Cross-cultural Online Learning under the Impact of the COVID-19 Pandemic

-- An Exploration of the Perspectives of Chinese International Students Participating U.K.-Based Online Courses in Higher Education

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Abstract

The impact of the covid-19 pandemic on the education sector is unprecedented. This hitherto unprecedented educational experiment is practiced in the field of higher education. This study aims to focus on the experiences of Chinese international students participating in U.K.-Based online courses in higher education under the influence of covid-19, exploring the difficulties and challenges they encounter in cross-cultural online learning and the factors that influence their online learning through the perspective of international online students. Using a qualitative research approach, this study conducted semi-structured interviews with nine undergraduate and postgraduate students who were studying at the University of Birmingham in the UK during the covid-19 pandemic and used thematic analysis to analyse the interview data. The results show that the majority of Chinses international students perceived the sudden transition to online learning as successful, but at the same time faced various difficulties and challenges, such as content perception and comprehension, academic and psychological stress. Factors affecting online learning included self-management, language skills, internet and technical support. The conclusions suggest that students and teachers should change their roles in online learning and focus on the effectiveness of online course content, interaction and post-course feedback.

Keywords

Higher education; Covid-19; Cross-cultural course; Online learning.

1. Introduction

1.1. Purpose of Study

The purpose of this study is to explore the perceptions of Chinese international students taking U.K.-Based online courses in higher education in the context of the covid-19 pandemic, to understand the difficulties and challenges encountered in their cross-cultural online learning from the experiences of international online learners, and to explore the factors affecting cross-cultural online learning in this The study also explores the factors that influence intercultural online learning at this particular time from the perspective of international online learners.

This study aims to provide reflections on intercultural online learning for a group of Chinese international students who lack experience in overseas and non-native language online learning, in order to help them through this challenging period. At the same time, this study also provides useful guidance information and action clues for the current teaching of university

teachers and the implementation of online teaching in higher education institutions. This not only has important substantive implications for the further development of online courses in higher education under the influence of the covid-19 epidemic, but may also provide a deeper and broader perspective for the design, implementation and development of future online courses in higher education.

Using a descriptive exploratory qualitative study, this study employs a purposive sampling of Chinese international students at the University of Birmingham, UK, to conduct an in-depth study of Chinese international students' experiences of cross-cultural online learning during the Covid-19 pandemic, the challenges and difficulties they encountered, and the factors that influenced them. Qualitative data obtained through one-to-one semi-structured interviews and using thematic analysis were used to explore Chinese international students' perspectives in order to gain meaningful insights into Chinese international students' engagement with online higher education courses in the UK during the Covid-19 pandemic.

1.2.   Research Questions

From the purposes of this study, three questions were addressed in this study. The first question that represents my main research question is：

(1) How do Chinese international students describe their experience of cross-cultural online learning during the COVID-19 pandemic?

The second and third questions were in-depth and extensive explorations based on participants' responses to the first question. The presentation is as follows:

(2) From the perspective of Chinese international students, what problems and challenges were encounter in their cross-cultural online learning experience during the COVID-19 pandemic?

(3) From the perspective of Chinese international students, what factors influenced the cross-cultural online learning experience during the COVID-19 pandemic?

The answers to these questions are presented in Chapter 4.

1.3.   Background and Motivation: Why this Research Now?

The context of this study is an exploratory study of international students' experiences of online learning in the context of the covid-19 pandemic. The study focuses on the significance of the rapid shift to online learning in the context of the covid-19 pandemic for Chinese international students, exploring the difficulties and challenges encountered by Chinese international students in cross-cultural online learning, and the factors that influence their online learning. The New Coronavirus-19 pandemic began in Wuhan, China, in December 2019 and quickly spread throughout the world within a few months. The pandemic had an impact on every aspect of life, including schooling. As the situation worsened, educational institutions were forced to close as a result of a global embargo. The closing of schools, colleges, and universities put a strain on education administration, leaving them with little choices. Many national education ministries have stated that online courses will allow students to complete their education in a safe environment. Higher education institutions in the United Kingdom are no exception. [1]. The New Coronavirus-19 is a serious threat to education and learning at this moment, which implies that learning is quickly developing on an unprecedented scale throughout the world. International students are experiencing greater obstacles than ever before as a result of the unusual conditions in global education [2]. "Never before has education been interrupted on such a scale," according to UNESCO. The coronavirus pandemic wreaked havoc on the world's educational systems. Most schools were closed from kindergarten through university, and students were forced to return home to live in self-isolation with their families. At the same time, isolation policies and social distance immediately contribute to the cancellation or postponement of congresses and graduation ceremonies, face-to-face classes, practical lessons such as examinations, and university research projects. Governments and education officials

throughout the world are trying to finish teaching programs for the spring 2020 semester, and the education industry is attempting to weather the storm by pushing online education [3]. However, remote online education is not a new concept, and online courses are already commonly utilized in higher education as a stand-in for face-to-face instruction. Larger colleges throughout the globe are gradually shifting their courses online and diminishing face-to-face delivery, with elite institutions like Tsinghua, Peking University, Harvard, MIT, Yale, Oxford, and Cambridge leading the way [4], [5] . What is clear, however, is that decisions linked to the coronavirus (COVID-19) will forever alter the path of personal and global history, necessitating new considerations for the many businesses affected [3].

Second, as a Chinese international student enrolling in autumn 2020, I have a strong understanding of what online learning in the context of the covid-19 epidemic means for Chinese international students, based on the researcher's personal experience of intercultural online learning at a UK institution. The coronavirus illness, which has become a human disaster in 2019, has had a particularly negative impact on international schooling. The whole educational curriculum of studying abroad has been interrupted, from living to studying. On the living front, for example, Chinese international students are directly impacted by flight cancellations and quarantine restrictions that make crossing the border nearly hard. They, like many other foreign students, are victims of the crisis, particularly those from China, which is the world's largest market for international education [6]. Based on the researcher's personal experience, different perspectives, both negative and positive, have emerged from the experiences of international students in China. In fact, international students and the study abroad experience of international students has long been a hot academic topic [7].

Research shows that an average of 2% of students from every country in the world, including both developing and developed countries, are enrolled in higher education abroad. This figure has increased by 50% since 2000 and by a factor of 2.5 since 1975. The total number of overseas students worldwide is expected to increase to 80 million by 2025 (an annual growth rate of 5.8%) [8]. By 2025, the overall number of international students in OECD nations is anticipated to be 7.2 million [9]. With the introduction of China's reform and opening-up policy in 1978 and rising per capita income in China, an increasing number of Chinese students have the opportunity to pursue further studies abroad, and Chinese students have become a major group of overseas students in Western higher education developed countries [10](Khalil, Al[10]. The United Kingdom, as a historic powerhouse of higher education, is a popular study destination for Chinese students. Chinese students account for more than half of postgraduate students at several UK institutions, and some popular programs are even entirely filled by Chinese students [11]. Chinese students are now the largest group of foreign students in the UK, according to a poll issued by the UK Council for International Student Affairs (UKCISA). According to a poll performed by UKCISA, Chinese students make up the biggest group of foreign students in the United Kingdom.

However, the academic Turner [12] has stated that "life in the UK for international students is not an easy task" . The researcher's own experience of participating in online higher education in the UK during the covide-19 period also presented some real difficulties. This difficulty is closely related to the particular time period of the challenger and the pandemic environment that led to online learning . Indeed, since the advent of the New Guinea virus, Chinese students have been under double scrutiny. For starters, while they went abroad at the start of the epidemic, the stigma of the 'Chinese virus' discriminated against them. Second, they have been attacked in a variety of ways as a result of the anti-Chinese politics sparked by the coronavirus. Second, cross-cultural online learning for foreign students presents challenges, particularly at this moment. Given the ebb and flow of the issue, as well as the impact of the new coronavirus on Chinese foreign students, it is important to examine their situation. This might provide a

new dynamic for key parties and institutions, including Chinese foreign students, while also providing a wide view on evolving forms of international education [6].

In addition, this study focuses on cross-cultural issues in online learning for Chinese international students. Internationalisation and cultural inclusiveness have become essential guiding concepts for organizational transformation and growth in higher education, industry, and other areas in the twenty-first century [13]. Domestic students can be transformed into a type of "global citizenship," with overseas experience and the cross-cultural abilities necessary by the expanding global marketplace, through "Study Abroad" university programs [14]. It is a reality that must be admitted that the New Coronavirus-19 has had a significant impact on every area of our everyday life so far in 2019. Even if the future is completely free of strict measures such as blockades and waiting for the arrival of a vaccine to bring back the possibility of everything, the long-term effects of the new crown epidemic remain even if the future is completely free of strict measures such as blockades and waiting for the arrival of a vaccine to bring back the possibility of everything with a global pandemic of this magnitude. Learners will have to adjust and adapt to a new way of life. Teaching has also been impacted significantly. Changes in the academic curriculum have had a significant cross-cultural influence on students in higher education [15]. Furthermore, before the covid-19 epidemic, the globalization of online courses had been a trend, changing online learning into a cross-cultural learning arena. Students from non-English speaking backgrounds are increasingly enrolling in credit-bearing courses, and they must adjust their attitudes and study patterns to accommodate online learning [15]. This paper therefore examines how intercultural online learning in the UK presents unique challenges for Chinese students in online courses from the perspective of Chinese international students studying interculturally online in the UK higher education system during covide-19. This will help Chinese international students to find the right place to adapt to intercultural online learning at this particular and difficult time.

1.4. An Outline of This Study

The study consists of six chapters, the rest of which are organised as follows: in Chapter 2, the literature review is divided into four sections: theoretical foundations of cross-cultural adaptation, cross-cultural issues of chinese international students in the UK, online course in higher education and student perspectives on online learning during the COVID-19 pandemics, which collate the key theoretical and relevant literature involved in this study and summarise the research gaps. and presents and summarises the research gaps. Chapter 3 details the research paradigm, research methods and research design applied to this study, including the data collection and data analysis methods used based on the research objectives and research questions, and considers practical and ethical issues. Chapter four presents the results of the data analysis according to the research questions and provides an in-depth discussion of the themes emerging from each research question in relation to the theory and literature, and chapter five concludes the study by summarising and drawing conclusions on how the research questions were answered throughout the text, stating the academic implications and limitations of this study, and providing future research recommendations are made.

