**ABSTRACT**

**Aim/Purpose**
This study aimed to explore the challenges faced by international doctoral students in Chinese universities and find out what international doctoral students perceive to be effective supervision.

**Background**
As higher education internationalization is proliferating, there is a need for adjustment in every educational system. Despite the rise in the internationalization of higher education in China, very little research has been carried out on internalization at the doctoral level. Since research forms an essential part of doctoral programs, it is necessary to examine the challenges international students face as far as research supervision is concerned.

**Methodology**
This study employed the exploratory case study research design adopting the qualitative research methodology. The study participants were 68 doctoral students from two comprehensive universities in China. A comprehensive university consists of diverse programs and students: for example, master’s programs, doctoral programs, undergraduate programs, and professional programs. Data were collected using a semi-structured interview guide. The qualitative data collected was analyzed thematically.

**Contribution**
This study offers new insights into the research supervision of international doctoral students. This study suggests that every university hosting international students should pay attention to doctoral students’ research supervision and implement appropriate strategies such as those proposed in this study to allow international students to acquire new knowledge and skills as far as research is concerned. This study also proposed some strategies based on what doctoral students perceive to be effective supervision that universities can implement to improve research supervision.

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Findings

The study found that international doctoral students faced many challenges regarding research supervision. These challenges are language barriers, ineffective communication with supervisors, insufficient time to discuss with supervisors, cultural differences and adapting to a new environment, depression, and forcing students to change research topics. Moreover, this study found that the following strategies can be implemented to improve research supervision of international students: considering student's research interests when assigning them to supervisors, the need for a specific time to meet with supervisors, providing or directing students where to get research materials, in-service training for research supervisors, and evaluating and modifying criteria for selecting supervisors.

Recommendations for Practitioners

University administrators can establish informal research supervision learning communities that can enable supervisors from different universities to share cross-cultural supervision ideas and learn from one another. Moreover, it is necessary for supervisors to guide and direct students both in academics and social life to help them overcome depression; isolation, and adapt to a new environment.

Recommendations for Researchers

This study was limited to two universities, and the participants were international doctoral students in English-taught programs. However, the situation may differ with international doctoral students in Chinese-taught programs. As a result, the researchers suggest that another study should be carried out focusing on international doctoral students in Chinese taught programs; their experiences may differ.

Impact on Society

Doctoral students are significant contributors to the research productivity of an institution. It is, therefore, necessary to ensure that they acquire sustainable research skills to solve the complex problems affecting the education sector and society at large.

Future Research

It is vital to explore international doctoral supervision in other disciplines as well as universities.

Keywords

international doctoral supervision, improving research supervision, internationalization of higher education research supervisors, research challenges, international education

BACKGROUND OF THE STUDY

INTERNATIONAL EDUCATION IN CHINA

Internationalization of higher education is seen as a possible remedy to address the globalization of societies, cultures, economies, and labor markets (Altbach, 2004; Altbach & Knight, 2007; Vander-Wende, 2007). As a result of this, international student recruitment is one of the major strategies used by many nations to meet globalization's needs (Ding, 2016; W. Ma & Yue, 2015; Urban & Palmer, 2014). China's massive recruitment of international students is a national strategy to boost its soft power (Kuroda, 2014). The recruitment of international students in China is based on diplomatic issues rather than educational or economic reasons (Wen, 2014; Wen et al., 2018).

There are over 492,185 international students in China, and most are in non-degree programs (Gao & Liu, 2020). The increasing number of international students in China is due to its fast economic growth (Jiani, 2016; L. Wang & Byram, 2018). Doctoral students constitute just about 8.6% of international students in China (J. Ma & Zhao, 2018). Compared with Germany, France, and Japan, China offers fewer English programs due to inadequate lecturers eligible to teach in English (J. Ma & Zhao,
W. Ma and Yue (2015) found out that internationalization in Chinese universities varies across disciplines, with economics, management, and education at the top. However, despite the limitations, over the past years, China has recorded considerable achievement as far as internationalization of higher education is concerned, which has led to the current transformation of the Chinese education system to compete with other nations (Gao & Liu, 2020; Yang, 2020; Yang, 2014).

China is striving to be the biggest host country for international students in Asia and a major study destination in the world (Kuroda, 2014; J. Ma & Zhao, 2018; Pan, 2013). However, it is good to note that China still has much to do to attain its aspirations of creating world-class universities as far as internationalization of higher education is concerned (Ding, 2016; Huang, 2003; Rui, 2014). For example, with regard to research supervision, Larbi and Fu (2016) found out that the language barrier hinders effective supervision and the inclusion of international students in research projects in Chinese universities. This reveals that much still needs to be done as far as the internationalization of higher education in China is concerned. International students in China face difficulties accessing English resources, limited interactions with faculty members, and problems adjusting to a new socio-cultural environment (Wen et al., 2018). To ensure that international students gain the necessary skills and experience, involving international students in research projects is crucial to their future careers as independent researchers (A. Lee, 2008; L. Wang & Bryam, 2018). Doctoral students need to gain sustainable knowledge and skills by engaging in work-related activities in industries, educational institutions, and companies to gain the necessary experience needed to acquire a job after graduation (A. Lee, 2008; L. Wang & Bryam, 2018).

