

The needs and challenges of international teaching assistants (ITAs) in the U.S. classroom and
the effective and professional training strategies for ITAs

by

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B.A., Guangzhou University, 2013
M.A., Kansas State University, 2016

AN ABSTRACT OF A DISSERTATION

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College of Education

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Abstract

The United States has been the most popular destination for international students to pursue their academic goals due to its quality of the higher education system, welcoming culture, and relatively open labor market after they graduate (Zong & Batalova, 2018). Meanwhile, the international students have brought a diverse culture to higher education and contributed to the U.S. economy. It is common for U.S. universities to hire international graduate students as teaching or research assistants to teach fundamental courses for undergraduates, which releases the financial pressure on the universities and faculties' teaching load. However, international teaching assistants (ITAs) face various difficulties in teaching and learning.

The researcher, as an ITA, has overcome the dilemma of language barriers, pedagogy methods, and social-cultural issues during the years of graduate study and training. This study contains the researcher's individual experience and aims to explore the needs and challenges of the ITA group in American university classrooms. For instance, lacking communication capacity and pedagogical strategies, adapting the differences of education systems between home countries and the U.S., balancing the research and teaching tasks. According to the interviews with several ITA participants, this study summarized the similarities and differences of their teaching needs and difficulties in the classroom, including their pressure on curriculum and research, limited assistance from departments, faculty members, and other organizations on the campus, especially transferring remote teaching and lacking mental support during the COVID-19 pandemic. The study collected participants' thoughts and suggestions on teaching reflection, time management, and professional development to support the ITA group and related training program on linguistic, pedagogy, and social-cultural aspects.

Key words: international teaching assistants (ITAs), challenges, American culture, professional development, teaching training strategies

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Chapter 1 - Introduction

Chapter one of this study introduces the researcher's academic and life background information in the United States. The researcher's identity as an International Teaching Assistant (ITA) and personal experiences and perspectives on the learning, teaching, and culture challenges are addressed. It also demonstrates the connection between the researcher's background and the research topic. Then it states the current issues and situation of International Teaching Assistants (ITA) in U.S. higher education. Along with the increasing number of international students and the growth of ITA, this group has been an important component in the colleges and universities in the U.S. ITA is indispensable as the foundation and future potential of the academic and teaching faculty in higher education. Because of their particular educational and cultural background, they all have more or fewer dilemmas on linguistic, social-culture, and pedagogy in their teaching and learning. This diversity group needs attention and professional training from the universities.

Additionally, Chapter 1 states the researcher's personal experience during the Covid-19 pandemic, raising the challenge of teaching mode and emotional support for ITAs and their students. It illustrates two research questions based on the current issues of the ITA group, and the interview method is applied to explore the deep stories and specific needs of ITAs to solve the research questions, which is based on Giddens's (1984) structuration theory and novice teacher learning theory as the theoretical framework. It also declares the limitation of this study and the definitions of the essential terms in the research.

Background Information

Cultural Shock Between China and U.S.

My life started the new chapter in fall 2013 when I decided to further my graduate study at the university in the United States—like the other international students, trying to pursue their academic achievement and acquire the education and training which are unavailable in their home countries (Özturgut & Murphy, 2009, p.374). My undergraduate major was English Education, so I chose Teaching English as a Foreign Language (TEFL) as my research concentration for graduate school. My academic goal was to deeply continue study-related linguistic knowledge and theory on English pedagogy and second language acquisition. Even though I studied English Education in China for four years, I was not confident in my major study due to the lack of English environment and language practicing for my undergraduate study experiences. The education and learning models exist the considerable difference between Eastern and Western culture. I believe most international students have pressure on both academic and cultural aspects. International students have to adjust to the academic differences and adapt to the cultural shock. Some of them without advanced English skills feel overwhelmed by academic pressure. Others with fluent English may face social problems related to social integration, daily life tasks, homesickness, and role conflicts (Özturgut & Murphy, 2009, p.376). A similar situation also occurred to me, especially at the beginning of the linguistic and cultural transition in the U.S. there was a dramatic impact on the curriculum requirements, classroom mode, and interaction communication, which brought me a lot of pressure and anxiety. Curriculum pressure is more than daily life tasks to me. I am fluent in English, but I have problems listening in the classroom and academic writing. The most significant difference is the student-centered and teacher-centered between Chinese and American classrooms.

I have more freedom and opportunities to demonstrate my personal opinions in the class and my assignments in the U.S. When I was back in the Chinese classroom, instructors had complete authority, and they could not pay attention to each individual because of the large number of students. Students are used to inputting all the information from instructors' lectures and seldom inquire. However, my personal opinions have become essential in American classrooms. All American classmates are positive to share their thoughts anytime during the class, and group discussion is essential. I tried to overcome the difficulties with a positive attitude because I prefer and enjoy learning in the U.S. It took me several years to adapt to learning, and I am still learning the language and American culture daily.

Challenges in Learning and Teaching

In addition to the learning, I had other challenges in teaching. English practicum course is the core course for TEFL major, so that I got a chance to give classes in all four skills (listening, speaking, reading, writing, and grammar) to other international students whose English hadn't reached the college level. It was the only opportunity to combine the theory and pedagogical approaches I learned in the class and practice in teaching. I only had three-month intern English teaching experience in high school in my hometown, and I could explain grammar knowledge in Chinese to students. I didn't have official English teaching experience in both countries. My challenges are linguistic, instructing, education system, and American cultural background in the English teaching classroom. In the second year of my graduate study, I got the Graduate Teaching Assistant (GTA) position in my university's English Language Program (ELP). So, I became one of the ITAs. At first, I worked as an English tutor and faced all the international students and community people who needed English practice. Most of the students in ELP are from China and Saudi Arabia, so the two main groups of students for tutoring are Chinese and

Saudi learners of English. Even though English is not my first language, I learned English in China when in primary school.