2. Literature Review

2.1. Introduction

The aims and research questions of this study focused on Chinese international students' perspectives on intercultural online learning, exploring the experiences and behaviours of Chinese international students in the process of intercultural online learning during the Covid-19 pandemic. The challenges and difficulties encountered by Chinese international students in intercultural online learning and the factors that influence intercultural online learning are

explored through participants' descriptions of their experiences of participating in intercultural online courses in UK higher education. This chapter is a literature review of this study. This chapter will look at theoretical foundations of cross-cultural adaptation, cross-cultural issues of chinese international students in the UK, online course in higher education and student perspectives on online learning during the COVID-19 pandemic, presenting the key theoretical and contextual literature relevant to this study, and suggesting some hypotheses and research gaps. It concludes with a summary of the core content of this chapter.

2.2. Theoretical Foundations of Cross-cultural Adaptation

In the process of collecting and collating theoretical and related materials, this study finds that the issue of intercultural adaptation of international students, which is one of the important topics in higher education research, has accumulated a large number of theoretical foundations and has produced relatively fruitful research results.

The first popular ones were the U-curve model proposed by Lysgaard and the cultural shock theory proposed by cultural anthropologist Oberg. Both theories and models suggest that international students will go through a honeymoon period, a danger period (i.e. cultural shock), a recovery period and an adjustment period after entering a new cultural environment. This process is subject to not only negative psychological changes but also positive psychological changes [16] . Research has shown that individuals often experience culture shock when they first enter a new environment due to the loss of familiar cues [17]. Oberg [17] sees its main manifestations in the following areas：

- Feeling lonely and helpless.
- Missing family and friends.
- Irritability or anxiety.
- Fear of being cheated and robbed or harmed.
- Compulsive preoccupation with hygiene and personal health.
- Over-identification with one's old culture.
- Avoidance of contact with others.
- Hostile attitude towards people of the cemetery culture.
- Physical pain or discomfort.

In addition, the discomfort caused by subsequent cultural exposure can affect the quality of life and academic achievement abroad, and can even affect the psychological well-being of the individual, leading to emotional experiences such as anxiety, depression and isolation [18]. Chinese international students may find it more difficult to adapt to a foreign environment because of a lack of 'Western schematic knowledge' (e.g. knowledge of the Western education system, Western culture and beliefs, academic language, etc.)[19].

Another model sees intercultural adaptation as a learning process. International students need to learn the necessary socio-cultural skills to integrate into their new environment. Lysgaard sees the learning process as a linear curve[20] There are two important mechanisms at work in the cultural learning model. The first major mechanism is the theory of intercultural communication. Anderson emphasises that "intercultural communication is a central part of cultural integration" [21]. Another major mechanism is the appropriate use of social behaviour and preparation. Lysgaard believes that successful integration is dependent on the correct learning and application of social behaviour and norms [22]. The fourth model views intercultural adjustment as a dynamic cycle in which psychological factors lead Chinese international students to a state of equilibrium [23]. The most important point is that the individual's internal perceptions and desires determine the degree of cultural adaptation. In fact, not all international students wish to integrate fully into their new environment. Many factors influence individual psychological factors, such as linguistic deficiencies, significant

cultural differences and exposure to racial discrimination. The intercultural online learning of Chinese international students during the Covid-19 pandemic may be closer to a dynamic cyclical process. The experience of international students' participation in higher education online programmes during a particular period of fluidity and complexity may not be a single linear process.

This study adopts Canadian scholar Barry's definition of the concept of acculturation. He argues that culture adaptation refers to "a conscious and predisposed behavioural choice and adjustment based on an individual's cognitive and emotional attachment to two cultures after moving from one culture to a different heterogeneous culture from the one in which he or she originally lived" [24]. As the main focus of this study is on the choices and adaptations of Chinese international students' behaviour during their cross-cultural online learning during the Covid-19 pandemic. Therefore, the concept of cultural adaptation is applicable to the analysis and context of this study. In addition, Ward's theory of cross-cultural adaptation provides a broad theoretical perspective for this study. According to Ward's cross-cultural adaptation theory, the process of cross-cultural adaptation is divided into two main dimensions: psychological adaptation and sociocultural adaptation [25]. Psychological adaptation focuses on the level of psychological and emotional well-being in a new environment; socio-cultural adaptation refers to the individual's ability to gradually accept the socio-cultural standards and norms of the host country and to maintain an interactive relationship with the local socio-cultural environment [26]. The socio-cultural adjustment of international student groups is often influenced by factors such as social support, language skills and the length of time spent abroad [27]. Although this criterion has been adopted by many researchers [28], this study subdivides the socio-cultural adaptation dimension of the theory into two components: socio-cultural and academic, in order to provide a more detailed and purposeful analysis of Chinese international students' cross-cultural online learning experiences during the COVID-19 pandemic. Thus, Ward's theory of intercultural adjustment is broader and richer, encompassing psychological, academic and socio-cultural dimensions, and can provide a broader and more comprehensive research and analysis perspective on the research questions of this study.

2.3. Cross-cultural Issues of Chinese International Students in UK

Current research is rich in empirical studies and research perspectives on international students' intercultural issues, including their psychological conditions, cultural communication, academic adaptation, and daily life. In this section, the literature on Chinese international students' intercultural problems in the UK is reviewed in three main categories: psychological problems, social and cultural environment and academic skills, based on Ward's theory of intercultural adjustment.

2.3.1. Psychological Problems

When international students first enter a new culture, psychological problems are inevitable and Ward believes that the process of psychological adjustment is influenced by individual personality, social support and changes in the living environment. He notes that psychological adjustment can fluctuate as academic work progresses [16]. Sam believes that the period of vulnerability to psychological problems arises after the initial entry into a new environment [29]. And cultural shock is one of the main causes of psychological problems among Chinese international students [17].

In addition, the differences in culture, values and beliefs between China and the UK can often create a sense of stress and loss for Chinese international students [30]. Researchers generally agree that the more contact there is with the local culture, the less psychological and physical adjustment difficulties there are. International students can gain a sense of psychological belonging and satisfaction through positive and active contact with their new environment [31]. However, during the covid-19 pandemic, travel and social bans may have largely prevented

Chinese international students from doing so. In fact, it is not very feasible for Chinese international students to actively integrate into UK social and cultural life in a wider range of ways, such as partying and travel plans.

Thus, on the other hand, it is also clear that during the covid-19 pandemic, help from the community will play a more important role in the psychological adjustment process of Chinese international students. In his functional network model of social friendship, Bochner [32] points out that different friendship models can have different effects on international students. In the case of cross-cultural online learning at special times under the influence of covid-19, getting support and help from parents or roommates can alleviate psychological stress and difficulties; getting help from teachers, peers and university support systems can enable them to better adapt to their new environment and reduce stress from their studies, helping Chinese international students to better integrate and meet UK academic standards in their studies. Although the help of international students from other countries can also help international students to relax in terms of living and recreation, early research has shown that Chinese students prefer to get psychological support from interaction and contact with their compatriots. While stable contact with compatriots can be a good source of psychological support in the early stages of intercultural adjustment, over-reliance on compatriots can have a negative impact on the final outcome of intercultural adjustment in the long term [32].

2.3.2. Sociocultural Environment

Research has shown that Chinese students often do not adapt well to the sociocultural environment in the UK over time. Research in the UK has shown that for international students, particularly Asian students, integration into local social and cultural life is difficult. Integration into the UK university community is not easy for Chinese students [33]. On the one hand, Chinese international students complain that there are too many Chinese students on all UK university campuses. This is where they feel a lack of cultural experience, as if they are studying in a Chinese environment [34]. Research shows that Chinese international students make up more than half of all students at UK universities, especially in postgraduate programmes, and some welcome programmes are even exclusively Chinese [11]. On the other hand, Maley et al. [30] concluded that Chinese international students face a number of socio-cultural difficulties while studying in the UK, including a lack of necessary social skills that lead to disconnection and separation from the wider environment, inability to adapt to the British lifestyle and social norms, and rejection of mindsets.

In addition, Chinese international students have fewer intercultural communication skills than other non-EU international students. Although Chinese students who choose to study abroad are keen to gain a cultural experience, they often lack the confidence to engage with the outside world and express their own views and opinions due to their implicitly traditional oriental cultural character [35]. One of the reasons for this situation has long been considered to be the poor English language skills of Chinese international students and their inability to express themselves in English in their studies, social life and in life. Secondly, Chinese students are growing up in an environment that does not encourage freedom of expression compared to Western countries, which leads to a lack of willingness to express themselves. Although many young Chinese international students are more influenced by Western free speech, there is still a certain distance between them and the actual freedom of Western thought [36].

2.3.3. Academic Skills

In terms of academic skills, educational experience, language skills and cultural differences affect the cross-cultural academic progress of Chinese international students. The impact of this transition may be made even more pronounced by the difficulties and challenges of online learning for Chinese international students who participated in higher education online courses during the covid-19 pandemic. Existing research suggests that the adaptation of Chinese

international students to the teaching paradigm and academic culture of the UK higher education system can be a challenging process. When Chinese international students arrive at a UK university, they face the challenge of moving from a traditional teaching paradigm to a completely new one, with academic difficulties arising from the cross-cultural academic demands and expectations [37].

Firstly, there is a significant difference between Eastern and Western educational thinking, and although this has changed considerably in recent years as the internationalisation of Chinese higher education has accelerated, Chinese higher education philosophy is still influenced by Confucian teaching and learning. The Chinese teacher represents the leader and authority in the teaching process, and the format of the lecture is entirely controlled by the teacher, with the student still being seen as a passive learner [38]. Based on this educational experience, Chinese international students generally lack abstract thinking, independent study habits and a sense of self-directed learning during the study abroad process [39]. However, the learning culture in Western higher education is one of learning-centred oriented teaching and learning that emphasises the development of a critical dialectic and independent research skills [40]. Learners are responsible for their own learning and are free to choose their own direction of study. During classroom interaction, students are also encouraged to offer different opinions or to challenge the teacher's views [41].

Secondly, earlier research has confirmed that Asian students expect more from their lecturers and superiors during their study abroad [42]. In fact, however, they feel helpless and anxious when they encounter academic difficulties because they feel that the help they receive from their teachers is very limited. Cortazzi and Jin [43] compared the roles of teachers as perceived by Chinese and British students. In the minds of Chinese students, teachers are more of a transmitter of knowledge, an authority, a moral role model and a parent. In contrast, in the minds of British students, teachers are mainly facilitators of learning, organisers and friendly critics [44]. In addition, Chinese international students have limited participation in the classroom due to language barriers, and some even deliberately avoid communicating and interacting with tutors and foreign students in a social setting. For example, they rely on classroom lectures for learning and tasks, are used to using a passive learning style to absorb knowledge and do not value tasks that require collaboration and teamwork [45].

