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Acceptance of online education in China: A reassessment in light of changed circumstances due to the COVID-19 pandemic

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ABSTRACT

Online education in China, previously considered ineffective, has undergone significant infrastructural improvements as a result of the COVID-19 pandemic requiring students to attend classes at home. This paper explores the experiences of Chinese students who have studied online during the COVID-19 pandemic to investigate whether the use of online education for degree-seekers has become a more acceptable way to expand access to higher education in China. Specifically, this study utilizes a phenomenological approach which focuses on the perspectives of the Chinese students’ impressions from their recent experience with taking online courses. Findings indicate that while there is a growing acceptance of online education, there remain key challenges online educators must overcome to gain true legitimacy in China’s higher education sector.

Background

Because of policies that have been implemented during the COVID-19 pandemic, online education has become an important area of higher education research (Chan, 2020). Online education models have gone from opt-in to mandatory since the pandemic began (Amemado, 2020). Nowhere has this shift been more dramatic than in China (Zhou et al., 2020) and understanding this shift can help educators predict future trends for online education in China.

According to China’s recent census, approximately 15% of the Chinese population has a higher education. This percentage is considerably higher among the young, with a steadily growing percentage of the Chinese population attending college at a current all-time high of 54.4% as of 2020 (China’s Higher Education, 2021). China’s compulsory education system is widely considered to be one of the world’s most arduous (Hansen, 2018; Lee, 2000). The score received on the Chinese college entrance examination will determine whether or not a student has the opportunity to attend a Chinese university (Lee, 2000). Those with insufficient scores will be unable to continue on with their peers to college and will typically enter the labor market directly or go back to high school and try to retake the exam the following year (Hansen, 2018).

Unlike the considerable startup costs associated with building brick and mortar educational institutions, the creation of online degrees could be a more cost-effective means to afford large quantities of students the ability to receive post secondary education. Specifically, an individual educational institution could potentially provide an opportunity to acquire a degree to any student with access to the internet. Particularly if major components of the students’ coursework are asynchronous and can be prepared in advance, online education is more easily scalable, and at only a marginal increase in cost. There are dozens of other benefits to online education as have been discussed by others (Angelova, 2020; Bacos, 2020; Bates & Pool, 2003; Bell & Fredemen, 2013; Daraku & Hoxha, 2020; Hassan et al., 2013; Keengwe & Kidd, 2011; Li & Irby, 2008; Means et al., 2009; Nikdel Teymori & Fardin, 2020; Paudel, 2021; Serhan, 2020; Somekh & Davis, 1999; Sun & Chen, 2016).

Early western visionaries described the spread of online education as market driven (Medhat, 1998). In the western world, these predictions have largely held true (Palvia et al., 2018). However, early efforts to expand western style online education into China stalled due to limited digital infrastructure and cultural as well as linguistic gaps (Marginson, 2004). The same study suggested that “market-controlled paths of development” had limited viability in China. More recently, some researchers have expressed concerns about colonialism in cross-cultural online education (Chen et al., 2020).

China’s ministry of education has promoted online education for some time, if mostly in a supplemental capacity (Zhou et al., 2020). Yet for various reasons, China has lagged behind other countries in adopting...
it. In 2010, Zhu, Valcke, and Schellens found that rates of implementation of online instruction were limited, with only 8% of the Chinese instructors in their sample using online instruction models, compared to 27% of the Flemish faculty. They acknowledged that this phenomenon could be explained by the relatively recent expansion of higher education in China (Mok, 2016) and relatively limited digital infrastructure. In addition to poor digital infrastructure, other reasons for slow adoption of online instruction include a natural reluctance by instructors to adopt new teaching practices (Zhu et al., 2010), and skepticism regarding the quality of online instruction (Lau, 2020). China’s slow adoption of online learning platforms has, arguably, limited education opportunities for students. (Chen et al., 2020).