Due to the test-based education system, grammar is the core of English learning in China. Compared with speaking and listening, most Chinese students are good at grammar and reading. Hence, I have effective grammar learning strategies to share with other international students. Meanwhile, I am familiar with the English learning methods, especially grammar rules, according to my previous English learning experience. In the beginning, I needed to transfer all my grammar knowledge to English and learn to explain in English. Gradually, it was not challenging for me to explain English grammar knowledge to the other international students in the class or during the tutoring. After that, I acquired a precious chance from ELP to teach a lower-level reading class in the summer. I appreciated their trust, but I did not get professional training from this program or other ELP instructors before teaching the formal class for the entire semester. Therefore, I was not very confident in the class at first. I studied the textbook every day and tried to apply all the pedagogical approaches in the actual classroom. During that summer, I experienced helplessness, doubt, questioning, and pressure relief as a circulation. I wondered if I were trained professionally in the curriculum or classroom management before tutoring and teaching, the situation would be much relaxed and unhurried.

Before becoming an ITA (International Teaching Assistant), the only requirement was passing the SPEAK Test, which ELP gave. According to the ELP program website's information, The Kansas Board of Regents requires any graduate teaching assistant whose first language is not English to have a minimum score of 50 on the SPEAK Test. This particular test is for all the international students who want to apply for teaching assistant positions in our university. Four competencies are considered based on grading criteria: functional competence, sociolinguistic

competence, discourse competence, and linguistic competence. A score of 50 means the speaker understood the question and answered it appropriately. There may be some effort in the response. Expressions may be awkward. Generally, strong content is included. As long as examinees can get fifty or above, they will get the teaching positions. However, from my perspective, Speak Test is not the real-life interaction between people, and it has a particular examination mode. Examinees can practice specific testing strategies to obtain a good score, which is not equal to communication competence in the classroom. I guess that is one reason why some ITAs complain about their speaking skills from undergraduates. I wonder if departments provide professional training to ITAs or not, and do they have the same criteria and requirements? I believe I will get the answer after the research. I attended ELP professional development (PD) activities organized twice per semester with other instructors, where I learned about some general and specific English teaching methods and philosophy. I regarded PD events as my professional training in the ELP. If I could get the related training before I started the teaching and tutoring position, it would release much pressure as the novice teacher and be beneficial for the preparation of classroom teaching.

Learning and Teaching Outcomes

During the three years of graduate studies, teaching, and tutoring experience in the ELP, I found that the two main cultural groups of students from China and Saudi Arabia showed the opposite English learning strength, different learning attitudes, and classroom behaviors no matter in tutoring or in the class, which aroused my interest and curiosity. So, I did the quantitative research on these two groups, found the results from my survey, and published my research, *A Comparison of Experiences and Preferences Regarding Classroom and Tutoring Feedback Among Chinese and Saudi Learners English* (2017). According to my research (2017),

cross-cultural backgrounds play an essential role in second language learning and teaching. In my study, two different language and cultural groups had significant differences among their previous and current English learning styles, habits, and tutoring feedback (Wang, 2017, p. 261). I wonder when ITAs are faced with a multicultural classroom, how many challenges for them to apply various teaching or tutoring methods to adapt to each language and culture group of students.

Then, I got another opportunity to teach an advanced Chinese class in fall 2018. The language I teach changed, and the student group changed as well. All the students are American students or American-born Asians. I feel the differences between American and international students are based on my previous English teaching and current Chinese teaching experiences. I speak my first language in the classroom, which is more relaxed than before, compared with teaching English. However, the Chinese learning systems are entirely different between American students and me. In other words, I do not have a former and systemic Chinese learning experience to share with these students. I learned my first language naturally, so I am unfamiliar with Chinese grammar rules. I need to adjust my language teaching methods and stand as the foreign Chinese learner's perspective to study grammar and arrange my knowledge. I am still studying and exploring the similarities and differences between different languages and cultures, improving students' Chinese language and cultural interests and learning motivation. The different language groups of students have different values in their specific cultural backgrounds, learning habits and experiences, and educational systems. It is natural for them to bring various thoughts in the classroom, and the ITAs need to be open-minded to teach and face multicultural student groups.

The deeper I studied in the language field, the narrower my research. English is the basic and primary obstacle when English learners with various cultural backgrounds start studying in the U.S. Cultural challenges in education and daily life would be their permanent task. After learning and teaching in U.S. higher education for several years, I started to find research interests in multicultural education. I want to dig further into language teaching; notably, the language's humanity and culture became my next objective in my research area. That is why I focus on multicultural education for my Ph.D. phases. I found the main topic on ITAs based on my identity. I hope this research will benefit the other international groups, such as students, teaching assistants, even the instructors and professors who may have similar challenges and concerns in learning and teaching.

Difficulties Under the COVID-19 Pandemic

I have also encountered a particular dilemma since spring 2020, which is the COVID-19 pandemic. It has threatened and changed the ordinary lives of human beings in the world in such a short period. Without any mental and academic preparation, all the courses transferred online. All schools needed to switch the instructional activities to remote learning platforms, like Zoom, that need the digital competence and availability of information on online learning (Adedoyin & Soykan, 2020, p. 3). Simultaneously, instructors needed to change the lesson plans and recreate the syllabus for remote teaching for the rest of the semester.

Meanwhile, many international students decided to return to their home countries and continue studying online. However, as an ITA, I needed to adjust the teaching plans and be prepared in a short time without any previous teaching experience instead of reuniting with my family back home. It enhanced my workload to transform all the course contents to e-platforms, such as Zoom and Canvas, which should be easy for learners to access. After several discussions

with my supervisor, we came up with a new teaching solution through Zoom. Then I took part in our university's Zoom orientation and studied this new instruction medium's primary function. All virtual courses started again after one week of preparation after the spring break. At first, I was unfamiliar with setting the background and organizing the Zoom discussion because of the limited digital competence.