2.4.   Online Course in Higher Education

This study considers the main models of challenges in online courses proposed by Kebritchi, M. Kebritchi, M. [46]and other scholars have taken the three basic subjects in the online education model, i.e. students, teachers and content, as the entry point to deeply explore the problems or potential risks that have emerged in higher online education. The relationship between the three categories and related issues is shown in Fig.1

M. Kebritchi [46]claims that online education has altered all aspects of higher education teaching and learning. The results of a review of numerous empirical research that asked questions regarding online courses revealed three primary types of findings: online learners, instructors, and content production. Learner expectations, preparedness, identity, and participation with online courses are all problems that learners face. Changes in teacher responsibilities, shifting from face-to-face to online, time management, and teaching styles were among the issues addressed by instructors. The role of the instructor in content development, the integration of multimedia in content, the function of instructional techniques in content development, and content development considerations are all covered under content problems. At the same time, he noted that higher education institutions must provide professional development for teachers, learner training, and technological assistance for content production in order to solve these issues in online education [46]. The main purpose of this study is to explore the challenges and difficulties of the online learning process from the

perspective of Chinese international students in terms of their experiences during the COVID-19 pandemic, and as such, the three subjects identified in the model regarding online courses in higher education provide a broad perspective for this study to describe and analyse. In addition,research on higher online courses since the beginning of the 21st century has focused on educational effectiveness, technology application, the teacher-student relations, the student experience, and international development.
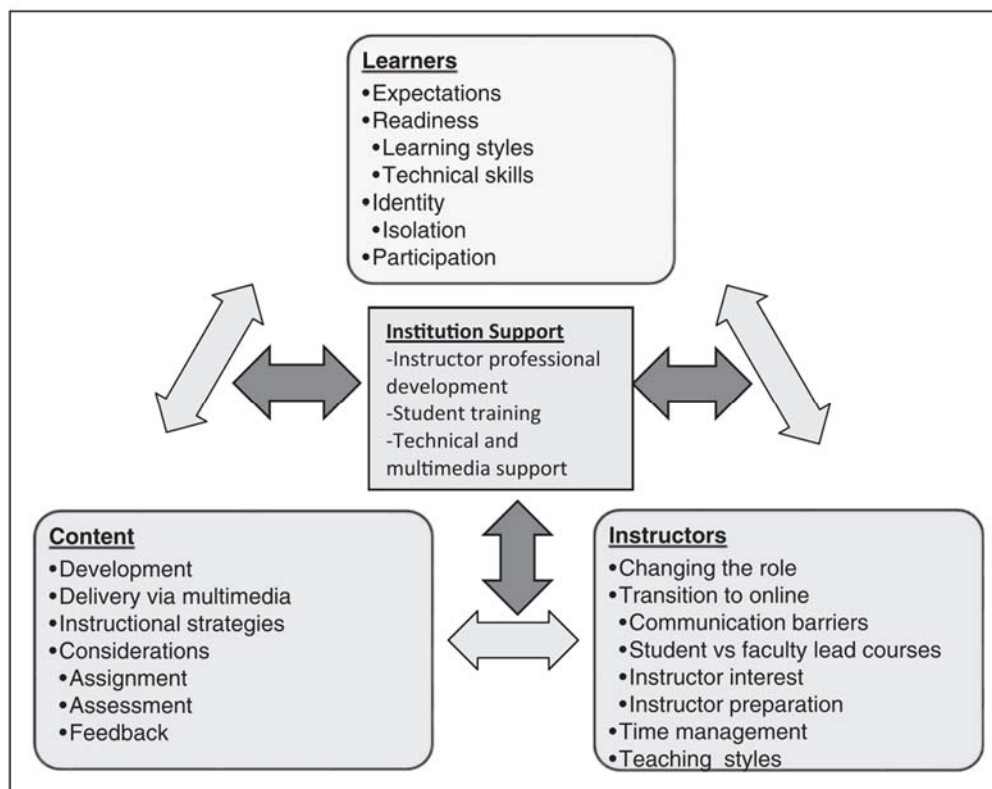

Figure 1. Three major components and the related issues in an online education environment.

2.4.1. Educational Effectiveness

The Covid-19 pandemic has had a major impact on all walks of life and in the education sector, online education is being adopted by students, parents, teachers and schools as an urgent alternative to teaching and learning. Not only at this particular time, but online education has been questioned since its development as a newer model of education compared to traditional education. Some scholars have made no secret of the fact that they have always regarded online education as a secondary (inferior) method of education, one that complements rather than replaces traditional education [47]. As a result, comparing the efficacy of online versus traditional education has been a long-standing issue in educational research, resulting in a plethora of empirical studies. A significant number of empirical research have been analyzed and gathered using systematic literature analysis and meta-analysis in attempt to discover similarities in the outcomes of numerous separate investigations. Matter of fact, some early scholars used meta-analysis systems to summarize the results of several experiments on online and traditional education, pointing out the "No Difference Phenomenon" that is frequently seen in empirical studies comparing online and offline teaching and learning, and suggesting that research should no longer focus on the comparison of the two. It is proposed that research go beyond making comparisons between online and offline education and look into the philosophy and practice of guaranteeing quality and efficiency in online learning. Furthermore, a

comparison of quantitative data from actual research shows that online education is as successful as, if not more effective than, traditional education with the same material [48]. Further study into online education has yielded a plethora of findings demonstrating that, as long as the aspects covered by the online education model are considered and applied in the instructional design process, online education may be as successful as high-quality offline education. A systematic analysis of 47 academic papers on online education from 2008 to 2016 published in a 2016 publication on the systematic evaluation of online education found that when online education is equipped with high-quality content, multi-level interaction models, advanced technical support, complete technical training for teachers, and a strong sense of learning community, its pedagogical effectiveness is enhanced [49].

2.4.2. Technology Application

Online teaching and learning requires continuous optimisation and development of technology. Technology has become the standard in education in recent years [50], with physical classrooms, blended learning, and online learning all intermingling [51]. Some scholars look at the logical effects of operating at the level of technology and tools and argue that modern technological tools can help learners adapt to the environment and processes of online teaching and learning [52]. It has been argued that the presentation of online micro-worlds and the application of virtual reality tools can effectively enable the pooling and sharing of resources and prompt students to learn collaboratively online [53]. Other researchers have concentrated on improving and optimizing certain technological tools and teaching platforms , such as the utility of subtitles for video lectures in online courses [54], the support of somatic interaction technologies [55], and platform functionality and interface optimization [54], [56].

2.4.3. Teacher-Student Relations

The change of the teacher-student relationship is highlighted through online teaching and learning. Teacher, learner, content, technology, and activity should all be integrated into online teaching and learning [57]. It is argued that rather than directly transplanting the conventional classroom teaching model, online education should focus on the identification of student responsibilities and the unique conceptualisation of the teacher's role in the redesign of the course delivery system [58]. Others argue that teachers should provide pupils with the information they require, foster participation, and encourage information exchange and personal fulfillment. Only when the instructor engages with the subject, with well-designed teaching resources and activities, and with good monitoring and timely feedback can students interact with the information [59]. The significance of teachers has not lessened despite the current move from a teacher-centered to a student-centered paradigm [51], [60]. To maximize the learning impact of technology, teachers must incorporate new technologies into the curriculum through highly contextualized instructional design [61]. In an IT context that incorporates technology, Mishra and Koehler [62] emphasize the need of teachers' pedagogical subject knowledge (TPACK). TPACK stands for content knowledge, pedagogical knowledge, and technical knowledge, emphasizing the overlap and complexity of the three forms of knowledge. Other academics emphasize students' subjectivity, saying that online instruction should focus on molding students' values, developing their talents, and transferring information [63]. During the Covid-19 outbreak, several researchers advocated using a linear mix of instructor immediacy and presence methods to temper unexpected excesses of distant online learning and improve the efficacy of online teaching [64].

2.4.4. Student Engagement and Experience

Students' experience and engagement are at the heart of successful online education. Online education has the distinct benefit of providing technological and psychological support for teacher-student engagement and interaction, as well as fast feedback and changes via big data in the background [65], [66]. Online teaching and learning is not just a paradigm change, but

also a critical component in enhancing and improving the student experience [66]. On the one hand, research shows that students view online teaching and learning as an unpleasant and alienating experience, which might contribute to a drop in student motivation and satisfaction with the online learning experience [67], [68]. Some academics categorize online engagement methods as low-involvement, shallow-involvement, performance-involvement, gradual-involvement, and random-involvement, stating that the focus should be on improving student initiative and consistency [69]. In the online context, students are required to transition from low-level communication (information sharing and errors detection) to high-level cognitive involvement [70]. Other researchers argue that online education is learner-centered, emphasizing students' higher-order thinking involvement [71] and improving the classroom experience and access to online teaching [72]. Furthermore, How to improve online learners' ability and commitment to learning online is an important factor in teaching effectiveness and gaining a sense of experience. Fredricks et al. offer a three-dimensional paradigm for learning engagement that includes cognitive, behavioral, and emotional aspects. The cognitive dimension describes cognitive resources and willingness to invest in the process of understanding subject knowledge and acquiring skills; the behavioural dimension describes outwardly visible engagement and learning behaviors; and the affective dimension describes feelings toward teachers, peers, and institutions. Moreover, learner autonomy and technology provide a dynamic two-way connection that has garnered considerable attention from academics among the many skills of online learners [51]. In order to succeed in online courses, students must "prepare themselves for learning, complete the essential learning stages, monitor and analyze their learning, offer self-feedback and assessment, and sustain high levels of motivation [73]." In addition, related research suggests that self-directed learning skills can be acquired in an online learning environment through collaboration [74], [75], as well as more explicit learner aids like self-regulation skills training [75], [76] and learning management features built into course management systems [76].

2.5. Student Perspectives on Online Learning during the COVID-19 Pandemic

The current study of student perspectives on the impact of the covid-19 pandemic is a hot topic of academic research, with student perspectives covering a wide range of countries, majors and online courses. Student perspectives are important to the study of the 'most extensive educational experiment to date' of this particular period [77]. This section of the literature review therefore collates empirical research on student perspectives, some of the key elements and findings of which are shown in Table 1.

