems faced by the engineering society today. This would require an in-depth understanding of the principles and practical knowledge learned through experiments. This can only be achieved by providing, teaching, and mentoring the students the innovative, creative, and problem-solving, and critical thinking skills. However, due to the impact of COVID-19 which resulted to border closure, many international students who are not in China are unable to receive direct mentorship from experienced professors who may not be able to provide such service directly. In addition, engineering is characterized by the growing demand made on engineers in their professional lives to provide solutions to problems faced by the society and bring about new innovative and creative ideas to make life easy for the people. The education system of Peoples' Republic of China is designed to train professionals capable of realizing and achieving the objectives through rigorous training of both domestic and international students for onward transfer of such knowledge to their home country. However, with the abrupt change from in-person teaching

to online teaching for some of the international students, such objectives may not be fully realized because the approach is different.

9. Conclusions

The pandemic caused disruption to education all over the world which deprived the international students the opportunity to interact socially with their peers from different parts of the world. One of the difficulties experienced by many universities around the world is effective transitioning from teaching in physical environment to complete digital environment. However, the case is different about China mainly because of their drastic effort in managing the impacts of the pandemic on education which resulted to smooth transition to virtual environment by employing the use of virtual teaching using different available online teaching platforms. However, even when the universities in China have re-opened and academic activities continued in all universities in China, many international students especially the new intake were not able to come to China to continue with in-person classes due to border closure which leave them with no option but to take the classes online. Although the online teaching has some advantages and most of the students experienced minor difficulties - such as unequal access to good internet connection, level of technology in their country, time management, the level of satisfaction of the students with the mode of instruction was low according to the data from the survey. The students prefer in-person classes over the online classes due to numerous advantages such as their motivation to learn and experience the cultural and social

aspect of China, economic benefits among other things. Furthermore, with challenges comes an opportunity. With the level of internet connectivity in most of the countries in the world, this has presented an opportunity to look at the possibility for Chinese universities to offer courses online although this may not fully serve the internationalization agenda of the Chinese universities which aimed at utilizing international students experience in China to promote the Chinese discourse, voice and cultural understanding to international community. However, the successful implementation of such program may require careful adjustment of the curriculum to ensure that high quality education is delivered to the international students while they stay in their country which would ultimately reduce the cost for the students especially self-sponsored students.

Possible Limitations of the study

This study of course has some limitations which should be addressed. The survey questionnaire was advertised to the students and data collection continued for only eight (10) days, it is our believe that time ought to be more so as to allow more students to have access to the questionnaire even though there was a substantial response from the students (130 International students majorly from school of Civil and transportation engineering). The investigation did not consider the faculty members perception about the online teaching who are a major stakeholder when it comes to online learning. It did not also consider and evaluate some institutional data (such as grades, financial aid, etc.) which may enhance the study therefore making it difficult to arrive at a conclusion when it comes to some issues regarding the online learning. Because of these limitations, the results obtained may not be used for generalization in China but can provide an insight about the current situations of international students. A subsequent investigation would consider and address such limitations.

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