International doctoral students in English-taught programs studying in China are required to take courses; after completing the course work, they are expected to defend research proposals followed by pre-defense and then the actual defense. However, in some universities, international students are expected to pass comprehensive exams before the pre-defense. The comprehensive assessment entails a summary of what the students have achieved with their one year of study. International education started in China with the study of the Chinese language, and as a result of this, a majority of international students in China are studying the Chinese language. Due to the increasing number of international doctoral students studying in China, there is a need to explore their perceptions and challenges regarding research supervision. To ensure effective research supervision of international students, understanding the challenges they face is very important.

Statement of the Problem

Despite the rise in the internationalization of higher education in China, very little research has been carried out on internalization at the doctoral level; moreover, very little is known about these students’ difficulties and challenges (L. Wang & Bryam 2018; Wen et al., 2018). Since research forms an essential part of doctoral programs, it is necessary to examine the challenges international students face regarding research supervision. The supervision process or the writing of a thesis forms an essential part of doctoral programs (Bastalich, 2015). Since international students are from different social and cultural backgrounds, they may face challenges during the supervision process. Due to the above reasons, this study aims to give an insight into international students’ research supervision by exploring the challenges international doctoral students face as far as research supervision is concerned and proposing strategies to overcome these challenges. It is important to note that international students contribute to universities’ success, primarily through research (Due et al., 2015).

Therefore, this study’s objective was to find out the challenges faced by international doctoral students during the supervision process and to find out what international doctoral students perceive to be effective supervision. Two research questions guided the study: What challenges do international doctoral students face during the supervision process? What do international doctoral students perceive to be effective supervision?
LITERATURE REVIEW

RESEARCH SUPERVISION

Research supervisors have many roles to play as far as the supervision process is concerned. Supervisors are expected to be experts in students’ research areas and to possess the necessary knowledge, skills, attitude, and experience to monitor students’ progress (Abigail & Hill, 2015; González-Ocampo & Castelló, 2019; Gube et al., 2017; Halse & Malfroy, 2010). Research supervision has a high impact on doctoral students’ development (González-Ocampo & Castelló, 2019). The relationship between supervisors and supervisees is crucial to the students’ success (Akerlind & McAlpine, 2015). Supervision practices determine timely program completion, satisfaction with the experience of doctoral studies, and general well-being of doctoral students (Ives & Rowley, 2005; Kreber et al., 2021).

Lindsay (2015) found that supervisors’ support is crucial when writing a dissertation. Research supervisors are responsible for shaping doctoral students’ career identity and guiding doctoral students to become independent researchers (Foot et al., 2014). It is the supervisors’ responsibility to provide the time and support to develop students’ research skills (Heath, 2002; Lubbe et al., 2005; Stubb et al., 2014; T. Wang & Li, 2008). Supervisors need to act as role models that students can emulate. Unfortunately, the supervisor and the supervisees’ relationship is not always positive (Gill & Bernard, 2008; Hattie & Timperley, 2007). Over 50% of students who enroll in postgraduate studies do not complete their studies at all (Erichsen & Bolliger, 2011; Rodwell & Neumann 2008; Schinke & da Costa 2001). This might be due to the failure of supervisors to carry out their roles effectively. Effective supervision is critical to successful postgraduate research. Many supervisors do not understand that research supervision is a teaching-learning process (Bruce & Stoodley, 2013; A. Lee, 2008). This might be one of the reasons why students face difficulties. There is a need to provide professional development programs for academics involved in postgraduate students’ supervision (Akerlind & McAlpine, 2015; Cryer & Mertens, 2003; Heath, 2002). According to Manathunga (2017), to ensure effective supervision of international doctoral students, there is a need to consider the transcultural supervision approach (time, place, and cultural knowledge) to create learning experiences for both the supervisor and the supervisees. Also, L. Wang and Bryam (2018) stated that supervisors and supervisees coming together to promote academic and social development could improve international students’ research supervision.

Many universities aim to become world-class universities in terms of international education; however, very little is known about international students’ problems during the research supervision process and how to solve these problems (L. Wang & Byram, 2018). Students need their supervisors’ support and expertise to enhance their research skills and produce high-quality theses (Foot et al., 2014; L. Wang & Byram, 2018). Supervisors’ expertise is one of the main factors determining the contribution supervisors will make to a student’s dissertation (Abigail & Hill, 2015; Gube et al., 2017). Supervisors are expected to prepare students for a research career by monitoring their publications, grant writing, and providing opportunities for networking (Manathunga, 2017). The conflict between supervisors and international students often results from the following: lack of time, excessive control by the supervisor, poor oral and written English skills, discrimination based on cultural background, lack of respect, lack of openness or honesty, and gender-based discrimination (Akerlind, & McAlpine, 2015; Erichsen & Bolliger, 2011; Halse, & Malfroy, 2010; Heath, 2002; Ives & Rowley, 2005). International students face difficulties adjusting to the new environment, cultures, and values; the integration of international students with local students’ may facilitate cultural adjustment (Wen et al., 2017). Cultural differences may hinder effective supervision (Manathunga, 2017; Townsend & Lee, 2004). International students often face challenges concerning language, isolation, cultural adaptation, limited peer relationships, and challenges in establishing a positive relationship with their supervision (Due et al., 2015; Elliot et al., 2016; J. Lee & Rice, 2007).
International students who have a cordial relationship with their supervisors are more likely to experience little or no stress and minimal psychological and physical problems (Andrade, 2006). A qualitative study carried out in Australia by Due et al. (2015) reveals that all the participants were satisfied with their supervisors. This shows that research supervision practices vary from one context to another. A positive relationship between supervisors and international students is meaningful because international students face many challenges with little social support to solve them (Rajapaksa & Dundes, 2002; Trice, 2003; T. Wang & Li, 2011). International students are faced with linguistic, educational, and cultural background differences which may influence learning (Larbi & Fu, 2016; Robinson-Pant, 2009). International students’ challenges in their host institutions differ from those in their home countries (Andrade, 2006; Tomich et al., 2000; Willis & Kennedy, 2004). These challenges may affect the supervision process. Research supervisors are better positioned to assist international students in overcoming these challenges.