Table 1. The current study of student perspectives

Authers	Context	Methods	Key empirical contributions
Adnan & Anwar, 2020	Pakistani higher education students' attitudes towards mandatory digital and distance learning university courses	Survey	The expected effect of online learning in underdeveloped countries is poor; Technical and financial problems led to the lack of Internet access; Lack of interaction, response time, and traditional classroom socializing
Laili & Nashir, 2021	103 Indonesian higher education students' perceptions of e-learning and the supporting factors and constraints in the e-learning process	Descriptive method	Positive: Flexibility Negative: unstable signal, lack of motivation, difficult conversation practice and high Internet costs
Dhawan, 2020	During the pandemic, educational institutions (schools, colleges and		Academic institutions that were reluctant to change their traditional teaching

	universities) in India were forced to turn to online modes of teaching		methods early on had no choice but to switch entirely to online teaching
Omar et al., 2020)	Views and preparations for comprehensive online guidance of students from higher education institutions in Malaysia	Google Questionnaire	Poor preparation of students; need for financial assistance, internet accessibility, timely feedback from assessments, and continuous academic participation
Jin et al., 2021	Student discussion on "Can China implement online courses replace traditional offline teaching"	Questionnaires; Push-pull mooring model.	Push effects (perceived safety risks, ease of learning and quality of service) pull effects (usefulness, ease of use, teachers' attitudes to teaching, technical fit to the task). The mooring effect (habit) all show intentions of influencing users to switch from offline to online learning platforms.
Octaberlina & Muslimin, 2020	Barriers to online learning faced by 25 Indonesian students and alternative ways of dealing with these barriers	Descriptive mixed methods.	Barriers: unfamiliarity with e-learning, slow internet connection and physical condition Alternatives: creativity, good communication with tutors
Dutta & Smita, 2020	Perceptions of 50 university students in Bangladesh on higher education in the country	Qualitative; Semi-structured interviews; Thematic analysis.	Unavailability of electronic devices, limited internet access, high internet costs, low internet speeds, difficulties in using online platforms
Mukhtar et al., 2020	Perceptions of 12 teachers and 12 students in Pakistan on the advantages, limitations and recommendations of online learning.	Qualitative case studies; Focus group interviews; Thematic analysis	Strengths: distance learning, comfort, accessibility Limitations: inefficiency and difficulty in maintaining academic integrity. Recommendations: teacher training, customised courses, reduced cognitive load, increased interactivity
Almuraqab, 2020)	Dubai University students' perceptions and preferences for distance learning (challenges and attitudes)	Questionnaires; descriptive surveys	26% of students prefer to study 100% online, while 49% of the majority of students prefer to study through a blended learning system that combines online and classroom learning.
(Besser et al., 2020)	Associations between pandemic adaptation, personality and level of learning experience (affective, cognitive and behavioural) among 1,217 university students in Israel	Questionnaires	More positive responses and learning adaptations from students with a greater sense of belonging and importance
Hussein et al., 2020	Attitudes of undergraduate students in two general English courses at a university in Abu Dhabi, United Arab Emirates, towards an emergency online learning experience in the first few weeks of the mandatory shift to online learning in COVID-19		Cost and time efficiency, security, convenience and increased engagement were the most frequently cited positive aspects of the urgent online learning experience, while distraction and inattention, high workloads, technical and internet issues and inadequate support from teachers and the internet
Maatuk et al., 2021	An exploration of the use and implementation of e-	Descriptive analysis	The return of students to educational institutions was also a successful option;

	learning in public universities during the COVID-19 pandemic from the perspective of students and teachers at Benghazi University.	methods. Survey questionnaire	the main obstacle to e-learning was the low quality of Internet services in Libya during the pandemic.
Duguid et al., 2020	How students in the clinical year at the University of London Medical School are affected by early registration and cancellation of exams		Leads to a lack of collaboration between students; engagement may be reduced; alternative learning opportunities are not applicable to clinical skills learning
Khalil et al., 2020	Undergraduate medical students' perceptions of the effectiveness of synchronous online learning at Unaizah School of Medicine and Medical Sciences, Qassim University, Saudi Arabia.	Content analysis framework	Thematic outcomes: educational impact, time management, challenges encountered, and preferences for the future. Synchronous online courses are popular and have potential for medical students; the principles and learning outcomes of online learning modalities should be rigorously and regularly evaluated to monitor their effectiveness.
Demuyakor, 2020	To assess the satisfaction and response of Ghanaian international students in China to "mass" online learning at higher education institutions in Beijing, China.	Online survey	Online learning programmes are very good ideas; internet connections are very slow; the cost of participating in online learning is high. The findings of the study will be beneficial to university administrators and management when making urgent decisions about implementing online learning programmes for students from different backgrounds in the future.
Allo, 2020	UKI Toraja ELP learners' perceptions of online learning during the COVID-19 pandemic	Qualitative; semi-structured interviews; thematic analysis	Online learning very helpful and good results; internet access, financial issues and availability of online learning implementations; would like materials and assignments to be preceded by instructions. Suggests effective use of audio notes when giving instructions. Suggests that materials and instructions implemented by the lecturer in online learning are not easy to use.
Nepal et al., 2020	226 Nepali students' views on the newly introduced online medical education system	Google Online Questionnaire	Nearly a third of students have no experience of online learning; most students use smartphones to take online classes; 65.5% of internet sources are broadband internet services Two-thirds of medical students find online courses less effective than traditional classroom teaching; traditional face-to-face education can be made more interactive and productive by introducing interactive and brainstorming sessions.

As can be seen in Table 1, there are commonalities and differences in the transformation and adaptation of online education across countries, regions, schools and professions during the covid-19 pandemic. The various empirical studies focus on students' readiness and adaptability to the sudden shift in the online learning paradigm, as well as on the learning experience, effectiveness, assessment and feedback of online learning. Perceptions vary between different

higher education professions, for example, the participation of students in English programmes and medical students in online learning varies considerably [78]. Reasons for this may lie in the substitutability of certain practice courses, such as practical and clinical [78]. In addition, the differences between countries are also reflected in technology and the internet, with students in countries such as Bangladesh, Malaysia, India, Pakistan, Arabia and Spain experiencing poor and ineffective online learning due to the internet and technology [79]–[86] ，whereas students in countries such as the UK, China, Saudi Arabia and Dubai have no such difficulties or challenges [3], [87]. In addition, the student perspectives research approach during the covid-19 pandemic was more diverse, including quantitative analysis using questionnaires [3], [77], [82], [85], [86], [88], [89], descriptive qualitative methods [80], [83], [87], [90], [91], mixed methods [90]and case studies [92]to discuss and explore students' perspectives on online courses in higher education. However. Current research on international student students' perspectives on online learning is relatively sparse, with studies focusing on the experiences and perspectives of online learning by students in their home countries. Therefore, the main aim of this study is to explore the experiences of Chinese international students participating in higher education online courses during the covid-19 pandemic, and to understand the difficulties and challenges they encountered in intercultural online learning at UK universities from the students' perspective, as well as the factors affecting their intercultural online learning during this particular period. This study can enrich the research on international students' perspectives on online learning during the covid-19 pandemic and also provide help, reference and action clues for Chinese international students, relevant stakeholders and universities.

2.6. Conclusion

The literature review section outlines concepts and theories related to intercultural adaptation and draws on Ward's theory of intercultural adaptation to analyse existing research on Chinese international students' interculturalism in the UK in terms of psychological problems, sociocultural environment and academic skills problems, and how these aspects of interculturality may have emerged in the online learning process of Chinese international students during the covid-19 pandemic. Secondly, this chapter also refers to Kebritchi, M' pattern of higher education online course challenges as a useful perspective for this study and analyses the main research issues in current higher education online courses, including educational effectiveness, technology application, teacher- student relations, student engagement and experience. Finally, the chapter analyses current student perspectives across countries (regions), universities and majors during the covid-19 pandemic relevant to this study, comparing and analysing existing student perspectives and finding that there is less research on cross-cultural online learning for the Chinese international student population during the covid-19 pandemic. Therefore, this study explores the intercultural online learning experiences of Chinese international students during the covid-19 pandemic from a student perspective, identifying the difficulties and challenges they encountered in online learning and the factors that influenced their online learning through an international student perspective.

3. Methodology

3.1. Introduction

This chapter details the methodology of this study, which aims to explore Chinese students' perspectives on their engagement with UK-based online courses in higher education, and to evaluate cross-cultural online learning in the context of the Covid-19 pandemic. The study is thus a qualitative, exploratory, descriptive study conducted within a naturalistic-constructivist research paradigm, with data collected through convenience sampling, purposive sampling and

semi-structured interviews, and the collated qualitative data scrutinised by employing thematic analysis, accounting for inherent ethical and practical concerns.

3.2.   Research Paradigm

The study was conducted within a naturalistic-constructivist research paradigm in order to elicit an interpretive understanding and elaboration of the experiences, behaviours and constructions of meaning reported by its research participants. The responses and ideas of international students in this study were investigated qualitatively, exploring how they engaged with, and reflected upon, cross-cultural online learning pertaining to UK university courses during the Covid-19 pandemic, in an attempt to construct meaning from their experiences, perspectives and ideas. Since an understanding of the world and reality as it is conceived stems from one's own perceptions and interpretations, each individual's background and experiences determine how we understand the world and interpret knowledge [93]. Meaning constructed on the basis of personal experience is likely to be multi-faceted, with phenomena consisting of multiple realities, so that a single perspective is insufficient to form a complete picture of a complex entity [94]. More importantly, meaning is constructed rather than discovered; it derives from humans interacting with the world as they interpret it, and humans consequently construct meaning in the process of those interactions [95]. In addition, the constructivist view of learning emphasises the result of interactions between the student and the environment, and becomes a process in which the student actively constructs his or her own knowledge [96]. The focus of this study is Chinese international students. As the socio-cultural context of the covid-19 pandemic reflects the complexity of reality, this study believes that reality is constructed by individuals in relation to their cultural and social milieux. Throughout the study, the qualitative researcher was interested in understanding the meanings that people construct [97]. Through semi-structured interviews, the researcher listened to how participants described their online learning experiences during the pandemic in order to explain and construct international online learners' perspectives, and further explore the difficulties and challenges associated with intercultural online learning, as well as the relevant factors that influenced intercultural online learning during the period in question.

3.3.   Research Method

A qualitative, exploratory, descriptive research approach underpins this study. Firstly, a basic qualitative research design is the most common research method used in order to ascertain the value of the experiences encountered by research participants in the real world, and their attitudes towards these experiences [98]. As this study explores issues related to international online learners' intercultural adaptations, by specifically focusing on Chinese students' subjective, descriptive and interpretive perspectives, qualitative research is the most effective method to employ. Unlike quantitative research methods, qualitative research deploys the researcher as a research tool to examine and understand questions posed through case studies, interviews, observations or document reviews, thereby facilitating and uncovering subjective descriptions of participants' experiences, attitudes and beliefs [99]. Thus, in general, this inductive approach generates non-numerical data that is conducive to the development of opinions regarding Chinese international students' perceptions of cross-cultural online learning [100]. Furthermore, the entire qualitative research process focused on describing and interpreting participants' data on the three research questions and discerning how they constructed meaning in respect of their engagement in cross-cultural online learning, a process that allowed participants to share their perspectives and provided unrestricted answers to the research questions [101]. The data from the qualitative study is therefore useful not only for obtaining insightful information about Chinese international students' perceptions and experiences of intercultural online learning, but also for exploring more broadly the manifold

perspectives on intercultural online learning during the particular period of the Covid-19 pandemic.