Yet any statement regarding China’s higher education system runs the risk of becoming outdated simply because of the rapid expansion and development of higher education institutions in China (Schleicher, 2016). Recently, China has become noted for its online infrastructure and the government prioritized online education as early as 2018 (Lau, 2020; Zhou et al., 2020). Yet resistance to implementing online degree programs persist (Lau, 2020; Yang, 2020). In a study comparing online- and traditional education models in China before the pandemic, Li (2018) found that although online education increases the income of learners, the increases are lower than those of learners in traditional education models and decreased from 2003 to 2006. These findings could be understood to reflect a preference for graduates of traditional education among employers and socio-economic forces in China during a period of intense massification of higher education (Mok, 2016). The resulting access to traditional programs would result in greater availability of graduates from such programs in the job market.

During the pandemic, China’s higher education institutions dramatically expanded their implementation of online education (Sun et al., 2020; Zheng, 2021; Zhu & Liu, 2020). This transition has been described by various scholars and several studies have examined the experiences of administration, teachers and students during this transition (Sun et al., 2020, Zhu & Liu, 2020). Most scholars agree that this expansion marks a transition to a greater implementation of online education methods in the future, while also noting challenges that will have to be overcome (Zheng, 2021; Zhu & Liu, 2020). Recent studies on this topic have focused on faculty (Bao; Gao & Zhang) and students’ experiences (Chen et al., 2020; Lin & Gao, 2020; Peters et al., 2020; Yao et al., 2020).

Research studies have examined instructors during the COVID-19 pandemic. Bao (2020) reported best practices of an unspecified number of Chinese instructors from Peking University teaching online: be prepared for unexpected problems, divide the content into smaller lessons to help students focus, focus on “voice” in instruction, use teaching assistants to support instruction, create assignments that require students to learn “actively,” and combine online learning with effective offline self-study. In a qualitative, single institution study, Gao and Zhang (2020) reported findings focused on three language teachers. Their participants reported having to learn how to adapt their lessons to meet their students’ needs acquiring information and communication technology skills. Instructors in the study reported encountering various technical difficulties and challenges related to classroom management.

Several studies have focused on Chinese students’ experiences online during the COVID-19 pandemic. Chen et al. (2020) examined user satisfaction with online platforms and found that satisfaction was predicated on platform availability. Peters et al. (2020) focused on the experiences of international university students studying in China during the pandemic. While offering no clear conclusions, this study provides a picture of these students’ experiences. In a single institution study, Sun et al. (2020) conducted a survey of over 30,000 Chinese students’ experience studying online during the pandemic during the spring of 2020. They found that while students generally thought that their online education had been effective and that they had made a positive connection with their instructors, they did not report having a strong ability to exercise “focus and restraint” in those studies. Students recommended interactive strategies to improve participation and mitigate technical difficulties.

Yao et al. (2020) compare the impact of synchronous and asynchronous course models on student learning at a Chinese middle-school. They found that students performed better in synchronous lessons. In a similar study focused on higher education, Lin and Gao (2020) surveyed over a thousand students at a university in northeastern China and found students experienced advantages and disadvantages with both synchronous and asynchronous models.

A few studies have focused on the culturally-specific practices in online education (Marginson, 2004; Peters et al., 2020; Zhu et al., 2010). In the 1990s, interest in creating cross-border, online education in China was intense, however many of efforts by western institutions to expand into China failed (Marginson, 2004). Marginson listed a number of reasons why these ventures failed, including technical limitations and a lack of perceived value for online education in Asia. Among his list of reasons for these failures, Marginson suggested that such programs were monolingual and monocultural in nature, making them unattractive to the target consumer. Since this paper, little has been published on this topic. As China has changed dramatically in the last fifteen years, the existence of these challenges should be re-explored.

In general, one of the greatest needs is additional research to further understand the implications of the expansion of online education in China and to find and describe the best practices for online instruction in the Chinese education system (Zhu & Liu, 2020). Perhaps this increased familiarity with online education on the part of both administrators and students could lead to a shift in popular opinion. With the added infrastructure already in place, authors were interested in examining if, as a result of this recent foray into online education, there might be greater acceptance of online degree programs. No qualitative study has focused in-depth on the experiences of Chinese students forced to study online in a cross-border program during the COVID-19 pandemic. Therefore, the main question of this study is: “What are the lived experiences of Chinese students studying in online, cross-border courses during COVID-19 pandemic?”