It is common for international students to experience high isolation levels in their academic and social lives (Due et al., 2015; Erichsen & Bolliger, 2011; Wen et al., 2018). This isolation may result from cultural differences and language barriers (Sawir et al., 2007). One of the duties of research supervisors is to introduce international students to social networks and encourage them to engage in the researchers’ local community (Bartram, 2007; Montgomery & McDowell, 2009; L. Wang & Byram, 2018). Appropriate educational practices help international students fulfill their educational goals, have positive experiences, and help the host countries compete with other nations (Erichsen & Bolliger 2011). International students have different expectations and desires from their host institutions (Due et al., 2015), meaning that host institutions need to consider differences among learners. Effective communication and quality feedback in doctoral programs are critical to completing a dissertation. However, due to cultural differences and language barriers, communication between supervisors and students may not be effective, which is detrimental to successful thesis writing. The language barrier may cause misunderstanding among people from different countries (Baron & Dapaz, 2001; Ives & Rowley, 2005).

As higher education internationalization snowballs, there is a need for adjustment in every educational system (Ding, 2016; Gao & Liu, 2020). Many higher education institutions aspiring to become world-class renowned institutions in internationalization have been thinking of internationalizing the curriculum and adjusting teaching methods, instructional materials, and assessment strategies to suit diverse learners’ needs (Bahtilla & Oben, 2021; Gao & Liu, 2020). Therefore, it is pertinent to point out that adjustment in research supervision practices to meet students’ needs from different social and cultural backgrounds is also crucial. Host universities must ensure that international students are well equipped with innovative knowledge and skills in research to compete with other universities as far as internationalization of higher education is concerned (Urban & Palmer, 2014; Wen et al., 2017). There is a need for nations aspiring to attract more international students to improve their pedagogy and research quality (Larbi, & Fu, 2016). While there are many studies about the challenges Chinese students face abroad, very little research has been carried out on the challenges faced by international doctoral students studying in China (Bahtilla &Oben, 2021; L. Wang & Byram, 2018; Wen, 2014). This study aimed to fill the gap.

**RESEARCH METHOD**

**RESEARCH DESIGN**

This study employed the exploratory case study research design adopting the qualitative methodology. The study adopted a multiple-case approach, which is the case of two universities in China. According to Stake (2010), a qualitative case study enables researchers to gain insights into a particular phenomenon from those directly involved. It allows researchers to collect and analyze qualitative data to describe a phenomenon in a real-life context. The qualitative case study research design is most appropriate for this study because it gives participants the chance to express their opinion in their
own words rather than choosing from a set of fixed items. Furthermore, the qualitative case study research design is suitable for this study because it can give the researcher new insights into the research supervision of international doctoral students. In addition, the qualitative approach is more suitable for this study because it allows the researcher to explore a practical phenomenon in a particular context (Creswell & Plano Clark, 2011). According to Creswell (2012), the qualitative research approach gives the researcher the chance to analyze and describe a research problem. The multiple-case approach was adopted to explore international students’ challenges during the supervision process in Chinese universities. Two comprehensive universities from Western and Central China were purposefully selected. These two regions were purposely chosen because they are within the reach of the researcher. China has attracted many international students’ compared to other Asian countries (Rui, 2014; Yang, 2020).

**PARTICIPANTS**
The study population consisted of international doctoral students enrolled in English taught programs from two comprehensive universities in China. A comprehensive university is characterized by diverse programs and students. The purposive sampling technique was used; only students who have been writing their thesis for one year and above participated in the study. The study participants were 68 international doctoral students from Social Sciences, 38 females and 30 males, with 34 participants from each university. The participants were from Asia, Africa, Europe, South America, and North America. It is also important to point out that most participants were from Asian and African countries; however, they were all fluent in English. Most international students in Chinese universities are from developing countries (L. Wang & Bryam, 2018; Wen, et al. 2018). The participants were all from English-taught programs, and they were not fluent in the Chinese language (Mandarin). Some participants were self-sponsored, while some were recipients of Chinese government scholarships.