3.4. Research Design

The research design describes the collection and analysis of data. Qualitative data were collected using both convenience and purposive sampling methods, as well as a one-to-one, semi-structured interview format. The data analysis phase then appropriated Braun and Clarke's [102] six analytical steps for thematic analysis, aided by Microsoft Word and the qualitative research tool Novivo 12, to analyse the qualitative interview text data.

3.4.1. Sampling Method

Convenience Sampling In this study, the selection of higher education institutions in the UK was based on a convenience sampling method. Etikan *et al.* [103] state that convenience sampling is non-random, providing a means of sampling where members of the target population meet specific criteria at a given time. Convenience samples are more readily available and accessible, with individuals willing to participate [104]. This advantage was evident during the Covid-19 pandemic, which afforded a significant degree of convenience to the researcher. Therefore, the University of Birmingham, was chosen as the higher education institution for this study primarily because the researcher herself, a Chinese international student, is pursuing a master's degree in education at the institution, and participated in an online course on education offered by the University during the period of Covid-19 (from September, 2020). During postgraduate study, the University offered online courses to students of different disciplines entering in 2020 because of the pandemic's impact; as a consequence, the researcher developed good relationships with Chinese undergraduate and postgraduate students at the University. Also contributing to this is the University of Birmingham's reputation and representation among the world's finest higher education institutions. Founded in 1825, the University is a world-class research institution and was the first red-brick university to be established in the UK. As such, this university sample was selected to provide access to relevant data and information on the research questions [105]. This sampling strategy was considered the most appropriate in light of the limited objective conditions and environment following the impact of Covid-19.

Purposive Sampling The selection of participants in this qualitative study was executed using purposive sampling. Purposive sampling is selective and purposeful, in order to produce informative data and generate the efficient use of resources [99]. Purposeful sampling of potential research subjects enables researchers to select participants who meet a specific set of criteria, and small sample sizes and pre-determined criteria are considered helpful in this process [98]. As a result, the pre-determined criteria were participants who had sufficient experience of studying during Covid-19, i.e. undergraduate and postgraduate students who participated in the University of Birmingham's online learning programmes throughout this period and whose nationality was Chinese. In addition, to ensure diversity of perspective and participant motivation, the purposive sample included the phrase 'articulate, thoughtful and willing to share with the interviewer' [106]. To obtain this purposeful sample, the researchers employed the following three steps:

Firstly, a list of the Chinese students who chose online courses at the University of Birmingham and took part in online learning during the pandemic was collected. The list was obtained from a database of publicly available WeChat communities with access, including the University of Birmingham Chinese Students' Association. The community was open to Chinese undergraduate and postgraduate students of all disciplines enrolled at the University of Birmingham in the autumn of 2019 or 2020.

Secondly, after shortlisting the target population from the eligible WeChat groups, the researcher sent recruitment emails to the population. The recruitment emails included the

purpose of the study and participation in the project, and emphasised the voluntary principle. (The recruitment email can be found in Appendix 1.)

Thirdly, email feedback was received from Chinese international students who wished to participate, resulting in a specific list of participants.

3.4.2. Semi-structured Interview

This study adopts a qualitative research approach during the data collection phase, i.e. a one-to-one, semi-structured interview is used as the data collection method in a naturalistic context to examine, in a holistic fashion, the cross-cultural online learning of Chinese international students at UK universities during Covid-19. Primary data was generated through communication and interaction with the research participants in order to gain an interpretive understanding of their behaviours and constructs of meaning. The method has both the rigour of a structured interview and the flexibility of an unstructured interview, allowing for more in-depth communication and information mining with the research subjects within the confines of an interview outline based on the research questions [107]. Merriam and Tisdell [98] argue that researchers are the primary instruments for data collection and analysis, and that interviewer interaction with interviewees can provide more opportunities for data collection and thus enrich the final analysis of the data. In contrast, quantitative data is often generated from closed-ended questions, while qualitative interviews allow for further clarification or further exploration of the researcher's statements through interaction with participants in a timely manner during the interview, which permits the researcher to gain a deeper understanding of the experiences and perspectives of Chinese international students. Since social distancing made face-to-face communication impossible, however, the flexibility and operational format of a voice call more ably suited the needs of the study. Accordingly, the one-to-one semi-structured interviews were conducted via a voice-call format. The researcher sent informed consent (Appendix 2) and an interview protocol (Appendix 3) to those who wished to participate in the interview. A suitable time for the interview was arranged after all participants had agreed to offer their consent.

When conducting an interview, interviewers must be aware of the different strategies that underpin the process, in order to optimize results. There are a few key steps to remember. To yield meaningful conclusions, the nature of the questions, questioning tactics, listening, and interviewer-interviewee relationships are critical [108]. As such, the language used for communication between the interviewer and the interviewees was Chinese. As Chinese is the mother tongue of both the target group and the researcher herself, using Chinese for the interviews allowed the participants to feel relaxed in a familiar language environment, as well as facilitating accurate descriptions and in-depth expressions of their views; it also increased the level of trust and rapport in the interactions, and surmounted cross-linguistic and cultural barriers that may have reduced the authenticity and validity of the interviews. In addition, the interview questions were composed in a way that the participants could understand, while details of the content and presentation varied according to the assorted ways of communicating with different students [109]. Instead of providing clues or definitions, the interview process used more open-ended terms such as "why" and "then what", thus leading students to think deeply about the problems of intercultural online learning and to analyse their possible causes [109], [110]. Importantly, variables such as whether, and how, the interviewer influenced the respondent, and the level of trust and rapport between the two, may have influenced responses [108]. Being a good listener during the interview and developing a friendly relationship with the interviewee is also an effective way of obtaining consequential, authentic information [111], [112].

The design of the interview outline is based on the theoretical framework of constructivism. This theory emphasises that learning is the result of the interaction between the individual

student and his or her environment [113]. Cross-cultural online learning is no exception, and interactive determinism assumes that behaviour, human factors and environmental factors act as interconnected, interacting determinants [114]–[116]. The interview outline was therefore based on three research questions that focused on the experiences, behaviours and environmental perspectives of Chinese international students in cross-cultural online learning during Covid-19, from the students' point of view. The researcher questioned one participant who met the criteria prior to the formal interview to see if they had any questions or suggestions regarding the questions in the list in order to check the usability of the interview outline and to determine the final interview outline (Appendix 4). The final interview questions are shown in Table 2:

Table 2. Final interview questions

Research Questions	Interview Questions	Probing Questions and Research Notes
QR1: How do Chinese international students describe their experience of cross-cultural online learning during the COVID-19 pandemic?	RQ1-Q1 Could you briefly describe your cross-cultural learning experience at the university during COVID-19?	
	QR1-Q2 Personally, how do you feel about the online learning experience of your major during this special period?	
	RQ1-Q3 Couldyou give a brief description of your learning process in a given day?	
RQ2: From the perspective of Chinese international students, what problems and challenges were encounter in their cross-cultural online learning experience during the COVID-19 pandemic?	QR2-Q1 Was it a challenge for you to take online courses during COVID-19? Why is that?	
	QR2-Q2 What difficulties and challenges have you encountered in participating in intercultural online learning during this special period?	Why do you have these feelings and opinions? Can you give me some examples? Can you describe it in detail? Could you expand on that, please?
	QR3-Q3 Could you describe how these challenges and difficulties specifically affect your cross-cultural online learning experience?	
RQ3:From the perspective of Chinese international students, what factors influenced the cross-cultural online learning experience during the COVID-19 pandemic?	QR3-Q1 What characteristics do you think are needed to be well adapted to online learning across cultures during COVID-19?	
	QR3-Q2 Which or which of these features do you think plays a bigger role?	
	QR3-Q3 What factors, such as people, requirements, institutions, pressures, learning resources, tools, and interpersonal relationships, do you think affect your learning?	

3.4.3. Thematic Analysis

In the data analysis phase, the researcher applied Braun and Clarke's approach to thematic analysis. The method of thematic analysis was applied to the analysis of qualitative data generated from semi-structured interviews. Braun[102] considered thematic analysis as a method of identifying themes, an iterative process of moving from confusing data to a map of the most important themes in the data. It involves six steps: familiarisation with the data,

generating an initial code, searching for themes in the data, reviewing themes, defining and naming themes, and generating a report. These six steps are shown in Figure 2.
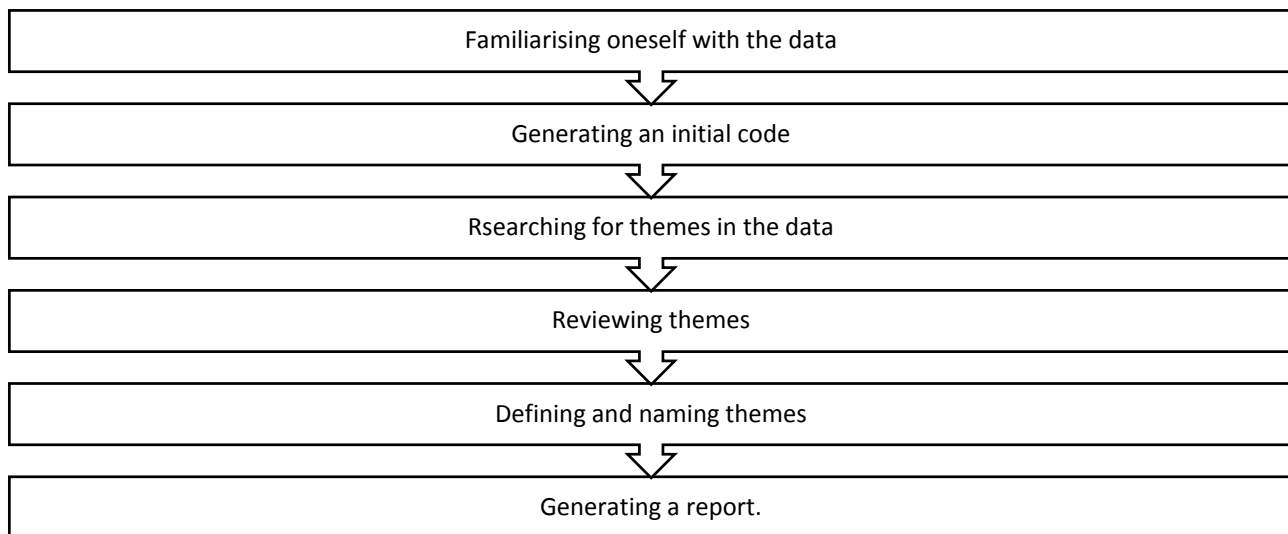
Familiarising oneself with the data

Generating an initial code

Rsearching for themes in the data

Reviewing themes

Defining and naming themes

Generating a report.