Materials and methods

This study uses a phenomenological approach. Phenomenology is the study of “the things themselves” (Eberle, 2014, p. 184). In the case of this paper, Chinese students studying online, many doing it formally for the first time. Richards and Morse (2006) note,

Two major assumptions underlie phenomenology. The first is that perceptions present us with evidence of the world—not as it is thought to be but as it is lived…. The second assumption is that human existence is meaningful and of interest in the sense that we are always conscious of something. Existence as being in the world is a phenomenological phrase acknowledging that people are in their worlds and are understandable only in their contexts. (p. 68)

In a phenomenological approach, researchers attempt to bracket their assumptions and biases before collecting data by writing them down. This method also uses open-ended interviews to collect data and then reflect on that data to find the essence of the participants’ experiences.

This study was designed to provide guidance into the Chinese university student perspective on internet-based education. The research was conducted via written free response surveys and face to face interviews. In total, 41 Chinese university students participated in this study. Students were recruited through a message disseminated on WeChat and offered a small amount of extra credit for their effort. All but two (39) of the students were attending a Chinese-US dual-degree partnership program in China, and the remaining two participants attended two other Chinese public universities. The interviews occurred in Spring 2021, by which point in time time the students’ coursework had already been switched to an online medium since the start of Spring 2020 due to COVID-19. All but three (38) of the students interviewed...
still had at least one current course that was online because the foreign professor was not able to return to China. The class breakdown included 30 juniors, 6 seniors and 5 recent graduates. The gender ratio included 18 males and 23 females.

Fourteen students submitted responses in written form based on 13 open-ended questions. These questions are available in Appendix A. These responses were coded for common themes and consolidated into a master document through organizing the results into broader themes and recurring sentiments. Researchers reviewed and coded the results separately and then compared and collated the findings of each. Differences in findings were discussed and resolved.

In total, 27 students took part in face-to-face interviews. These interviews ranged from 1-4 students and typically lasted about 15 minutes per person. The content of the interviews was the same as the surveys, but with additional opportunity for clarification and follow up questions. Interviews were recorded and later listened to by the second author. During group interviews, each student was asked to share their opinion one at a time to each question. Students were provided the questions in advance to accommodate English as a second language speakers and permit students to prepare the necessary vocabulary needed to adequately convey their viewpoints. As needed, certain key words were translated into Chinese in order to facilitate communication. Students were frequently given follow-up questions to further explain their opinion or provide additional background for ideas that had been expressed.

Interview content was initially summarized into bullet points. Then each bullet point was combined into a master document and repeated sentiments were consolidated and noted based on the number of occurrences. Key quotations were also extracted to convey ideas of particular interest. The interview master sheet and the written survey master sheet were also merged using the same method to create the final master document.

Results

Findings regarding participants experiences with online courses during the COVID-19 pandemic ranged from descriptions of their involvements and perceptions on online education before the pandemic, positive and negative experiences with online education during the pandemic, and speculation on future developments for online education in China.

Before COVID

Participants’ opinions of online education covered a wide range before the COVID-19 pandemic. Most of them had not given it much consideration. Seven thought it was a good way to learn something new, although of those participants, four thought it was better as a source of optional learning, e.g. a good way to pursue a hobby or to entertain themselves. An equally strong consensus was that online education was unreliable because it could be easily manipulated. One participant said that he thought it would be a good experience, only to find that it was not.

Most of the participants had some experience with online education before the pandemic. In four cases, the participants had taken part in a supplemental online project that was connected to their regular schoolwork. In four cases, participants used online courses to gain certifications, such as driving tests and the TOEFL exam. Five participants reported studying English online as a supplement to their regular schooling, either because they were intrinsically motivated to do so or their parents expected them to. Three participants mentioned taking part in online courses and being unimpressed with the results. One participant reported difficulties understanding the expectations in the online course she took to study for the TOEFL exam. Based on their prior experiences, three participants suggested that online education should be recreational in nature.

Positive experiences

Four participants reported a predominantly positive experience in their online courses, once they became mandatory during the COVID-19 outbreak in the spring of 2020. They reported being surprised at the effectiveness of online education and that they had gained a new appreciation of the potential accessibility of online education. Three participants mentioned learning to interact with their teacher and classmates in new ways and developing new strategies for success. Three participants also mentioned being impressed with the level of technology in their online courses.