**DATA COLLECTION**
A semi-structured interview guide was used for data collection. The semi-structured interview guide was most appropriate for this study because it allows the researcher to ask follow-up questions and probe for additional information. Moreover, detailed information about personal feelings and perceptions was easily obtained through an interview. All the interviews were carried out in English. Some of the interview questions included the following: What do you perceive as effective supervision? What can be done to improve the research supervision of doctoral students? What types of problems have you encountered during the supervision process? The participants were free to ask questions, and the interviewer used probes to get additional information from the participants. Each interview took about 40 to 60 minutes. The interviews were conducted face-to-face and by phone; participants that the researcher could not interview face-to-face due to the Coronavirus pandemic were interviewed by phone. All the interviews were recorded and transcribed. Ethical guidelines were followed to ensure the confidentiality of the participants. The researcher explained the study’s objectives to the participants and their rights. Participation was voluntary. To ensure the research’s validity and reliability, the researcher gave two professors to review it. Moreover, two universities were selected, which makes the insights reliable.

**DATA ANALYSIS**
Data collected was analyzed thematically; the analysis was guided by Creswell’s (2012) six steps of analyzing qualitative data. After collecting the data, the researcher went through the qualitative data several times, organizing, transcribing, and making notes. During the transcription, keywords were written that helped in coding to ensure that the data was complete and accurate. The transcriptions were read several times to make sure that they were accurate. After the transcription, the data was coded, putting similar codes into categories that helped generate themes. During coding, the researcher read
through text data, divided the text into segments of information, labeled the segments of the information with codes, reduced overlap and redundancy of codes, and then collapsed codes into themes.

**FINDINGS**

This section discusses international doctoral students’ challenges and strategies to enhance international doctoral supervision. The research questions guide the presentation of the findings. Quotations are assigned using the following acronyms (Doctoral student # 1, 2, 3, …).

**CHALLENGES FACED BY INTERNATIONAL DOCTORAL STUDENTS DURING THE SUPERVISION PROCESS**

**Insufficient time to discuss with supervisors**

A majority of supervisors do not have time to discuss with their supervisees. A majority of the participants (N= 45) revealed that they do not meet with their supervisors as often as they want, which affects their dissertation progress. Most supervisors do not create time to communicate with their supervisees leading to late feedback, which slows down the supervision process. Some supervisors are too busy with teaching and administrative duties, and, as such, they do not have time to meet with their supervisees and discuss research. Some supervisors travel abroad during the supervision period leading to insufficient time to discuss with their supervisees. The following quotes illustrate these points.

- My supervisor is too busy with teaching and administrative duties; he does not create time to discuss my research; I have been texting him for three months now without any reply, I feel frustrated. (Doctoral student # 12)

- My supervisor do not have time to read my work properly; my supervisor traveled for more than one year. We could not discuss as often as I wanted; unfortunately, the faculty could not give me another supervisor. (Doctoral student # 56)

**The language barrier and ineffective communication**

The study found that a majority of supervisors are not proficient in English, which limits interactions with students. Effective communication is very vital in research supervision. A majority of the students (N= 49) revealed that their supervisors could not effectively communicate in English, making the supervision process difficult. It is always good for supervisors to include students in their research projects, but most often it is not possible in English-taught programs in China because most of the supervisor’s research projects are in Chinese. Students express their difficulties in discussing their research ideas with their supervisors effectively. Due to some supervisors’ inability to effectively communicate in English, they assign their supervisees to work with other lecturers. These are some sentiments from some interviewees.

- My supervisor is not fluent in English, so our interaction is limited; he is also so busy to discuss with me his English proficiency is 3/10; however, he assigns me to another supervisor whose English is better. (Doctoral student # 34)

- Language has been a big challenge for me because I cannot speak Chinese, and sometimes It is hard to communicate not only with my supervisor but also with Chinese students. (Doctoral student # 58)

- Language is a problem. My supervisor can not involve me in her research projects because they are in Chinese, and I can not speak Chinese. (Doctoral student # 31)
Cultural differences and adapting to a new environment

A majority of international students (N= 51) faced some difficulties in adapting to a new environment and working with supervisors with different cultural backgrounds and supervision styles. International students have different experiences as far as the supervision process is concerned. They are from different cultural backgrounds with different educational systems. The way they were supervised back home is different from how they are supervised abroad because each institution or supervisor has a different supervision approach. Students express their frustration about adapting to a new country, new culture, and new supervision approach. These are some quotes from some students.

*It was so difficult for me to adapt to a new environment; working with someone with a different cultural background and style of supervision was not an easy task for me.* (Doctoral student # 32)

*Cultural difference is a major challenge; I found it challenging to adapt to a new supervision style. In my home country, supervisors guides students step by step throughout the research process, but this is not the case. I do not even think that my supervisor knows what I am working on.* (Doctoral student # 51)

Depression and isolation

The study found out that international students can be depressed due to personal issues or educational issues at one point in time. Most of the participants (N=43) complain about isolation. Some participants expressed that living in a foreign land without close family members and friends is challenging. This means that some international students often face problems that they cannot solve due to little or no social support. Most international students are without family and close friends around; the supervisor may be the only one who can guide international students when facing educational and social issues. International students who have a positive relationship with their supervisors may not face many physical and psychological problems because the supervisors will always be there to help them when the need arises. The following quotes illustrate these points.