Figure 2. Thematic analysis phases (adapted from Braun and Clarke, 2006).

Data analysis began at the commencement of the interviews; it was beneficial to begin this work early in order to verify that the direction of the data collection was defined and whether any modifications were required [117]. The researcher transcribed the text data from the semi-structured interviews verbatim using word processing software (Microsoft Word), and imported them into the qualitative research tool Nvivo 12 for the purposes of coding and analysis. The coding process was carried out in Chinese, as the language used for both the interviews and the transcribed texts was Chinese. That said, an example of an interview transcript translated into English can be found in Appendix 5. During this process, the researcher had to be familiar with the data [102]. This facilitated the subsequent assignment of appropriate and text-based codes to the data, and exploring and discovering patterns or themes in the complex textual data. In reviewing the themes, the researchers principally examined and reflected on whether the themes told a story about the data and verified that saturation was achieved. In qualitative research, subject saturation is the point at which no more data gathering is judged essential [118]. Finally, the report provides a tabular presentation of how the results of the thematic analysis answer the three main research questions. The results are presented in Chapter 4, and key elements, including a description of the themes and the provision of quotation examples, will be translated as accurately as possible into English, and made available in written form in accordance with the standardised English academic specifications set by the University of Birmingham.

3.5. Ethical and Practical Concerns

Throughout the research, practical concerns and ethical considerations were addressed. Firstly, the researcher submitted a research proposal and ethics form, which included moral and ethical issues, to the University's Academic Board and the assigned supervisor. A copy of the ethics sheet can be found in Appendix 4. After approval had been obtained, the researcher sent a recruitment email outlining the purpose of the study, eligibility and requirements for participation. The recruitment email can be found in Appendix 1. The recruitment email also added an Interview Protocol and an Informed Consent Form for potentially willing participants. The interview protocol includes an interview setup and location, interview overview, consent form/ethical considerations, process for the interview, interview questions and summary/closing. The interview protocol can be found in Appendix 3. Informed consent

includes key information about the research, display collected information, privacy and data security, future research, study contacts, voluntary consent, and an investigator's statement. Consent forms can be found in Appendix 2. Finally, prior to the formal interviews, the researcher obtained signatures from the participants' informed consent forms, and again reminded respondents of the key elements of the consent forms and their right to withdraw at any time before the interviews began. In addition, the researcher arranged the interview schedule as appropriately as possible to cope with the busy graduation season during July and August. In addition, the researcher arranged, as far as possible, the realities of how to organise a reasonable interview schedule to cope with the busy graduation season in July and August.

4. Result and Discussion

4.1. Introduction

This study is a descriptive exploratory study that explores the experiences of Chinese international students studying online across cultures at UK universities during the covid-19 pandemic through descriptions of participants' perceptions, behaviours and experiences. In the previous chapter, the interview outline as well as the interview question questions were structured around three research questions and the participants' responses generated qualitative data. In this section, the results of the thematic analysis of the data are presented, including the key descriptive data results of the participants and how these results answered the three research questions of this study. Finally, the findings are summarised and discussed, including some insights for teachers of online teaching from the perspective of Chinese international students.

4.2. Interview and Partication

Qualitative data results were obtained in this study through semi-structured interviews, convenience sampling and purposive sampling methods. The resulting interviews ranged from 14 to 36 minutes in length, with an average interview time of around 35 minutes. Each voice interview was conducted individually on a one-to-one basis, and the entire interview cycle lasted 11 days (i.e. 28 July-29 August 2020), resulting in a total of 64 pages of interview material in a word document transcript, which was sourced in the form of a verbatim transcription of the web-based voice. The transcribed transcripts can be found in Appendix 5. The semi-structured interview participant information is shown in Table 3.

Table 3. Semi-Structured Interview Participant Information

Participant	Gender	Age	Admission date	Major	Setting	Interview date	Duration	# of transcript pages
Participant 1	male	26	Sep.2020	Education	Wechat voice phone	Jul. 28, 2021	14 minutes	4
Participant 2	female	25	Sep.2020	Cultural Management	Wechat voice phone	Jul. 28, 2021	32 minutes	6
Participant 3	female	24	Sep.2020	Tesol	Wechat voice phone	Jul. 29, 2021	25 minutes	7
Participant 4	male	25	Sep.2020	Communication Engineering	Wechat voice phone	Jul. 30, 2021	33 minutes	9
Participant 5	female	28	Sep.2020	Financial Management	Wechat voice phone	Aug. 1, 2021	19 minutes	5
Participant 6	female	26	Sep.2020	Business Administration	Wechat voice phone	Aug. 5, 2021	22 minutes	6
Participant 7	male	23	Sep.2020	Computer Science	Wechat voice phone	Aug. 6, 2021	36 minutes	10
Participant 8	female	24	Sep.2020	Education	Wechat voice phone	Aug. 6,2021	20 minutes	6
Participant 9	male	24	Sep.2020	Marketing	Wechat voice phone	Aug. 7,2021	29 minutes	8
M		25					25.5 minutes	7.1
Total		225					230 minutes	64

Note: Transcript pages were Times New Roman, font size 12, single-spaced

4.3. Research Question 1

The first research question was: How do Chinese international students describe their experience of cross-cultural online learning during the COVID-19 pandemic? Respondents described their experiences of taking online courses at UK universities during the COVID-19 pandemic. The three themes that emerged from the thematic analysis to answer the first research question were sudden transitioning online, social and cultural experience and cultural difference expectations. the three themes that support the first research question are tabulated 4 in which they are shown.

Table 4. Themes by research question 1

RQ1 of Themes	Theme descriptions
RQ1-T1 Suddenly transitioning online	The sudden transition from traditional to cross-cultural online learning during the COVID-19 pandemic has been a successful experience and experiment.
RQ1-T2 Social and cultural experiences	Studying cross-cultures online during COVID-19 has deprived Chinese international students of the social and cultural experience in the UK.
RQ1-T3 Cultural difference expectations	Under the influence of the epidemic, Chinese students feel that the difference between their own culture and British culture exceeds expectations
Note. The sources for these themes were the participant interviews.	

RQ1-Theme 1 Suddenly transitioning online. Although nine participants provided descriptions of their online learning experiences during the Covid-19 pandemic that varied in detail, in general, the vast majority of respondents felt that the sudden shift to online learning experiences during the New Crown epidemic was successful. Specific statements were made as follows.

"I was completely unprepared and I hesitated when I was told I could only take classes online, I was going to defer to the following year, but what I didn't expect was that the year was a great experience and at least for me, I completed my education programme on time, which is the most important thing." (Participant 4)

"I did my entire study in China and to my surprise I completed my postgraduate course at home and I found that I avoided all the hassle of the painful international student adjustment period and I could get straight into my studies. Despite the problems I encountered, I made a good transition to online classes in the UK" (Participant 6)

"At first I seemed panicked because I missed the language classes and I didn't really know how to use the online learning platform, but luckily my friends and personal tutor gave me useful guidance and I was able to adapt in about less than a month." (Participant 3)

"I think I was lucky that the year of online learning went well and saved me a lot of hassle, especially when it came to tuition fees and also health and safety. Studying online has taken a lot of the burden off my shoulders and has given my parents and myself peace of mind." (Participant 7)

"It was an unforgettable experience for me, but I have to say that facing everything alone during the new crown epidemic made me grow a lot and it was a rewarding experience." (Participant 9)

RQ1-Theme 2 Social and cultural experiences. In the nine participants' descriptions of their learning experiences, almost all felt that cross-cultural online learning during the covid-19 pandemic lacked social and cultural experiences. The specific statements were as follows.
"What I feel most regretful about is not experiencing the culture of the UK, I hardly had the chance to talk to the locals except for a few housemates who stayed in their rooms."（Participant 1）

"I went to Birmingham to experience the UK even though it was not compulsory for me to be there, but I ended up staying at home and not being able to do anything."（Participant 2）

"Even though I finished my postgraduate course, I still don't feel like I'm really an international student.（Participant 3）

Participant 6: "During the year I studied online, I only travelled once or twice and didn't make any friends."

"There are a lot of Chinese students in our major it was already difficult to communicate with foreign students in class, and with the social restrictions and quarantine policy of the epidemic, I spent the year almost alone."（Participant 7）

"From the beginning to the end, I didn't feel like I was studying abroad, meaning I didn't feel that my year in the UK was any different from my year in China. Because I couldn't go out and travel, I couldn't make friends and didn't participate in university activities."（Participant 8）

RQ1-Theme 3 Cultural difference expectations. The nine participants included postgraduate and undergraduate students studying online at universities in mainland China and the UK, with those who travelled to the University of Birmingham in the UK for online study getting a better sense of the cultural differences between China and the UK during the epidemic, in terms of epidemic prevention systems and so on. Their descriptions are as follows.

"When I first arrived in the UK, I found that the local precautions were very lax and this worried me so much that I was afraid to even go out every month at first because I was very afraid of getting infected." (Participant 3)

"I don't understand why the UK government asks everyone to keep a social distance and wear a mask, but some people just don't want to do that, it's very different from my situation in China where everyone is very conscious of wearing a mask." (Participant 4)

"In the UK, people don't seem to be worried about getting infected." (Participant 5)

"I actually think there is a very big difference between Chinese and British attitudes towards dealing with the epidemic, if you walk down the street, Chinese people are definitely wearing masks." (Participant 7)

4.4.   Research Question 2

The second research question is: from the perspective of Chinese international students, what problems and challenges were encounter in their cross-cultural online learning experience during the COVID-19 pandemic? In the second research question, the respondents described the difficulties and challenges encountered in participating in online courses in British universities during covid-19. The topic analysis produced four topics: content understanding and perception, online communication and interaction, online learning experience and academic and psychological pressures. The four topics supporting the second research question are shown in Table 5:

Table 5. Themes by research question 2

RQ2 of Themes	Theme descriptions
RQ2-T1 Content understanding and perception	Confused about the understanding and perception of the content in the online course
RQ2-T2 Online communication and interaction	It is difficult to communicate and interact with teachers and students in online learning
RQ2-T3 Online learning experience	Chinese international students lack online learning experience
RQ2-T4 Language barriers	Chinese students' language is an obstacle and challenge to online learning
RQ2-T5 Academic and psychological pressure	Academic goals and psychological pressure are the challenges to participate in online courses
Note. The sources for these themes were the participant interviews.	