It was a brand-new experience for me, and the interaction of online teaching is much more complicated than an in-person class. Technology has become the primary challenge, and it depends on the internet: this objective factor has become indispensable in daily teaching. Additionally, it requires technological equipment for instructors and learners, and it is unfriendly for people with outdated devices. For instance, some students rely on the computer and free internet in school, and due to the closure of schools, they have to find access to the internet (Adedoyin & Soykan, 2020, p. 4). Some learners have no cameras with their technological devices. Many of them even chose to turn off the camera or even without a camera, increasing the teaching challenges without seeing students' facial expressions during the class, so that the inquiry section became blurred. Specifically, I was unsure whether students understood the new grammar patterns unless I kept asking them to confirm if they didn't have problems. Even though they gave me affirmative answers, sometimes, it is questionable for their initial or objective answers. Importantly, faculty and students receive more emails from the university, and some of the emails contain essential information. Hence, people need to spend much more time checking and updating their emails. According to Adedoyin and Soykan (2020, p. 6), these loads of emails have added to students' and faculty's stress, which may result in mental health problems.

Another critical concern is the assessment mode during the COVID-19 pandemic, and the effectiveness of invigilation becomes weak compared with the in-person classroom. However, it

still makes the assessment more complicated than before. For example, in advanced Chinese classes, students need to take weekly quizzes and monthly examinations, and they are required to turn on the camera during the testing. In online learning, assessments are often carried online, whereby instructors are limited to learners' proxy supervision, making it impossible to regulate and control cheating (Arkorful & Abaidoo, 2015). Other ITAs have similar teaching and emotional support difficulties, and I hope to acquire different personal stories during the interviews.

Summary of Background Information

In a word, I experienced challenges and difficulties in both language and cultural differences during these years of learning and teaching, even in the global pandemic. I grope between western and eastern culture, including pragmatics, the education system, classroom modes (face-to-face classroom and online teaching), teaching philosophy, and try to find the balance, especially select the essence, and discard the gross of each culture and apply in my teaching and learning, which can be a life-long goal for me.

Statement of Problem

International Students Situation

According to McCarthy (2018), the total number of international students in the United States was 808,640, of which 367,920 were graduate students. However, according to the research of Israel and Batalova (2021), about 1.1 million international students were enrolled in U.S. institutions in the school year 2019-20, which marked a decrease of almost 20,000 international students from the year before the decade consistent growth. These known and unpredictable factors affect the trend of the international students in the U.S. and fluctuate the amount of this group. The main factors include the increasing tuition fee and the living cost in

American higher education; the intensive political and social environment under the Trump administration; meanwhile, it also caused the visa delay and rejected issue. International students have more options to study and work in other nations except for the U.S. Other than these, the COVID-19 pandemic has aggravated the situation for the international student in the school year 2020-21, international students have faced more complicated visa situations and travel plans. Since the online courses were offered in Spring 2020, many international students went back home and studied remotely.

Due to various financial constraints, American colleges and universities employ graduate students—including international students—to teach American undergraduate courses (Zhou, 2014). It has been noted that these international teaching assistants (ITAs) are subjected to criticisms from undergraduate students concerning their English pronunciation, communicative competence, or pedagogical strategies (Ashavskaya, 2015, p. 56). They undertake unknown pressure and anxiety on both physical and mental aspects. Zhou (2014) stated that during the past three decades, the persistent presence of the ITA had brought linguistic, pedagogical, and sociocultural challenges that have led to the development of research related to ITAs.

Challenges for International Teaching Assistants (ITAs)

As I mentioned above, I am an ITA, and I face too many challenges in my teaching and learning. There are still many ITAs in the other departments of our university, and we had no chance to communicate with each other. I constantly groped my teaching strategies by myself. I am curious about the other ITAs if they have similar questions about linguistic, pedagogy, or social-culture dilemmas as I do in the U.S. classroom. The lack of related training programs will isolate ITAs in each department. It is the information era, and the group of ITAs needs a platform to share great ideas and communicate with each other. Some of them may have

thoughts to overcome these difficulties in the classroom or still groping without university assistance. Therefore, it is necessary to establish a program for ITAs to communicate and share personal teaching experiences and proper methods in the university. Hence, I decided to do the research study on the ITA group and explore theoretical and practical ways to improve their teaching strategies and social-cultural awareness.

ITAs have one more identity than other international students, which influences many learners. I believe that the primary identity of ITAs is an international student, and the second one is the teaching assistant. This group of people comes to the U.S. and pursue their studies. The primary task is to learn and live in the new country, overcome the language barriers, academic challenges, cultural shock, etc. At the same time, they also bring the various fabulous cultural backgrounds in American universities, which makes more cultural and thought diversity in higher education. They need to be a qualified instructor in the American classroom, which is a severe extra responsibility compared to the other international students. Some ITAs get familiar with their academic field; additionally, they have to learn how to deliver their professional knowledge to other students in their second or foreign language. I believe that each university has the responsibility and necessity to help this particular group of students——ITAs overcome their study and teaching difficulties and support them in the foreign environment. Because the success of ITAs directly affects the quality of the undergraduate class and the learning motivation of undergraduates. It will cause a chain reaction in higher education, whereas it is vital in supporting and training ITAs.

Limited Training Programs for International Teaching Assistants (ITAs)

Some universities have established ITA programs or training sessions to help them conquer teaching obstacles in the classroom, while others do not have professional associations

or programs to assist ITAs. For instance, the Teaching and Learning Center at Kansas State University offers seminars to all teaching assistants each semester, providing professional pedagogy thoughts and practice. However, ITAs only acquire general teaching strategies in the seminars instead of specialized and targeted training for this particular group. There is a difference between American teaching assistants and ITAs. Even though these two groups all apply the same rationale in the undergraduate classroom, American teaching assistants are familiar with the U.S. education system and cultural background; meanwhile, English is their native language. Compared with ITAs' situation, many of them still worry about their English language competence, other than language, and they sustain pressure and challenges on each aspect of education and life.