*I went through depression, I lost my dad, and after some time, I lost my wife; during this time, I could not understand what I read or wrote. My supervisor encouraged me during this period; he is like a father.* (Doctoral Student # 1)

*Most often, I feel so lonely like no one cares; I want my supervisor to ask about my well-being, to ask how I am doing and how I am progressing with my thesis.* (Doctoral Student # 67)

Forcing students to change research topics

The study found that telling students to change their research topics entirely can be frustrating. Some of the students expressed that they had a research interest before enrolling in a doctoral program. As a result of this, changing their research topics is like telling them to leave the program indirectly. This means that changing a student’s research interest may frustrate them, and they may lose interest in the program. Forcing students to change their research topics is detrimental to their future careers. Forcing students to carry out research in areas not of interest may cause them to abandon the program. Forcing students to change their research topics entirely may demotivate them. To successfully carry out research, one needs to be motivated. It is advisable to modify a student’s research topic instead of entirely changing it. These are some sentiments from some interviewees.

*I feel restricted; certain research topics are not allowed in my host country. From my personal experience, my first topic was related to morals. They did not want me to include religion, so I felt frustrated because it is impossible to separate morals from religion. My friends abandon their programs because of the same problem.* (Doctoral student # 22)

*My supervisor always insists on what he thinks and what he believes, which is not what I want to do or what I have an interest in.* (Doctoral student # 29)
INTERNATIONAL DOCTORAL STUDENTS’ PERCEPTION OF EFFECTIVE SUPERVISION: STRATEGIES TO IMPROVE RESEARCH SUPERVISION OF INTERNATIONAL STUDENTS

Taking students’ research interests into consideration when assigning them to supervisors

A majority of the participants (N=52) stated that to improve international doctoral students’ research supervision, the supervisee’s interest area should be related to the supervisor’s area of interest. The point here is that, if the student and the supervisor have different research interests, the supervision will not be effective. When students are assigned supervisors who do not have expertise in the student research topic, it slows down the supervision process. Students perceive supervisors who are knowledgeable in their research areas as effective because they give them constructive contributions. The following quotes illustrate these points.

My supervisor is effective because he is an expert in my research area, my topic is related to the course he taught us, and his English is good, too. He gives me suggestions that are helpful. (Doctoral student# 16)

My supervisor is not effective; he is not knowledgeable in my area of interest; I do not receive the support I need. I am not even sure he knows the topic I am working on. (Doctoral student# 28)

Specific time to meet with supervisors

According to some participants (N=39), there should be a specific time for students to meet with supervisors every two weeks. Any university with international students can arrange a regular time for students to meet with their supervisors. After each meeting, students can write explaining the outcome of their meeting; through the reports, the faculty leaders can offer suggestions for improvement. The faculty should motivate and monitor to ensure that supervisors and students respect it. Supervisors can provide as much help to the students as possible; they can share their research projects, ideas, and results with their supervisees. The supervisees will learn practical research skills from them. The following quotes illustrate these points.

I think the international college can enhance the research supervision of international doctoral students by arranging a regular time for students and supervisors to meet and discuss research under the supervision of the faculty. (Doctoral student #23)

It is crucial if there is a specific time for students to meet with their supervisors and discuss the progress of their research; faculty leaders or university leaders can monitor to ensure that supervisors and students respect it. (Doctoral student #47)

Provide or direct students where to get research materials

This study found that supervisors who provide or direct students where to access research materials are considered to be effective by a majority of the participants. Most of the participants (N=45) revealed that accessing English materials in China is challenging. Supervisors can facilitate the supervision process if supervisors guide and direct students where they can get research materials, especially in a country like China, where English materials are not easily accessible. Articles and books are essential for dissertation writing; students need standard articles to write meaningful literature reviews. This means that supervisors can guide and direct students to get books, articles, and links related to their research topic; this can help students make the research work less stressful. Moreover, supervisors can encourage students to do more searches because it is more meaningful when they discover knowledge by themselves. If the supervisor can provide some material and links related to the student’s research and stimulate them to do more searches, it can facilitate the research process. The following quotes illustrate these points.
I think an effective supervisor is one who directs students where to get materials and encourages them to do more searches by themselves. (Doctoral student # 4)

My supervisor is effective; he supervises me professionally; he does the right things at the right time; if I tell him I need an article or book, he does it immediately. (Doctoral student #17)

In-service training for supervisors
This study found that one of the strategies to improve research supervision is to provide in-service training for research supervisors. In-service training is necessary to enhance supervisors’ English language competence and keep them informed of research innovations. In-service training is essential because, as research is going on, new and better research methods and designs are being discovered. Supervisors who are informed of the recent changes in the research field are more likely to equip students with the essential knowledge and skills needed to produce quality dissertations and practical skills needed in the workplace after graduation. However, there are limited training programs for research supervisors. A majority of the participants revealed that there is a need for such training (N=53). The following quotes illustrate these points.