Freedom and flexibility

Participants appreciated the inherent flexibility of online education, both in terms of time and location because they could choose when and where they completed their lessons. They found it relaxing, in many cases, too relaxing. But the participants who seemed to appreciate their online experience the most mentioned having more time to ask the teacher questions, more time to think about a given topic, and the ability to multi-task, leading to more efficient time management.

Ease

Eleven participants also noted that online education was a lot easier than they had expected. Again, for some students, this was a more positive observation than others. Five participants mentioned the convenience of being able to watch their teachers’ lectures more than once, although one mentioned that she never actually utilized this option. Four participants mentioned that they could easily find the answer to exam questions, either within course material or online. They reported satisfaction with the grades that they received in their online class.

Student effort and learning

Six participants mentioned that success in an online class depended on the temperament of the student. One student mentioned online classes being better for introverted students. Five suggested that a successful student needed to have a high level of internal motivation and self-discipline. Students had to take initiative to work with other students to solve problems, including learning how to work new types of software. With practice, one participant noted, students could adapt and improve their work ethic.

Other advantages mentioned in regard to participants’ online experience included access to resources, saving money, and teachers who were trained and demonstrated rapid improvement in their teaching methods. One participant noted that his teachers enhanced their teaching methods quickly. He was also impressed by the variety of technical tools that were available.

Negative experiences

Comparatively more of the participants reported a predominantly negative experience with online education. They reported being disappointed with a lack of creativity, accountability, and interaction with their teachers. Seventeen also expressed surprise at their own lack of motivation and self-control.

Lack of self-discipline and/or self-control

Almost all of the students noticed that online education required more self-discipline than face to face instruction. Twenty-two of them struggled to find this kind of self-discipline. They reported losing energy and motivation and being easily distracted by a variety of other activities. Seven reported struggling with time management and procrastinating on assignments. Four participants mentioned being bored and multitasking and hearing other students do the same (logging into their lesson and then watching recreational videos and/or doing other non-academic activities during class time). Students even acknowledged a lack of motivation to implement some of online education’s intrinsic...
benefits (e.g. re-watching video lectures).

For three students, these habits led to a lack of success in the course as a whole. One participant mentioned thinking he was doing well in the course until he scored poorly on the final exam. Four reported that managing to do well in a course without effort cheapened their learning experience. Still, six mentioned that it was easy to find shortcuts and ways to get help in completing their assignments, including using translators, looking up answers online, receiving help from others and finding other ways to cheat on the exams.

Three participants observed that only some students have the necessary self-discipline and motivation to be successful online. One participant suggested that only really smart students can be successful online, and another that only students with strong self-control can succeed. They also observed that this type of student is rare. One participant went so far as to say this was the reason she did not like online education—because success depended on individual student motivation another participant concluded that online education is good for developing hobbies, but focusing on required classes was more difficult.

**Lack of accountability**

Another strong theme that emerged related to lack of self-discipline was the lack of accountability. Participants observed that the teacher is not there to supervise. Because they were not held accountable, six participants reported making only the most perfunctory effort to complete their classwork. This situation also created opportunities for students to “chat” during the exam. In fact, five of the participants mentioned cheating as a prevalent, non-productive aspect of their online classes, and one even pointed out that the line between collaboration and cheating was unclear.

The students were not the only actors who lacked accountability. At least 5 participants suggested that teachers were not strict enough, that both students and teachers did not put much effort into the lessons. In at least three cases, the participants said that the lack of engagement on the part of the instructor was marked: the instructor simply posted the materials online and never communicated with the students.

**Lack of rigor and/or quality**

Online courses were less effective than face to face courses, according to 34 of the students. Five suggested that the courses were designed ineffectively or that the teaching methods and technical support were not of a very high quality.

Twenty-six participants reported that online courses were easier than face to face courses, with 22 noting that average grades were higher. This phenomenon was referenced both as a positive aspect of online courses and a negative aspect. At least six participants mentioned that students only focused on getting points—and did not learn as much—they did not read or watch all of the material but merely scanned and extracted only the minimum amount of information required to complete assignments. A dozen participants noted that heavy reliance on translators interfered with learning. Eleven participants mentioned that it was very easy to minimize the required effort and that the exams were not rigorous.