The College of Education at K-State offers a course entitled "College Teaching Principles," which is orientated towards all TAs (Teaching Assistants) in the university. Some of the course content intersects with the seminars offered by the Teaching and Learning Center. I took this course in my graduate study and attended professional development seminars and workshops, which benefited me as a novice teacher. The observations, discussions, and teaching practice helped me move into the role of instructor promptly. What is more, I applied the specific pedagogy and classroom activities I learned in the language teaching classroom and presented promising outcomes. Nevertheless, I need to depend on myself to improve the other difficulties in adjusting the difference between Eastern and Western education systems and adapting to the social and cultural environment; notably, I have to continue practicing academic and appropriate English in classroom teaching.

Qualified Assessment for International Teaching Assistants (ITAs)

As I mentioned above, international students need to pass the SPEAK Test first and then get the K-State teaching position. It is the first step for ITAs, and they will have unknown challenges in the classroom even though they pass the test. According to my personal and tutoring experience, SPEAK Test score is not equal to the actual English level. It might show some aspects of English-speaking competence. It contains four central portions: map direction, telling a story about pictures, chart description, and making an announcement. Does any of the parts play an essential role in the classroom or daily life? I have not applied any of them in my teaching, unfortunately. That is why I am still nervous after passing the SPEAK Test, which did not support my confidence in classroom teaching. As long as examinees master the particular strategies for this test and practice similar exercises a couple of times, the result will be optimistic. I used to tutor some graduate students who needed related practice for this test. After the targeted training, they all passed the test and got the TA position despite their relative English communication weakness. Understandably, some ITAs get complaints about undergraduates' English pronunciation, accuracy, and fluency. The group of ITAs at K-State has no specific training program to support them. It is necessary to offer professional language training for ITAs before and after taking this test and prepare them for the undergraduate classroom. This study aims to explore ITAs' needs and difficulties in the undergraduate classroom in the U.S. and tries to find a connection between ITAs' former cultural background and current American cultural background. Another goal of this study is to collect ITAs' thoughts on professional training.

Research Purpose

This research aims to explore the needs and challenges of ITAs in American university classrooms. ITAs with different cultural backgrounds have various dilemmas in either communication capacity or the differences of education systems between home countries and the U.S. They may struggle with some difficulties in other perspectives, which I have not considered. The study summarized the similarities and differences of ITAs' teaching needs and difficulties and try to find a way to support them on linguistic, pedagogy, and social-cultural aspects. The research focused on ITA participants' professional training experiences and collected their thoughts and suggestions on the ITA training program. According to the interviews with several ITA participants from different departments at Kansas State University. Based on ITAs' narratives and their suggestions, this study discovered some professional training methods to improve ITAs' linguistic, pedagogy, and sociocultural strategies in the classroom.

Research Questions

1. What are the ITAs' challenges and needs of linguistics, instruction, and culture in the U.S. classroom?
 - a. What are the ITAs' difficulties in teaching, learning, and individual lives under the COVID-19 pandemic?
2. What are the effective training strategies for ITAs, and how to be trained professionally?

Definition of Terms

ITA— International Teaching Assistant, the term ITA in this study also emphasizes the linguistic, educational, and cultural differences of specific international student populations (Jia & Bergerson, 2008).

Challenges and needs— ITAs face many challenges, such as linguistic skills, instructional (unfamiliar instructional context) competence, classroom management, and adopting cross-cultural and social challenges. ITAs concerns how the ITAs' preparation programs and the related departments can better support them in the new circumstances. (Ashavskaya, 2015).

American classroom— Classrooms of colleges and universities in the U.S., especially the fundamental course classrooms for undergraduates.

STEM— STEM is a curriculum based on the idea of educating students in four specific disciplines: science, technology, engineering, and mathematics in an interdisciplinary and applied approach (Hom, 2014).

COVID-19— Coronavirus disease 2019 (COVID-19) is a contagious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (“COVID-19”, 2021).

COVID-19 pandemic— The COVID-19 pandemic, also known as the coronavirus pandemic, is an ongoing global pandemic of coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (“COVID-19 pandemic”, 2021).

SPEAK test— It is an oral examination that lasts 20 minutes and emphasizes speech functions and extended samples of speech. It requires any graduate teaching assistant whose first language is not English to have a minimum score of 50 on the SPEAK test (Kansas State University)

Methodology

This study examines what the ITA participants experience about the teaching and culture challenges in the American classroom and how they think of their academic and professional training needs. The narrative inquiry is applied to the methodology of this study to reach the study goal. Narrative inquiry is the framework that helps researchers explore, discover, understand, and construct stories based on the participants' recounting of their experience

(Bhattacharya, 2017, p. 93). The researcher interviewed three international graduate teaching assistants from different country backgrounds and departments and collected data from the interviews. The participants all had more than a year of teaching experience and offered undergraduate fundamental lecture opportunities in the U.S. university. They had concerns and suggestions for the ITA professional training. This study used purposeful sampling, identifying, and selecting individual participants to communicate experiences and opinions to address the purpose of the research based on the accessibility of the researcher (Palinkas et al. 2015, p. 2). The research expanded the social circle of the international student group in the community and utilized the information from acquaintances to find the most appropriate participants for this study. The researcher adopted the interview as the research method to explore ITAs' teaching experiences and applied prior experience in the current classroom with different cultural backgrounds.

This research involves human subjects, and it is reviewed and approved through the Institutional Review Board (IRB) to meet ethical guidelines before the interviews. There are three interviews for each participant with the followed questions in Appendix C, D and E through the Zoom meeting or in person. All interviews are audio-recorded and transcribed, and data is collected and analyzed from the interview content.