Research supervision can be improved by providing in-service training programs for supervisors to enhance their English and keep them updated with new development in research. (Doctoral student 14#)

I think in-service training is crucial not only to improve supervisors’ English proficiency but also to keep them informed about the recent changes in the field of research. (Doctoral student 54#)

Evaluating and modifying criteria for selecting supervisors
A majority of the participants (N=52) point out that there is a need to evaluate and modify the criteria for selecting supervisors. The fact that someone is a Ph.D. degree holder or has been supervising for some years does not make him or her effective. Evaluating the research supervision process can enhance the supervision process. The increasing demand for quality research to solve educational issues and the problems affecting society requires every university to strengthen its supervision process. In countries where English is not the first language of most supervisors, evaluating their English proficiency and providing them with opportunities to improve is crucial because effective communication is vital during the supervision process. The following quotes illustrate these points.

I think that to enhance the research supervision of doctoral students in English taught programs; they should be a form of evaluation every year to ensure that doctoral supervisors are fluent in English and are carrying out supervision effectively. (Doctoral student # 68)

Research supervision can be improved if there is a constant evaluation of the supervision process. Through evaluation, the faculty can identify supervisors who are not doing their job or those who are tired of supervising students. (Doctoral student # 28)

DISCUSSION

CHALLENGES FACED BY INTERNATIONAL POSTGRADUATE STUDENTS DURING THE SUPERVISION PROCESS

Insufficient time to discuss with supervisors
Supervisors need to create time and discuss students’ research progress as much as possible because supervisors’ support is vital during the supervision process (Abigail & Hill, 2015; Lindsay, 2015). A student who meets with his or her supervisor regularly discusses the difficulties he or she is experiencing and gets feedback on time, enabling him or her to progress faster. One of the most crucial factors that can guarantee postgraduate supervision’s success is supervisors’ availability (Ives & Rowley, 2005; Lindsay, 2015). Supervisors need to create time to communicate with the supervisees; in
situations where they cannot meet face-to-face, they can text students and ask them how they are doing and their research progress. Supervision practices determine doctoral students’ satisfaction with doctoral studies (Ives & Rowley, 2005; Kreber et al., 2021). Research supervision is vital in doctoral programs, and, as a result of this, there is a need for supervisors to provide the time, expertise, and support students need for development as researchers and to produce high-quality theses (Foot et al., 2014; L. Wang & Byram, 2018). Effective supervision of international students requires time, commitment, trust, and patience (Manathunga, 2017). Supervisors are often too busy to attend to students (Bahtilla & Oben, 2021). Reducing the workload of research supervisors may give them time to supervise students. Research supervisors are responsible for shaping students’ career identity (Foot et al., 2014; Gube et al., 2017), which requires time and commitment.

The language barrier and ineffective communication
Language is a pertinent issue as far as research supervision is concerned. International students face linguistic differences that may influence learning (Larbi & Fu, 2016; Robinson-Pant, 2009). It is crucial to consider the language barrier between international students and their supervisors (Due et al., 2015; Elliot et al., 2016; J. Lee & Rice, 2007). During the supervision process, it is always good for supervisors to include students in their research projects, but most often, in English taught programs in China, it is not possible because most of the supervisor’s research projects are often in Chinese. The language barrier hinders effective supervision and international students’ inclusion in research projects in Chinese universities (Larbi & Fu, 2016). This reveals that to improve the internationalization of higher education, there is a need to assign students to supervisors with whom they can effectively communicate. Many students cannot communicate effectively with their supervisors, which hinders the supervision process. This is in line with what Due et al. (2015) stated that international students often face language challenges. This reveals that language is not only an issue in some Chinese universities, which means that any country that wishes to promote international education needs to ensure that supervisors and students can effectively communicate. For the internationalization of higher education to be successful, there is a need to develop more effective forms of intercultural communication (Manathunga, 2017).

Cultural differences and adapting to a new environment
International students are from different cultural backgrounds and have different experiences as far as the supervision process is concerned. They are from different countries with different educational systems, which may influence learning (Larbi & Fu, 2016; Robinson-Pant, 2009). This means that, for the research process to be successful, the students need to adapt to the new supervision method, which is not always easy. At the beginning of the supervision process, supervisors need to encourage students’ initial efforts and withhold criticism (Lindsay, 2015). Helping students adapt to a new country and culture is necessary because failure to adapt may affect their studies (Manathunga, 2017; Wen et al., 2018). To ensure effective supervision, international students need to adjust to their supervisors’ supervision style and try to learn the new knowledge and skills that come with the new experience. However, studies show that students often find it challenging to adapt to a new culture (Due et al., 2015; Elliot et al., 2016). Providing personal support such as inviting students out for a walk and other social activities or pairing them with more experienced students can help new students to adapt to the new environment.

The adaptation of international students to the new research environment requires supervisors to adopt transcultural supervision approaches. It is vital because it enriches the experiences of students and their supervisors (Manathunga, 2017). Supervisors who adopt transcultural supervision understand their supervisees’ cultural background, which guides them to supervise international students effectively. By understanding their supervisees’ cultural backgrounds, they adopt supervision practices that enable international students to develop their knowledge and skills before coming to their host institutions and growing as independent researchers. This type of supervisor creates a conducive environment that enhances international students’ acquisition of sustainable research skills.
Depression and isolation