Five participants mentioned that they already could not remember anything they had studied in their online course the previous semester. Even when challenged, they maintained that their retention of course material was better in face-to-face courses. One participant even suggested that in his online courses, he learned seventy to eighty percent of what he would normally learn in a face-to-face course.

Three participants also reported a disappointment with the value of their international classes. These courses typically cost the students more, but sometimes only consisted of a PowerPoint presentation, according to some students. Students also struggled to comprehend their international instructors and communicate with them because of time differences. The general conclusion was that although their parents had spent a lot of money for these courses, they had not received proportional instruction.

**Lack of interaction**

It was more difficult to ask questions, according to eight of the participants. This observation was in contrast to those who thought it was easier, but most participants thought it was more difficult to communicate with the teacher online. When asked for reasons, at least three participants suggested that many students were too shy to initiate communication online. It was difficult to feel one knew the instructor, especially if the teacher rarely interacted in real time with the students. Students also had to wait for the teacher to respond to questions, so asking questions was time consuming.

Students also struggled with communication barriers. One participant noted an aspect that surprised him—that the teachers were hard to get to know... “they were mysterious. One could hear their voice, but not see their face.” Students struggled to understand their instructors, particularly in English immersion courses. Students had no immediate way to ask for clarification or get the instructor to modify their communication. Instructors would sometimes misunderstand their questions. Some participants reported that it was “difficult to find help or to know how to look for it.”

In addition to not being able to communicate with their instructor, participants mentioned that they could not communicate with their classmates in the same way they would in a face to face class. They reported that it was “hard to know what other students are thinking” and/or experiencing. They also found it “harder to [network] with other students” or gain understanding of material by talking to them.

**Learning difficulties**

Despite some participants reporting that “online courses were easier,” others mentioned that they really struggled to understand the course materials. Oneparticipant mentioned that PowerPoints and videos are harder to absorb than personal interaction with the teacher. In particular, the student found international (English) classes more challenging online because the students did not have classmates to help them understand the teacher.

**Other negative aspects**

Participants mentioned a variety of other negative experiences regarding online courses. At least ten mentioned technological difficulties briefly, in particular poor internet connections. One participant noted that “even teachers became bored” with teaching the same thing repeatedly in their Chinese courses. Participants mentioned the physical impact of online courses on their eyesight, with one participant simply describing the experience of always facing the computer or mobile phone as “very terrible.”

**Face to face classrooms**

In speaking about their experience in online courses, participants tended to compare those experiences with those they had in face-to-face courses. Almost inevitably, online education suffered in the comparison. In addition to teachers having better methods and lectures being an efficient way to teach, participants reported experiencing better interaction, a richer learning environment, and greater accountability as advantages of face-to-face courses.

**Better interaction**

Participants noted that face-to-face classes are better because the student “can communicate directly with the teacher and ask questions” about the parts of the lecture that he/she did not understand. The instructor can answer the question in real time. This interaction was very meaningful to students, helping them find ways to answer questions. One participant noted that “the relationship with the teacher is better,” because the student can gather non-verbal clues about the teacher. They can see the teacher’s face. Even when pressed on this matter (what about
videos online?), participants insisted they could gain this type of information more effectively in person. Students also mentioned being able to interact and collaborate with their classmates as an advantage of face-to-face courses. Only one participant noted that being in a physical classroom made him nervous.

**Holistic experience**

Participants also cited the quality of their experience in face-to-face instruction as an advantage. Nine participants mentioned the “college experience” which seemed to encompass building relationships (both personal and professional), developing social skills and ideals, and building professional knowledge. Participants also described the face-to-face instruction as more realistic, referring possibly to its tangibility or practicality.