Theoretical Framework

The research applies Giddens' structuration theory as a valuable theoretical framework. Giddens (1984) suggests that social life is an ongoing structuration of interplay between social structures and human agency embedded in the systems. He emphasizes the interaction of individuals and social relationships. In the case of ITAs, the most significant interaction in the classroom is the relation between ITAs and undergraduates. They need to improve the

relationship between students and themselves. Giddens (1979) emphasized that the necessity of language in the social institution is based on daily practice in specific social contexts. Most ITAs are familiar with English grammar rules, but they lack practical English, especially in the teaching context. However, English skills and interaction in the classroom are the primary teaching element for ITAs; meanwhile, it is also the fundamental factor for undergraduates to evaluate ITAs. Face with the different cultures and language environment, negotiation of meaning with students in the classroom constantly challenges ITAs.

According to Li, Mazer, and Ju (2011), Giddens's theory also emphasizes the role of interaction and communication in social systems, but it also carries implications for creating change in those systems (p. 463). In this way, the connection between recent teaching experiences and previous ones and the diverse cultural background also matters for ITAs to develop relationships with undergraduates in the U.S.

Many ITAs are novice teachers, and they did not have teaching experiences before. Another theory grounded in social constructivist perspectives is novice teacher learning theory (Lave & Wenger, 1991; Rogoff, 1984). Experienced teachers are the experts in teaching, while the novice teachers like ITAs are the beginners in the teaching field, and they need time and practice to grow. Except for novice teachers' general training and knowledge, ITAs have more difficulties with language and culture than native novice teachers. ITAs are students as well, and they need to exchange their identities as teachers and students in their daily life and find the balance between these two different identities.

Limitations of the Study

The limited number of participants in this study may not demonstrate the research questions for the entire group of international graduate teaching assistants at our university. Only

three participants were interviewed since the researcher applied the interview as the qualitative research method. Even though three of them were from different countries and departments, their teaching and learning experiences were unique and different. Some of their experiences would be conducive for ITAs, while some stories were subjective, which could not represent and was generalizable for the ITA community. However, the researcher summarized the similarities of their teaching experiences and professional training needs among three participants, whereas some issues might not be touched according to their personal stories.

Another limitation is the English proficiency of the researcher and the participants. The researcher or participants communicated in their second or foreign language, which increased the risks of misunderstanding and affected the data accuracy. If they could use their native language to answer the research question, the research outcomes would be more incisive. The researcher and all participants shared similar lived experiences, and one of the participants is from the same race as the researcher. It might affect the bias of the researcher in this study. However, the participants provided feedback to the study, and the peer review was conducted throughout the entire research, which would reduce the risk of the validation.

Organization of the Study

This narrative study is based on the individual stories of teaching experience and needs in U.S. classrooms. Chapter one demonstrates the background story of the researcher and the current issues of the ITA group. The researcher will review the previous literature on ITAs in chapter two and set the theoretical foundation and framework for this study, consisting of Giddens' structuration theory and novice teacher learning theory. In Chapter 3, the researcher will explain the research methodology. Chapter 4 will describe the research findings. Chapter 5

will analyze all the findings and contain the interpretation, implications and suggestions for further research, and the conclusion.

Chapter 2 - Literature Review

Chapter 2 focuses on the previous peer-reviewed research studies on the history and current situation of international students in U.S. universities and the contribution of international students to U.S. society and higher education. In addition, the challenges and difficulties of graduate teaching assistants and international teaching assistants will be explained through the related research studies, including the existing problem of training programs assessment of International Teaching Assistants (ITAs) and the social-cultural background differences. Then it demonstrates the theoretical framework of this study: Giddens' Structuration Theory (1979) emphasizes the relationship between individuals and social institutions and the necessity of the language is based on daily practice in specific social contexts. Another theory grounded in social constructivist perspectives is novice teacher learning theory (Lave & Wenger, 1991; Rogoff, 1984) due to most ITAs' situation, which is the first year of graduate student and teacher, experiencing these two identities simultaneously.

Based on the previous literature reviews, the researcher of this study tries to explore the limitation on the studies of ITAs and aims to find the ITAs' specific barriers and needs on teaching and adaption of American culture in the classroom and suggests some professionally trained ways for this group according to their real needs.

Previous Research

International Students Situation

Zong and Batalova (2018) noted that the United States has historically been the top destination for international students due to its quality of the higher education system, welcoming culture, and relatively open labor market after they graduate. Since World War II, diversity has expanded in each aspect of U.S. society, including higher education. An increasing

number of students and faculties from non-English and non-western backgrounds started their academic lives in universities and colleges in the U.S. The needs for diversity in higher education are still in the process (Smith, 1992, p. 20). Foreign students who made up 12% of the total student population contributed nearly 30% of total tuition revenue at public universities in 2015. The total contribution to the US economy by international students was estimated to be over \$45 billion in 2018 (Bustamante, 2020). Further, many international students decide to stay in the United States after graduation, and they will continue to make contributions to American society, which includes “promoting technological development, facilitating international relations, and reinforcing America’s overall competitive advantage in the international community” (Jia & Bergerson, 2008, p. 77). Figure 1 illustrates the number of international students studying in the U.S. by country of origin in the school year of 2018-2019.