RQ2-Theme 1 Content understanding and perception. Almost all participants mentioned that the biggest difficulty in the process of intercultural online courses was the challenge of understanding and perceiving the content in the online classroom. This was described as follows.

"I found all the pre-course materials provided very informative but unfocused, which made it difficult for me to grasp." (Participant 1)

"Some days the teacher will follow the syllabus and some days he won't. When the teacher got off track I got off track with them." (Participant 3)

" If I didn't use recording software to record what the teacher was saying in class to review afterwards then I would definitely not understand the next lesson, I felt that the teacher was talking fast." (Participant 5)

"Instead of having a course on computer languages that is so fast and hands-on, I find it very difficult to understand some of the lectures and I feel that the teacher is not very clear in the online course" (Participant 7)

"I wish the teacher would send me lecture notes because there is so much content and span in the classroom. Those classes with handouts I would feel good about." (Participant 8)

"It's hard to describe the feeling that I can understand what the teacher is saying, but I can't follow his thoughts, I feel like all I hear are sentences and words, but I can't understand the meaning. Sometimes often I have to put more effort out of class or do more pre-reading before class." (Participant 9)

RQ2-Theme 2 Online communication and interaction. Participants identified difficulties in intercultural online learning in terms of interaction in the classroom and communication with the teacher. Specific descriptions are as follows:

"I feel that the communication and interaction with teachers and classmates in class is not as effective as it should be, we usually communicate by email." (Participant 2)

"Very few people turn on the camera in class because everyone is nervous and afraid of embarrassment but this can lead to no one participating in the discussion, especially in groups where there are more Chinese students, almost no one talks." (Participant 3)

"During group work, I found that Chinese students generally don't talk, or if a lot of Chinese students are in a group, they will chat in Chinese but won't discuss the questions left by the teacher. This feels like it's good for learning, but there's no way around it, that's the reality." (Participant 5)

" Some times it is difficult to express ourselves clearly with the tutor, also it is not very efficient to communicate with the teacher in class, and there are

courses where the teacher keeps talking and does not let us discuss."
(Participant 7)

"Most of the time, if there is no problem that cannot end, I don't take the initiative to talk to the teacher about my ideas and I don't take the initiative to contact the tutor, I feel that online learning is all about learning by myself."
(Participant 9)

RQ2-Theme 2 Online learning experience. Participants expressed their lack of experience with online learning as a challenge to adapting to cross-cultural online learning at a UK university. This was described in detail as follows:

"I never thought I would be completing a master's degree by taking online classes, so I didn't really know how to study effectively. At first I simply listened to the lectures in class and didn't participate, or take notes. It wasn't until later when I had to take the exams that I realised how important a lot of what the teacher was saying was"(Participant 1)

" I was very passive at first and didn't really know how I was going to adapt to this mode of learning. I hadn't taken any online classes in China and this was the first time I had done so. It was very difficult at first, not only to adapt to the teaching style of a British university, but also to adjust to the time difference.
(Participant 3)

"I remember the first time I took a class I had no idea how to open zoom, and then I asked in the dialogue box, but no one replied to me. I didn't know what to do for the first few lessons. (Participant 6)

"I felt that the online classes were a casual thing, no one told me what I had to do because I hadn't done it before, so I didn't really take it seriously – I basically didn't participate much and mostly logged in on my smartphone to listen to the classes. (Participant 8)

RQ2-Theme 4 Language barriers. Participants reported that language was a major barrier to participation in online courses during the covid-19 pandemic for cross-cultural online learning. Specific descriptions are as follows:

" I basically didn't have the opportunity to speak English this year because there was also very little communication in class"(Participant 1)

I am probably the least spoken student in the class because I think my speaking is so bad. Every time there is a group discussion there are very few people talking, so I think it's better not to talk." (Participant 6) "

"Very often, I actually wanted to participate in the online discussion groups, I actually wanted to express a lot of my opinions but I was too embarrassed. I've tried a few times and even though I've said my point of view, people don't seem to understand it or have a hard time understanding it." (Participant 7)

"When I am communicating with teachers and classmates, I would like to be able to express myself in a professional and authentic way. This will give me more confidence in the online classroom." (Participant 8)

RQ2-Theme 5 Academic and psychological pressure. Participants reported that the stress of participating in cross-cultural online learning at UK universities during covid-19 was mainly academic and psychological in nature. The specific descriptions are as follows:

" The most stressful time for me is when I have to hand in assignments or exams and I just feel anxious that I am not prepared and I don't know how others are doing"(Participant 4)

"I get anxious and can't sleep before the deadline for an assignment. "(Participant 5)

"I feel that the thing I find most difficult about this online learning is the mental regulation, such as being lonely and easily anxious." (Participant 6)

4.5. Research Question 3

The third research question is: From the perspective of Chinese international students, what problems and challenges were encounter in their cross-cultural online learning experience during the COVID-19 pandemic? The thematic analysis generated nine themes on the research questions, including self-management, motivation to learn, help and guidance and feedback, networking and technical support, interpersonal relationships, critical thinking, language skills, learning environment and climate, and safety and wellbeing. The nine themes that support the third research question are shown in Table 6.

Table 6. Themes by research question 3

RQ3 of Themes	Theme descriptions
RQ3-T1 Self management	Online learning can maintain self-discipline and effectively manage and arrange learning and daily life time
RQ3-T2 Motivation to study abroad	Personal motivation to study abroad plays a key role in the effect of cross-cultural online learning
RQ3-T3 Help, guidance, feedback	Help from students and society, as well as effective guidance and feedback from teachers in online learning
RQ3-T4 Network and technical support	Cultural online learning needs good network and technical support
RQ3-T5 Interpersonal relationship	Whether the relationship with members of the family and roommates is harmonious affects online learning
RQ3-T6 Critical thinking	Online learning transforms inherent thinking and exercises critical thinking ability
RQ3-T7 Language ability	Have good language expression and communication skills in communication and interaction
RQ3-T8 Learning environment and atmosphere	Learning atmosphere is very important for active online learning. Chinese students are eager to create a good learning environment.
RQ3-T9 Safety and health	Safety and health protection under the influence of covid-19 is the basis of online learning

Note. The sources for these themes were the participant interviews.

RQ3-Theme 1 Self-management Participants indicated that maintaining self-discipline in online learning and effectively managing and organising their study and daily life time had a significant impact on online learning, described as follows.

"I think it is important for everyone to be able to balance their life and study time during online learning, and to draw the boundaries between the two more. "(Participant 2)

"People who are self-disciplined can definitely do well in the online learning process because they know exactly what they are doing. And those who don't plan often don't learn well. "(Participant 7)

RQ3-Theme 2 Motivation to study abroad. Participants indicated that personal motivation to study abroad plays a key role in the effectiveness of intercultural online learning, as described below.

"As for why I didn't apply for a deferment or give up my online course, the most important reason is that I want to get my master's degree as fast as possible, so even if there are regrets and difficulties, I will still persist." (Participant 7)

"I think Chinese students are all still working hard because most of them want to graduate successfully and then go back to China to find a job, and nothing else matters. "(Participant 2)

RQ3-Theme 3 Help, guidance, feedback. Participants indicated that help from fellow students, as well as guidance and feedback from teachers, were important factors for effective online learning, as described below.

(Participant 3) "My housemate and I are in the same major and we came to university together from China, both in life and study, and the help we give to each other solves most of the difficulties we encounter."

(Participant 8) "I think the teachers in the UK are completely different from those in China. The teachers in each course basically don't supervise your studies or pay too much attention to you in general. You need to take control of the learning process yourself and the teacher will only provide some key guidance and feedback."

RQ3-Theme 4 Network and technical support Participants expressed the importance of a good online environment and technical support for online learning. The following statements were made.

"The first best thing our school did was to provide a VPN located in China, which allowed me to access the school library and use Google Scholar even when I was in mainland China, which was the basis of everything. (Participant 3)

"The internet in our dormitory is always down and several times I can't get into Zoom's room at all during class, which is too disruptive to my studies"(Participant 4)

RQ3-Theme 5 Interpersonal relationship Participants indicated that in the covid-19 pandemic online learning environment, the harmony of relationships with family members and roommates affects online learning. The expressions were as follows.

"With all of us studying at home or in our dorm rooms, our parents and roommates are the people we have the most contact with and many times it affects our learning status." (Participant 1)

"I think although going to university in the UK and attending classes at home, the learning content is the same, but there are more ren q relationships to deal

with at home and it is not easier than going to the UK and staying alone."
(Participant 5)

RQ3-Theme 6 Critical thinking Participants reported that taking part in online learning in the UK was a process of shifting inherent thinking and exercising critical thinking, which can affect the ultimate online learning outcomes. This was described in detail as follows.

"The experience of online learning has made me realise that whether it is in classroom learning's or after school tasks, what is required to achieve effective online learning is the critical thinking that is promoted by UK education, which is present throughout almost all aspects of learning." (Participant 4)

"I prefer to believe it was an academic exercise to hone my academic skills and critical writing skills." (Participant 6)

RQ3-Theme 7 Language ability Participants felt that for international students, language skills were very important in communication and interaction in online learning. The descriptions are as follows.

"I think that 99% of the problems with online learning can be solved if you have good English skills. The instrumental role of language is very crucial to the online learning experience. "(Participant 4)

"During every online group workshop, I am very envious of those who can express themselves fluently and clearly and they can handle everything, both online and offline. (Participant 7)

RQ3-Thene 8 Learning environment and atmosphere The learning environment and atmosphere were also considered by participants to be important factors influencing online learning. The following descriptions were given.

"Online learning is much more effective when there is an open, active learning atmosphere, although this is the biggest difference between online and offline learning. "(Participant 4)

"A good online learning atmosphere makes me feel encouraged and makes me feel that I am not alone in my learning and that all people may have similar difficulties, which gives me more confidence. (Participant 6)

"Because of online learning, there is no learning atmosphere or peer teacher involvement or supervision, it makes me feel that I have to do everything on my

own and the ability to learn on my own is probably more important."
(Participant 9)

RQ3-Theme 9 Safety and health Participants identified safety and health as important factors affecting online learning in this particular environment. This was described as follows.