**Accountability**

Participants also mentioned accountability as a marked advantage of face-to-face instruction. They reported having more patience in face-to-face classes and paying more attention. Participants noticed that the process of preparing for and going to a physical classroom helped them focus in a way that other environments, such as libraries and coffee shops, did not. They found it easier to overcome their lazy tendencies and focus when they were surrounded by others doing the same things under the direct supervision of an instructor. They reported the experience that instructors’ presence prevented cheating, both directly and indirectly. Participants acknowledged that students were still preoccupied with grades in a face-to-face classroom, but that the structure of the lessons made it more challenging to get those points without doing the work. In a physical classroom, it is harder to get the point and they have to absorb more information and understand the context (think more) in order to do so. Not all of the participants found this structure helpful, however. One participant mentioned feeling that it was harder to keep up in her face-to-face classes, possibly because they were English immersion classes. Five noted that lecture classes are more efficient and traditional teachers have more ways of teaching.

**Future of online education**

When questioned whether or not they would consider an online degree (based on current conditions), 38 of the participants responded in the negative. They worried that it was “not official” and would “not be accepted by businesses” as a legitimate credential. This concern for the lack of legitimacy extended to the perceptions of society in general. In some cases, participants suggested that online education had “poor quality” and was a “waste of money,” and that students typically lack the self-discipline to make it effective, citing observations from their experiences with online courses. Five students mentioned that they believed they personally were not suited for online education and learned better in face-to-face classes. Others acknowledge that they would not enroll in an online degree program because they have other options. Some participants made a clear stipulation that they would not consider a degree that was online, but they might consider some type of hybrid model with both online and face to face coursework.

Only about five participants said they would be interested in an online degree, and three of those were conditional. These participants express an optimism that online education would be a trend in the future. They noted improvements in online education since the pandemic. They found it an effective way to learn and suggested that some types of degrees/courses might be acceptable. Three participants mentioned interest in online graduate degrees. Participants also suggested that online degrees might be useful for other people—people who would not normally be able to get a degree. For example, online education “can be used in emergency situations.” One participant said if students just want a certification without learning, it is preferable and another noted that online degrees might be easier to get.

**Necessary changes, obstacles**

Participants were asked under what conditions they would consider an online degree and they provided the researchers with a long list of stipulations. These stipulations can be divided into four categories: public opinion, quality, accountability, and special circumstances.

**Public opinion**

Thirty-eight of the participants noted that perceptions regarding online education must change. Not least, the government needed to endorse online education. This endorsement might be motivated by the general opinions of society or sway and influence those opinions. Parents’ opinions would need to change and, in some cases, this depended on the participants’ opinions changing as well. Businesses would need to demonstrate that they accepted online degrees in the same way they valued face-to-face degrees. Four students mentioned high-profile universities offering such degrees might motivate their own opinions about online education.

**Quality**

Another area that the participants noted which needed to change was the quality of online education. They suggested that an online degree might be attractive if the courses were more rigorous, if the class sizes were limited to ten to twenty students, if there were more effective means of interaction with the teacher and other students, and if the technology was improved. Participants mentioned a need for teachers to improve their methods to make the class more interesting and to create the “same atmosphere” as a regular classroom. In addition to improving the design and structure of the online experience, participants mentioned increasing resources available in online classes, suggesting that resources presently available are not very good.

**Accountability**

Participants suggested that online education needed more accountability. A popular suggestion was that online courses needed some type of in-person monitor to keep the students focused and discouraging cheating, although more than one participant acknowledged that setting up such safeguards would be difficult. Participants agreed that educators would have to find a systemic way to help students focus on their study.

**Accessibility**

Finally, participants acknowledged that there were external, extenuating circumstances that might motivate a greater acceptance of online education. They mentioned the relatively low cost of online education might promote broader acceptance. They suggested that some classes could be provided online, raising the possibility of hybrid degrees. They acknowledged that for some people an online degree would be better than no degree at all, and that even in their own situations, they might find some types of certification or work skills easier to get online. Also, participants noted that some students are temperamentally suited for online education, although the implication was that such students were in the minority.

**Discussion**

The research question that guides this study is “What are the lived experiences of Chinese students studying in online, cross border courses during COVID-19 pandemic?” Notably, participants in this study reported positive and negative experiences that undermined or reinforced their ideas about the legitimacy of online education and demarcated a path to higher-quality, more socially accepted online education in China.