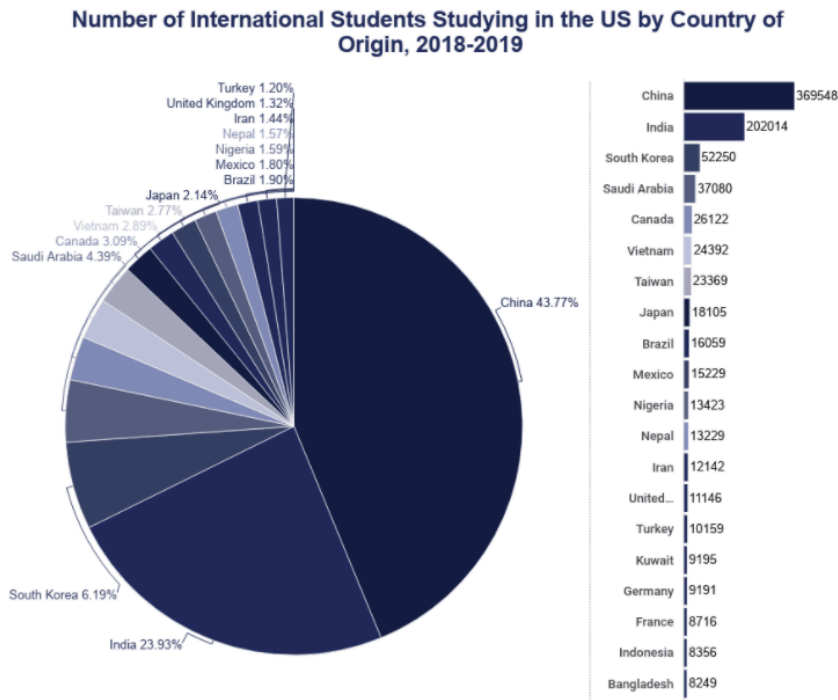


Figure 1. Number of International Students Studying in the U.S. by Country of Origin, 2018-2019.

Adapted from *EDUCATIONDATA.ORG*, by J. Bustamante, 2020
(<https://educationdata.org/international-student-enrollment-statistics>)

It shows the majority of international students come from China. The second largest population is India, so the Chinese and Indian International Teaching Assistants (ITAs) in the U.S. universities also occupy the largest proportion of ITAs. Among all the overseas students, engineering, business management, math, and computer science were the top four fields of study for international students, accounting for more than half of all international enrollment at US higher education institutions by the International Student Enrollment Statistics in 2019. Therefore, many ITAs study and work in the Science, Technology, Engineering and Math (STEM) and business programs. However, studying in the U.S. started to cool down in these years.

Israel and Batalova (2021) stated:

At the start of the fall 2020 academic semester, the total number of international students enrolled in U.S. schools, including those physically present in the United States and studying online from abroad, decreased by 16 percent from the previous year. One in five of these students was studying online from another country. The number of new international students fell by 43 percent, in part because some chose to defer their studies.

The primary factor about the dramatic decrease of international students is related to the difficult political environment under the Trump administration, “including tighter visa restrictions and xenophobic rhetoric, along with increased competition from other countries, appears to have also cut into the US share” (Marklein, 2020). and the COVID-19 pandemic has further aggravated these dynamics (Israel & Batalova, 2021). International students had difficulties planning their travel, either entering or leaving the U.S. Apparently, the political environment is vital to

consider. The new policy of the Biden administration will also influence the number of international students in the future.

Graduate Teaching Assistant (GTA) Situation and Issues

Many universities and colleges across the United States rely on Teaching Assistants (TAs) to instruct undergraduate courses (Buerkel-Rothfuss & Gray, 1990; Kendall & Schussler, 2012). Smith (1992) mentioned that Johns Hopkins University was the first research university that founded graduate students to teach undergraduate students in the U.S. Although undergraduates' complaint about graduate teaching assistants (GTAs) always exists in the U.S. universities, with the increasing number of graduate students, the amount of GTAs as well. Importantly, hiring GTAs alleviates the economic pressure of universities in the U.S. (Smith, 1992, p.17). To be specific, "Higher education institutions, senior faculty, and graduate students can all benefit from the employment of GTAs" (Nasser-Abu & Fresko, 2018, p. 943). First, many senior faculty members teach the lecture to a large number of undergraduates. GTA can help them teach the basic courses and grade assignments, which will release senior faculty from teaching and grading time. So, they have enough time to focus on the research. "Graduate students who serve as GTAs also profit from this arrangement since they are provided with financial support (both salary and tuition waivers)" (Park, 2002, as cited in Nasser-Abu & Fresko, 2018, p. 944). Additionally, GTAs acquire academic and instruction assistance, professional development from department and faculty to be prepared for the future academic career (Nasser-Abu & Fresko, 2018, p. 944).

However, according to Cho et al. (2011), many GTAs have little or no formal teaching experience before and they lack the professional training of former teaching in the higher education classroom, which may bring about the negative perspectives on their teaching

motivation and enthusiasm, anxiety, and attitude (p. 267). It will influence the effectiveness of teaching, which shows “recognizing that preparing GTAs to successfully fulfill their teaching responsibilities is a critical issue in higher education.” (Darling & Dewey, 1990, as cited in Cho et al., 2011, p. 267). Based on the identity of GTAs, they have two roles: student and teacher. They always have more pressure to balance both identities in their lives (Cho et al., 2011, p. 269). They face many challenges: research and study stress, pressure from teaching, students’ attitudes in the classroom and students’ evaluation. Importantly, they have difficulties to build the authority in the classroom (Nasser-Abu & Fresko, 2018, p. 944).

International Teaching Assistant (ITA) Situation and Issues

Among the Graduate Teaching Assistants (GTAs), ITAs cannot be neglected. “In the past thirty years, the number of ITAs has been increasing, and many departments at universities rely on ITAs to cover undergraduate courses” (Gorsuch, 2016). As the researcher mentioned in the above section, the GTA group has pressure and difficulties in different aspects of academic life. The same with international teaching assistants (ITAs) in higher education. They do have similar lived experiences; however, ITAs face more challenges based on their identities. Fitch and Morgan (2003) illustrated the universal phenomenon in American higher education, ITA in the universities in the U.S. due to the diversity in this country, the same in the universities. ITAs are international students admitted to graduate study at universities in North America (Gorsuch, 2016). Plakans (1997) demonstrates that international students hold student visas, which makes them ineligible for most off-campus employment and grateful for any positions the university offers (p. 96) while many American students rather find other jobs pay much more than teaching assistantships while international students are willing to work for this position due to their student visa and special identity. International students have limited job options, and most legal

working positions are provided by U.S. universities and colleges (Murphy, 2009, p. 375).