International students often experience high isolation levels in their academic and social lives (Erichsen & Bolliger, 2011; Due et al., 2015; Wen et al., 2017). International students often face problems that they cannot solve due to little or no social support (Trice, 2003; T. Wang & Li, 2011). In a foreign land without family and friends, the supervisor may be the only one international students’ can turn to in times of trouble to seek advice and comfort when it concerns educational issues and social issues (T. Wang & Li, 2011). This reveals a need for a positive relationship between the supervisor and the supervisee. Supervision practices determine the general well-being of doctoral students (Ives & Rowley, 2005; Kreber et al., 2021). The relationship between supervisors and supervisees is crucial to the students’ success (Akerlind & McAlpine, 2015). However, Gill and Bernard (2008) found that the supervisor and the supervisees’ relationship is not always positive. Cultural differences affect the relationship between the supervisors and the students (Andrade, 2006; Townsend & Lee, 2004). Some supervisors ignore students’ personal experiences and challenges (Manathunga, 2017). Students often feel good and more relaxed with a supervisor concerned about their well-being and research than with supervisors who only focus on educational issues.

International students often experience high isolation levels in their academic and social lives (Due et al., 2015; Erichsen & Bolliger, 2011; Wen et al., 2018). This isolation may be due to cultural differences and language barriers (Elliot et al., 2016; Sawir et al., 2007). It is essential for faculty members to create opportunities for international students to socialize with other international students and Chinese students, reducing isolation and stress associated with doctoral programs. According to L. Wang and Byram (2018), international students can be integrated into the research community through informal enculturation, which involves social and academic networks. Socialization can promote positive relationships among students, which is necessary to overcome depression (Manathunga, 2017). International students can be provided with opportunities to interact with Chinese students and exchange ideas; they can collaborate with Chinese students and publish research papers. These will enable them to learn from one another. However, communication may not be effective since most English-taught international students cannot understand basic Chinese. The supervisor and all the supervisees coming together and exchanging ideas to promote academic and social interactions proposed by L. Wang and Byram (2018) is more likely to be effective in Chinese universities only in situations where the international students can speak basic Chinese. The transcultural supervision pedagogy proposed by Manathunga (2017) is likely to be more effective in supervising English-taught international students since it considers the students’ cultural backgrounds. It also recognizes students’ prior knowledge, future career, experiences, and challenges and creates an environment for improvement.

Force to change research topics

As human beings, we all have goals and career aspirations. This means that changing a student’s research interest may frustrate them, and they may lose interest in the program. Manathunga (2017) found out that some supervisors do not care about students’ future careers; they only focus on getting students through their doctoral studies. They failed to recognize, respect, and build upon students’ personal, intellectual, and professional histories. Supervisors who consider students’ cultural backgrounds are more likely to give them the chance to explore their research interests. Research shows that 50% of students who enroll in postgraduate programs do not complete their studies (Erichsen & Bolliger, 2011; Rodwell & Neumann, 2008; Schinke & da Costa 2001). Forcing students to carry out research in areas that are not of interest may lead to attrition. This may even demotivate the student. To successfully carry out research, one needs to be motivated. It is advisable to modify a student’s research topic instead of changing the topic entirely. L. Wang & Byram (2018) found out that students are satisfied with supervisors that give them the freedom to choose their topics. Successful supervision of international students is determined by mutual respect, recognition of students’ intellectual resources, and respecting their research interests (Manathunga, 2017).
**Strategies to Improve Research Supervision of International Students**

**Supervisor and supervisee research interests need to be the same or related**

Taking students’ research interests into consideration when assigning them to supervisors is vital because it enables supervisors to make meaningful contributions. Doctoral students view supervisors’ expertise as the main factor that determines the contribution their supervisors will make to their dissertation (Abigail & Hill, 2015; Gube et al., 2017). Supervisors’ expertise is needed to enhance students’ research skills and produce high-quality dissertations (Foot et al., 2014; Stubb et al., 2014; L. Wang & Byram, 2018). Ives & Rowley (2005) found that when students are assigned supervisors who have expertise in the student’s research topic, the student’s progress is noticeable, and the students are more satisfied with the supervision process. One of the strategies to ensure effective research supervision is to identify both the students’ and the supervisors’ research interests and then assign students to supervisors with the same or related research interests. This strategy can enable both the supervisor and the student to carry out research supervision effectively and even engage in research projects, introducing the supervisee to experts in the field and a broader research community. Participating in research activities will improve students’ research skills and prepare them as independent researchers. This strategy will also facilitate thesis writing since the supervisor will have meaningful contributions as an expert in the students’ research area. Supervisors are supposed to be experts in students’ research areas and to possess the necessary knowledge, skills, attitude, and experience to monitor students’ progress (Halse & Malfroy, 2010; L. Wang & Byram, 2018).

**Specific time to meet with supervisors**

There should be a schedule for meeting with supervisors; after each meeting, students can write a report to explain what they discuss and the supervisors’ recommendations. This will help the faculty administrators monitor to know what the supervisors and students discussed when they met. From this strategy, the faculty administrators can also determine the type and quality of feedback students receive from supervisors. This strategy, if effectively implemented, will facilitate the research supervision process because students will have the opportunity to discuss their challenges with supervisors regularly. Specifying specific times for students to meet with supervisors does not mean that supervisors and students cannot organize special meetings. Supervisors need to communicate with students whenever there is a need (Abigail & Hill, 2015; Lindsay, 2015); they should not wait for students to text them first. Texting a student and asking about the challenges he or she is facing or how the thesis writing progresses gives students the impression that their supervisor is interested and concerned about the thesis’s success. It is necessary to ensure that international students acquire quality knowledge and skills (Larbi & Fu, 2016; J. Ma & Zhao, 2018). Improving the research supervision of international students is beneficial to the students and institutions because quality supervision enhances the students’ research skills, leading to the publication of quality research papers.