**Positive experiences**

Some participants reported overall positive experiences in their
online courses—although more than one noted that thriving in an online course took a special skill set and/or temperament. These observations could be linked to more negative observations made in this and other studies that students struggle to stay focused and/or feel engaged in online courses (Lau, 2020; Lin & Gao, 2020; Sun et al., 2020). Some students reported thriving when given this type of freedom and autonomy, however. Participants also mentioned the flexibility and freedom of the format, echoing the findings of Lin and Gao (2020). Some participants noted that online education was easier, although this observation was not universal. This reported ease is not necessarily a positive finding, however. In many cases, participants implied that the ease came from the many “shortcuts” available in online education, implying a tendency to find methods to circumvent academic standards laid down by the institution. Observations regarding academic dishonesty have been made in other contexts (Chen et al., 2020; He, 2020; Tiejun, 2021). Studies have noted that avoiding such behavior can be an arduous and expensive undertaking (He, 2020; Tiejun, 2021).

Negative experiences

More commonly, participants reported negative experiences with online education in two main areas: a lack of internal focus and control and a lack of outer connections to teachers and classmates. Self-discipline has been noted as a challenge in online education in other studies (Lau, 2020; Lin & Gao, 2020; Sun et al., 2020). Similar to this study, Lin and Gao (2020) found that, in asynchronous classes, students tired of forcing themselves to focus and reported that feeling distant from other students led to a lack of motivation, whereas in synchronous classes, they found themselves easily distracted by other students who were off-task. Lack of engagement with teachers and classmates have been noted as well (Lau, 2020; Lin & Gao, 2020). These are areas that must be addressed in future implementation of online courses. Efforts have been made to engage students more, for example, but such efforts have not been consistently implemented. Many students in this study agreed with an observation by Chinese student Kan recorded by Lau (2020) that “the real-life campus experience cannot go virtual.”

Relatively few participants complained about technical difficulties, contrasting the findings of Marginson (2004) which reported these challenges as one of the primary reasons online education would not work in China. Implications of our findings are that these deficits in technical infrastructure have been and are being overcome. Our findings are echoed in a report of China’s infrastructure by Lau (2020) and Yang (2020). As a result of China’s recent expansion of online service capability due to the COVID-19 pandemic, this barrier might have been reduced (Sun et al., 2020; Zhou et al., 2020) although lingering problems have been reported both by participants in this study and elsewhere (Lin & Gao, 2020; Zhu & Liu, 2020). All Chinese universities and students in China should have spent a minimum of one semester engaging in education exclusively through an online medium. Researchers have reported institutions now have the capacity to host live video lectures, distribute and grade student assignments and interact with students via a computer screen (Bao, 2020; Yang, 2020; Yao et al., 2020; Zhu & Liu, 2020).

Perceptions of legitimacy

A recurring theme throughout the interviews was the question of legitimacy of online degree programs. This challenge has been noted in other sources (Lau, 2020; Yang, 2020). The vast majority of participants believed that online degree programs lacked societal respect and were not viewed as valuable by most employers. Although permissible for supplemental coursework or as a tool when no face-to-face medium of instruction was available, almost no students had seriously considered it a viable option for obtaining a degree. As noted by Hamish Coates, director of the Higher Education Division of the Institute of Education at Tsinghua University, “The big thing is legitimization” (as cited in Lau 2020).

Participants reported parental views for online degree programs that reflected their own. Rarely did participants suggest that their parents were hampering their own desire to pursue an online degree, and a few even reported that their parents were guided by their children’s opinions. Generally, both student and parent views appeared to be so entrenched that even the prospect of procuring a degree online seemed to be a foreign concept that, to that point, had never been seriously entertained. If the participants’ views are indicative of the broader Chinese populace, this mindset poses a daunting hurdle to any expansion of online degree programs in China.

When referencing their own opinions regarding the legitimacy of online educations, some participants alluded to their own lack of learning outcomes. Others mentioned their ability to find “shortcuts” or to cheat. Still others mentioned the public perception of online education and how, in their estimation, no significant changes had occurred. The measure of this public perception varied, but often referenced a lack of government approval and ratification, or the desire to see prominent universities (such as Peking University or Tsinghua University) implement online degree programs. But perhaps the most telling concern was that employers preferred graduates with a face-to-face degree. In a study of the past decade, Li (2018) found that while an online degree improved the income of the graduate, that advantage had begun to recede as traditional education has become more available. In his study, Li noted that online education often gains legitimacy through pursuing non-traditional students. These observations were echoed by Gu et al. (2019) in their overview of education in China.