According to Plakans (1997), “science, mathematics, and engineering departments have offered an increasing number of teaching assistantships to new graduate students from foreign countries who are not native speakers of American English” (p. 96). because fewer U.S. students are undertaking graduate work in science and engineering fields. Meanwhile, “many of the foreign applicants are highly qualified in their respective fields of study, departments sometimes offer assistantships as an inducement to foreign students during the recruiting process” (Plakans, 1997, p. 96).

Jia and Bergerson (2008) believed that ITAs contribute to American higher education. ITAs are from various cultural backgrounds with different educational experiences in their home countries, so “ITAs’ cultures also benefit American students,” and their pedagogical strategies are different from the domestic instructors, which may improve their creativity in the classroom (Jia & Bergerson, 2008, p. 80). Recently, many studies (Smith, 1992; Zhou, 2009, 2014; Youssef, 2018) have examined the lived experiences of ITAs in U.S. classrooms, and the following challenges and dilemmas have occurred to this group: linguistic and communication challenges, American pedagogy and culture challenges, and undergraduates’ attitudes in the classroom.

Linguistic and Communication Challenges

Most ITAs possess high lexical and grammatical competence in English, which shows from the standardized English proficiency tests, such as the Internet-based Test of English as a Foreign Language (TOEFL iBT) and International English Language Testing System (IELTS) (Aslan, 2016, p. 2). However, the test-based speaking capacity is different from the classroom interaction with American undergraduate students. Communicative competence is important for

ITAs, who need to apply grammatical knowledge in communicative situations, like in the classroom. Although many of them are familiar with grammatical rules and apply their grammar knowledge in academic writing, they still have problems applying formal grammar knowledge to communicate effectively (Hoekje & Williams, 1992, p. 247). However, “the improvement of grammatical accuracy can be a time-consuming, long-term process,” but the time for ITA training is short (Hoekje & Williams, 1992, p. 248). Therefore, ITAs need to improve the oral grammar in a short time. Other than oral grammar, the pronunciation and speaking rate also matter among the language skills (Halleck & Moder, 1995, p. 734), which can be trained and improved. ITAs also need to practice and be trained with their reading and writing skills, because they always need to read announcements, students’ feedback, and questions, teaching materials, etc. Also, they need to prepare the examination papers, syllabus comments for students’ assignments, and so on (Smith et al., 1992, p. 39).

Li, Mazer, and Ju (2011) found that students' understanding is related to ITAs' language clarity. Students had a clearer understanding of whether ITA could teach clearly. Classroom interaction between instructors and students only emphasized one aspect of interaction. So “the ITA's problem is primarily seen as a linguistic one, often defined in terms of pronunciation or fluency” (Brown, Fishman, & Jones, 1989, as cited in Hoekje & Williams, 1992, p. 245). ITAs need this skill to make classroom presentations and lead the group discussions in the class, supervise group work, explain experiments in a laboratory setting, and hold office hours (Axelson & Madden, 1994; Davies, Tyler, & Koran, 1989; Rounds, 1987; Shaw & Garate, 1983, as cited in Halleck & Moder, 1995, p. 734).

In the case of ITAs, sociolinguistic competence takes a significant element in the classroom. It includes both knowledge of the sociocultural rules of speaking and the rules for

discourse (Hoekje & Williams, 1992, p. 249). Although grammatical and social linguistic competence are important for ITAs' linguistic skills, the discourse competence is equally important to produce and interpret cohesive and coherent discourse (Hoekje & Williams, 1992, p. 254). According to Hoekje and Williams (1992), ITAs often fail to produce texts that attain the level of cohesion necessary for easy interpretation and "they often do not name important steps, mark junctures explicitly, or make cohesive links between ideas" (p. 254). Knowledge cannot be inputted without language capacity. But I believe communication is considered based on cultural understanding in the classroom. As long as students can understand ITAs' pronunciation, instructors' various accents should be narrowed down in the classroom.

The U.S. Pedagogy and Culture Challenges

Pedagogy and American culture also matter because ITAs and undergraduates have different cultural backgrounds. Cultural and educational system differences affect most aspects of language behavior in the classroom, "including the appropriate role relationship between students and ITAs" (Hoekje & Williams, 1992, p. 250). Meanwhile, "ITAs may have difficulty adjusting to the teaching setting" (Hoekje & Williams, 1992, p. 250). To be specific, ITAs generally have just a little knowledge about American education and classroom culture before coming to the U.S. The lack of American classroom experiences will bring a lot of anxiety and difficulties to ITAs and they are not familiar with the university policy, which will be very different compared with their native countries based on American culture (Chalupa & Lair, 2000). Meanwhile, undergraduate students also have different cultural and family backgrounds in different locations, such as coast cities or mid-west towns in the U.S.

Ashavskaya (2015) studied the topic of ITAs' lived experiences in U.S. classrooms and found that ITAs still face many challenges. The study result shows that ITA participants face

challenges in classroom teaching and the cultural differences between their home countries and the U.S. These ITAs were willing to have workshops or lectures about cultural differences and American classroom culture (Ashavskaya, 2015). Smith et al. (1992) noted that ITAs need to learn the strategies for interaction with students in and out of the classroom to build the trust foundation, mutual understanding with students (p. 40). Another pedagogy difficulty is about student-centered teaching; for example, “new ITAs have no experience in a student-centered classroom as learners and have rarely seen instructors facilitate active learning in a classroom; thus, they have difficulty envisioning their role in a student-centered classroom” (Meadows et al., 2015, p. 37). Take Chinese students as an example; the education model in the Chinese classroom is always teacher-centered. “One of the ways in which of how Chinese students demonstrate respect for their teachers is by refraining from asking questions” (Smith et al., 1992, p. 22). This educational and cultural background influences all the Chinese ITAs, but when they are in American classrooms, students’ inquiry situation is opposite compared with their home country's culture and education. They need to adjust to establish authority in the classroom instead of discouraging students from asking questions freely. Zhou (2014) tried to explore the potential obstacles in cross-linguistic and cross-cultural academic interaction for ITAs in the American classes and find a way to help ITAs improve their teaching and cultural understanding. Zhou (2014) suggested improving ITAs’ English proficiency, American pedagogy, and intercultural experiences to help ITAs’ anxiety in the classroom and teaching experience.