**Provide or direct students where to get research materials**

This study found that students prefer supervisors who provide them with reference materials related to their topics. This may be due to the fact that English resources are not easily accessible in China (Wen et al., 2018). There are situations where students waste much time searching for materials. Students need good articles and books to write their thesis effectively. This reveals that supervisor support is essential (Lindsay, 2015). Lack of supervisor support can affect doctoral students’ experience and satisfaction with doctoral studies (González-Ocampo & Castelló, 2019). Supervisors can guide and direct students to get books, articles, and links related to their research topics; this can help students make the research work less stressful. A supervisor is considered more knowledgeable in a student’s research area (Manathunga, 2017). As a result, it is the supervisor’s responsibility to guide and
direct the students on how to search for scholarly materials relevant to the student research topic (L. Wang & Byram, 2018).

**In-service training for supervisors**

This strategy is fundamental because supervisors often supervise students based on how they were supervised, forgetting that as research is going on, new and better models of research supervision are being discovered. Moreover, research supervisors need to identify the differences among international students and learn how to handle them. There are limited training programs for research supervisors (Akerlind & McAlpine, 2015; Halse & Malfroy, 2010). There is a need to provide professional development programs for academics involved in the supervision of postgraduate students (Bahtilla & Oben, 2021; Manathunga, 2017). Most supervisors are not aware of innovations in the research process (Akerlind & McAlpine, 2015; Cryer & Mertens, 2003). As research goes on, new research methods, designs, and data analysis methods are being discovered. However, some supervisors seem to be ignorant about these innovations, and as a result of this, even when the students try to be current and use new research methods or designs, some supervisors turn to disagreement. This reveals a need for in-service training programs to enhance supervisors’ skills and inform them of innovations as far as research supervision is concerned. There is also a need to provide supervisors with in-service training programs to enhance their English. If this is effectively done, it will improve communication between the supervisor and the students; they will be able to exchange ideas smoothly, which is the essence of supervision. It will also facilitate the research process and make the supervision process easier. Foreign professors who are fluent in English can also be employed to supervise international students.

**Evaluating and modifying criteria for selecting supervisors**

Evaluating and modifying criteria for selecting research supervisors can significantly improve the research supervision of international students. The increasing competition between countries to be at the top of internationalization requires every country to strengthen its educational system (Rui, 2014; Yang, 2020). However, it is good to note that some countries still have much to do to attain their aspirations of creating world-class universities as far as the internationalization of higher education is concerned (Ding, 2016; Huang, 2003). In countries where there are English-taught programs, there is a need to evaluate the supervisors’ English proficiency because, without effective communication, the supervision process can be difficult and frustrating. Misunderstanding between the supervisor and the supervisee may arise due to the language barrier (Baron & Dapaz, 2001; Ives & Rowley, 2005). There is also a need for continuous evaluation of the research supervision process as a whole.

**LIMITATIONS OF THE STUDY**

This study was limited to two universities, and the participants were international doctoral students in English-taught programs. However, the situation may be different with international doctoral students in Chinese taught programs. As a result, the researcher suggests that another study should be carried out focusing on international doctoral students in Chinese taught programs; their experiences may differ. Moreover, it is also vital to explore international doctoral supervision in other disciplines as well as in other universities. Moreover, this study explores only the perspectives of students; it is necessary to explore the perspectives of research supervisors.

**IMPLICATIONS AND CONCLUSION**

Doctoral students are significant contributors to the research productivity of an institution. It is, therefore, necessary to ensure that they acquire sustainable research skills to solve the complex problems affecting the education sector and society at large. This study offers new insights into the research supervision of international doctoral students. The findings are relevant to research supervisors, universities, policymakers, and students. This study found out that a majority of international
doctoral students faced some challenges when it comes to research supervision; most importantly, this study also offers new insights on how to overcome such challenges. This study suggests that every university hosting international students should pay attention to doctoral students’ research supervision and implement appropriate strategies such as those proposed in this study to allow international students to acquire new knowledge and skills as far as research is concerned.

Furthermore, university administrators can establish informal research supervision learning communities to enable supervisors from different universities to share cross-cultural supervision ideas and learn from one another. Moreover, it is necessary for supervisors to guide and direct students both in academics and social life to overcome depression, isolation and to adapt to a new environment. To effectively do this, there is a need for supervisors supervising international students to take into consideration cultural differences among students because it gives supervisors and supervisees the chance to effectively interact, learn from one another, and support each other. In addition, this study gives policymakers insight into what to consider when formulating international education policies. For example, the study found out that there is a need to take into consideration the human resources available when formulating international education policies. Furthermore, it is necessary for students to carry out research in their home places because it enables them to build the literature about their countries, histories, and cultures, thereby internationalizing knowledge and at the same time giving students the chance to make unique contributions to knowledge.

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