"Online learning provided us with a safe and healthy environment, which ensured that we were able to complete our study programme." (Participant 3)

"During the worst time of the epidemic, even though I stayed at home most of the time to study, I still felt worried. This gloomy feeling did not allow me to concentrate on my online classes." (Participant 9)

4.6. Summary and Discussion

From the results of the thematic analysis of the first research question and the participants' descriptions, it was found that during the covid-19 pandemic, Chinese international students perceived the sudden transition to online learning as a successful study abroad experience. This differs from the findings of Duguid et al., [78] , but is similar to the findings of Khalil et al., [87], Demuyakor, [3], [119], Allo, [87], that online courses during the covid-19 pandemic were helpful for international students. The course is helpful for international students' learning. The results show that online learning offers a viable educational alternative for Chinese international students at this particular time as an urgent transition. Furthermore, this alternative to offline courses was supported by the majority of participants, who responded that adapting to online learning as soon as possible made everything easier and more effective. However, while the overall experience was well received by the majority of participants, the social and cultural experience of the Study Abroad programme did not meet expectations. This offline contrasts with previous offline study abroad experiences for Chinese international students. Whereas in the past it had been difficult for Asian students to integrate into local social and cultural life and the university community due to a lack of language skills and social skills [30], during the epidemic Chinese international students had even less opportunity to experience and integrate into UK society and culture [30], meaning that they were completely isolated from the wider environment and the whole learning process was like being in China [34]. However, the fact remains the same as in previous studies, namely that Chinese international students are very keen to have a cultural experience [35]. In addition, Chinese international students also perceived that cultural and cognitive differences between China and the West were more pronounced under the impact of the epidemic. This is in line with the dynamic cycle theory of cross-cultural adaptation. As the requirements for protection against the epidemic were very different, the vast cultural differences between China and the West were initially shocking to Chinese international students, followed by understanding and acceptance. During this particular period, Chinese international students went through a process of intercultural adaptation [23].

The five themes of the second research question state and summarise the main challenges encountered by Chinese international students during the covid-19 pandemic. These difficulties and challenges include the understanding and perception of learning content, communication and interaction in cross-cultural online learning, lack of online learning experience, language barriers, academic and psychological stress. To begin, the findings

support those of Khalil et al., [119], in that Chinese overseas students in online courses have content and comprehension problems. Content cannot be taken straight from the traditional classroom in online education. It must be chosen, modified, and integrated by the instructor or instructional designer utilizing a range of technology tools, and restructured according to pedagogical theory or pedagogical principles. However, many instructors may find it difficult to adjust to online teaching rapidly owing to the fast change caused by the covid-19 epidemic, and a lack of expertise creating and delivering online material in several areas has resulted in the inadequate quality of many online content. Another challenge in designing and developing online educational content is that, because online educational content is technology-based, and students' learning environments differ in terms of technical support, online teaching and learning content may not be delivered to each student in a timely manner. To put it another way, each student's access to the information is not reciprocal. When viewing instructional videos online, for example, students living in locations without high-speed internet access may experience delays [80], [88]. Access to the complete online content may be limited for students from different regions and countries. This is the present stumbling block in international online courses.

Secondly, Chinese international students' participation in online communication and interaction, as well as their lack of experience in online learning, were also a major difficulty in the online learning process. The findings of the study are consistent with those of Adnan [88] and Omar et al., [82], but unlike previous studies, the difficulties were mainly caused by the biased perceptions of many Chinese international students of online education as described by the participants. For starters, many Chinese foreign students regard online education as an informal style of education due to a lack of face-to-face contact with university professors. This is due to the fact that many students in online education do not view assignments and tests as important duties to accomplish, and are therefore unmotivated to participate in online classroom activities. Second, as the theme analysis revealed, some participants were not willing to participate in online courses. Chinese foreign students may be hesitant to modify their learning patterns formed in the conventional Chinese educational model and may avoid participating in online teaching activities such as online seminar group activities and group projects from a psychological standpoint. In terms of abilities, some Chinese international students are not initially adept in the technical skills necessary to use online learning gear or software. This also plays a role in their first struggles with online learning. Third, if a social community of knowledge is not formed, the absence of engagement in some of the more theoretical online courses can generate a sense of alienation among otherwise novice international online learners. When it comes to online education, this also makes pupils skeptical.

Finally, language barriers and academic and psychological stress are also difficulties that Chinese international students have to face. This result reflects the fact that, as with previous research findings, language issues have continued to plague Chinese international students for a long time [36]. The language barrier not only affects the interaction and communication of Chinese international students, but also has a negative impact on online classroom participation [45]. It is worth noting that the results of the study differ from those of Mukhtar et al., [92] in that when describing academic difficulties, Chinese international students mostly cited academic demands as the main cause of psychological stress and did not mention concerns about academic integrity. This is another indication of the effectiveness of the university's academic support for international students in the online learning process and the training of academic discipline development.

From Chinese international students' descriptions of the third research question, it can be found that self-management, motivation to study abroad, help from peers, guidance and feedback from teachers, networking and technical support, interpersonal relationships, critical

thinking, language skills, learning environment and climate, and safety and health security were identified as the main factors influencing Chinese international students' intercultural online learning during the covid-19 pandemic. The above themes reveal that intercultural online learning requires a greater degree of self-directed learning and self-regulation, requiring international online students to take greater responsibility for their own learning. And these criteria are difficult for Chinese international students who do not have access to online education, necessitating additional support and help from schools and professors. In addition, good internet and technical support were also important factors, and the results of the study also revealed that, unlike the findings of Octaberlina [90] and Dutta [83], who mentioned 'unavailability of electronic equipment' and 'high costs', the participants reported only initial problems with the internet, but that overall, Chinese international students were satisfied with the technical support provided by the university. The findings also found that interpersonal relationships, language proficiency and learning climate were also important factors influencing intercultural online learning, which is in line with the main research questions and perspectives on online learning for international students and online courses in higher education prior to the covid-19 pandemic.

Overall, by looking into the experiences of Chinese foreign students with online learning, some useful ideas may be gained for university professors who are also dealing with the covid-19 epidemic. Firstly. In the face of the growth of online education, the most essential problem for university faculty is to reconsider the role of the instructor. According to the findings, Chinese foreign students perceive teaching and learning as a transfer of expertise from teacher to student since they have continued to adopt a teacher-centered approach to teaching and learning for many years under the traditional education paradigm [38]. Most online courses, on the other hand, are presented in a classroom lecture style, and without the actual classroom setting and close supervision of the teacher, Chinese foreign students are more prone to lose attention, interest, and confidence as learners. However, in the United Kingdom, online courses and academic assignments place a strong focus on critical thinking, and the teacher's function in the online classroom is more of a facilitator than a mere broadcaster of information [40]. As a result of this group of Chinese international students' perceived shortcomings in terms of teacher expectations [42] and online learning, university teachers must adopt a student-centered approach to teaching and learning, creating a learning community that emphasizes interactivity and allows students to engage in online classroom activities on their own.

5. Conclusion

5.1. Finding and Conclusion

This dissertation is the result of a descriptive exploratory study on the experiences of Chinese international students participating in U.K.-based online courses in higher education during the Covid-19 pandemic. As a descriptive exploratory qualitative study exploring Chinese international students' experiences of cross-cultural online learning during the Covid-19 pandemic, qualitative descriptive data were collected through convenience sampling, purposive sampling, and one-to-one present structured interviews, and three main research questions were answered using thematic analysis. The research questions included.

(1) How do Chinese international students describe their experience of cross-cultural online learning during the COVID-19 pandemic?

(2) From the perspective of Chinese international students, what problems and challenges were encounter in their cross-cultural online learning experience during the COVID-19 pandemic?

(3) From the perspective of Chinese international students, what factors influenced the cross-cultural online learning experience during the COVID-19 pandemic?

The results of the thematic analysis revealed that despite the fact that Chinese international students perceived participating in U.K.-based online courses in higher education as a lack of social-cultural experience and perceived significant cross-cultural differences, they still perceived the sudden transition to online learning as a successful experience. From the perspective of Chinese international students, the study found that the difficulties and challenges encountered by Chinese international students in intercultural online learning during the covid-19 pandemic were mainly related to the understanding and perception of online learning content, communication and interaction in online learning, lack of intercultural online learning experience, language barriers, and academic and psychological stress. At the same time, Chinese international students identified self-management, motivation to study abroad, help from peers, guidance and feedback from teachers, online and technical support, interpersonal relationships, critical thinking, language skills, learning environment and atmosphere, safety and health security as the main factors affecting their intercultural online learning during the covide-19 pandemic.

Through the discussion of the findings, the thematic analysis section provides reflections and action clues on the process of intercultural online learning and teacher teaching for Chinese international students, while the discussion section reaches three consensus points and recommendations on the implementation of U.K.-based online courses in higher education in the context of the covid-19 pandemic: firstly, intercultural The first is that the centrality of the student should be highlighted in online courses, with the teacher acting as a helper and guide, as opposed to the traditional classroom teacher-student role. Secondly, online teaching should carry out an online reinvention of course content and methods, focusing on the effectiveness of classroom communication and interaction and post-class guidance and feedback. Third, highlight the interface between the network and technical support and online teaching courses, improve the degree of integration, and realize the transformation from a tool attribute to a valuable attribute as soon as possible

5.2. Limitation and Recommendation

Admittedly, there are several limitations to this study. Firstly, this study is a descriptive exploratory qualitative study, taking both a random and purposive sample given a convenient and small sample size, and therefore has limitations in terms of the number of study participants and the time available for the study. This may not provide an objective and comprehensive representation of the entire population of Chinese international students in the UK. Although quantitative data can provide a broader perspective [101], this means that the results and findings of this study cannot be generalised to a wider population through quantitative analysis. However, due to the nature of the qualitative study, the findings are transferable to a wider academic population and other higher education institutions offering online courses and programs. Secondly, the researcher herself is a member of the Chinese international student population, as are most of the participants. Inevitably, the implementation of the research methodology and analytical approach was biased by her own values, which had an impact on the objectivity of the data. The researcher attempted to avoid any loss of objectivity as much as possible through pre-test interviews and reflective thematic reviews. However, it was not possible to avoid all errors in the research process. In addition, with only two months to collect data in the field, and with data collection taking place mainly during the busy graduation season in July and August, the researcher considered that the amount of information collected might not be as good as expected.

Future research could therefore be more broadly adapted by studying a larger and more comprehensive sample of international online learners as a group, including Chinese international students. Furthermore, as the motivation for this study was heavily based on the researcher herself, future research should be directed from the perspective of a wider range of

stakeholders, such as teachers, universities and institutions. At the same time, with the arrival of the new crown vaccine and the improvement of the covid-19 pandemic, the research design of future studies could be developed on a more liberal basis in order to obtain more comprehensive and objective findings.

Acknowledgments

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