Challenges to overcome

Many of the participants acknowledged that they had little idea what to expect when they began studying online. Arguably, as they became more familiar with the format, they also began to see it as a more legitimate means of obtaining an education. Indeed, some of the participants explicitly said they would prefer to get an online degree if it were inexpensive, high quality, and from a reputable school. Others said they would be open to getting other types of certifications online. Participants also reported being open to hybrid models in which some types of classes were offered online while others were face-to-face.

In China, often legitimization occurs top-down, and in some areas, this type of legitimization seems to already be occurring. The government has provided some level of acceptance of online education, albeit tacitly, and only for the duration of the COVID-19 pandemic (Zhou et al., 2020; Zhu & Liu, 2020). In addition, reputable Chinese universities have made some courses and degrees available online (Lau, 2020; Yang, 2020). Presumably, as these initiatives gain momentum, parents and businesses will also be more supportive.

Participants outlined a number of hurdles that designers of online courses and degrees would have to overcome in order to make online education desirable: legitimization, quality, accountability, and accessibility. Educators still face many questions regarding the quality of online education. For instance, they need to find ways to engage students and help them achieve learning outcomes while still keeping them accountable for the work they accomplish. Addressing these problems will potentially take a great deal of effort and capital but much has already been done in the push toward online education during the COVID-19 pandemic (Lau, 2020; Sun et al., 2020; Yang, 2020; Zhou et al., 2020; Zhu & Liu, 2020).

Educators must find cost-effective ways to make classes more interactive (Lau, 2020; Yang, 2020; Zheng, 2021; Zhu & Liu, 2020) and keep students accountable (Tiejun, 2021). A key difficulty: “capture and challenge the imagination, based on learners’ pre-existing knowledge” (as cited in Lau 2020). These types of changes take investments in time, capital and research to achieve.
Conclusions: limitations and future research

This research focuses on Chinese students attending university in one province. Parallel research from other provinces would be beneficial. This paper also focuses on the perspectives of students. In the future, obtaining other stakeholder perceptions, for example teachers, university administrators, or members of government, would provide further depth into the Chinese populace more broadly.

Prior to the COVID-19 pandemic forcing classes online, Chinese students had an overwhelmingly negative view of online education as a means of obtaining a college degree. Online education lacked the legitimacy of traditional universities and had considerable technical and implementational hurdles that inhibited universal acceptance. As a result of the pandemic, educational institutions were forced to utilize this medium and invest considerably into online educational infrastructure. As such, students who otherwise would not have utilized online education were compelled to do so. Student experiences with online education were still typically suboptimal, with most students still preferring a face-to-face classroom. Most students, however, conceded that their overall impressions of online education were more positive as a result of their experience. Further, if there was more widespread acceptance of online degree legitimacy and improvements made in the arena of accountability on the part of both students and teachers, then online education could be a potentially viable option to serve the other half of the Chinese population. Thus, the overall implication of this research is that China might be inching closer to greater acceptance of online education. Although China does not appear ready to accept online degrees at present, this recent experience with online education has further cracked the door open to its permisibility in the future.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A: Survey and Interview Questions (English)

1. Did you have/ever considered getting an online degree? Why or why not?
2. Before 2020, how did you feel about online education?
3. How did your parents feel about online education?
4. Did you have any experience studying online?
5. How was your experience?
6. Did you study online during the COVID-19 outbreak in Wuhan? (Spring of 2020).
   • 6a. How was your experience?
   • 6b. How was your experience?
7. What surprised you about your experience?
8. How did your experiences studying online change your understanding of online education?
9. How effective do you think your online education experience was?
10. Do you appreciate online education more or less than prior to pandemic?
11. How do you feel about an online degree?
12. Do you think you or your parents would ever consider an online degree (for you)?
13. What would have to change in the current style of online education to make online degrees in China a reality in the future?

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