Undergraduates’ Attitudes Toward ITAs

According to Smith et al. (1992), the favorite instructors of undergraduates have some common characteristics: “providing useful feedback, making eye contact, inviting comments and questions, and so forth” (p. 40). ITAs may not exhibit those certain behaviors in the classroom in

the first couple of years of teaching because it takes time for practice and training. “International students’ nonnative accents as well as their physical appearance are markers of their “otherness” to the American undergraduate students” (Manohar & Appiah, 2016, p. 150). “Undergraduate students have preexisting stereotypes about the clarity, credibility and language inadequacy of ITAs” (Li, Mazer, & Ju, 2011, as cited in Manohar & Appiah, 2016, p. 150). Meanwhile, “some existing research suggests that negative evaluation of international TAs might be a function of undergraduate students’ biased attitudes and preexisting stereotypes” (Lippi-Green, 1997; Rubin, 1992, 1998, as cited in Manohar & Appiah, 2016, p. 150). Therefore, many undergraduates refuse to take courses from ITAs. It has been noted that these ITAs are subjected to criticisms from undergraduate students concerning their English pronunciation, communicative competence, or pedagogical strategies (Zhou, 2014, p. 188). Compared with American TAs, ITAs are under pressure due to their natural characteristics before teaching. So, they need to put in the effort to improve their pedagogy methods to gain faith from undergraduates.

Jia and Bergerson (2008) found “complaints about ITAs’ English proficiency may be a reflection of deep cultural, social, and pedagogical differences and biases” (p. 94). Undergraduate students cared about many aspects, like teaching methods, dressing style, personality, etc. Additionally, according to the research result of Fitch and Morgan (2003), many undergraduates didn't realize ITAs' identities, and they focused on ITAs' appearances and intelligence. Many of them complained about ITAs' pedagogical methods. Learning could be a shared responsibility between both ITAs and students. It also needed ungraduated students to promote awareness of the benefits of having a foreign instructor (Zhou, 2014, p. 179). In other words, undergraduates regard ITAs as American TAs or instructors, and they have the same expectations on classroom teaching. ITA is a particular group in higher education, and many of

them are novice teachers who are still trying to get familiar with the foreign language environment.

Training Program for International Teaching Assistant (ITA)

The history of the training program for ITAs changed based on different periods. During the 1970s, the training program focused on classroom instructional skills through workshops and seminars. In 1976, American academic institutions proposed to improve the awareness of teaching interests. The purposes of TA training programs include improving the quality of undergraduate education and preparing TAs for their present TA responsibilities and their future roles as teaching faculty (Smith, 1992, p.39).

ITAs are assigned various responsibilities in American higher education institutions. Although the primary work for ITAs is to teach undergraduate classes, some academic institutions do not offer undergraduate courses. In this way, the responsibility of ITAs' work may be significantly different. Some directly interact with undergraduates in the classrooms and labs; others may not have similar opportunities (Jia & Bergerson, 2008, p. 79). "Many ITA training programs are offered by English as a Second Language (ESL) or linguistics departments with the intent to improve ITAs' English ability" (Jia & Bergerson, 2008, p. 79). Except for the general training and knowledge for the novice teachers, ITAs have more difficulties with language and culture than native novice teachers. English is their second or foreign language, so ITAs need the training of language proficiency, pronunciation, and communicative competence. ITAs are students as well, and they need to exchange their identities as teachers and students in their daily life and find the balance between these two different identities.

The ITA training curriculum is necessary for both ITAs and undergraduate students. Zhou (2009) noted that ITAs' linguistic and communication skills are the primary elements that

students care about. After that, pedagogy and American culture also matter because ITAs and undergraduates had a different cultural background. Learning could be a shared responsibility between ITAs and students (p. 20). Zhou (2009) considered multicultural and postmodern perspectives in the current ITA training curriculum. It also needed American undergraduates to promote awareness of the benefits of having a foreign instructor (p. 21).

Gorsuch (2016, p. 276) established areas of the ITA program, and it concerns three factors: language, teaching, and culture. From the language perspective, the research projects focused on fluency and pronunciation. So, Gorsuch (2016) created tasks for ITAs to practice their fluency and English pronunciation. In addition, Gorsuch (2016) created other works for ITAs to practice their teaching skills, like presentations, reading aloud, and task-based free talk. After training for several sessions, ITAs improved their teaching and linguistic skills; simultaneously, their cultural awareness developed. The researchers compared the influences of traditional teaching assistant training programs and specific ITA training programs. They focused on the teaching self-efficacy and effectiveness of comparisons between these two programs. This study shows that all ITA participants improved teaching self-efficacy after training in both programs. Those ITA participants acquired intercultural communication capacity and awareness of the local cultural context in the classroom teaching in the specific ITA training program (Meadows, et al., 2015, p. 39).

Many ITAs are novice teachers, and they did not have teaching experiences before. Experienced teachers are the experts in teaching, while the novice teachers like ITAs are the beginners in the teaching field, and they need time and practice to grow. Many universities proceeded the training program for all TAs, and the forms of training content are similar, such as workshops, peer-observation, seminars on teaching skills and the creation of a friendly classroom

atmosphere, etc. (Smith, 1992, p.39). “American colleges and universities should increase their willingness to institutionalize ITA preparation and ultimately make it an integral part of their campus cultures” (Jia & Bergerson, 2008, p. 95). According to Jia and Bergerson (2008), it is not easy to achieve this goal, and all the related parties should devote themselves together. The researchers, ITA program or preparation for the program, department, faculty, students, and “appropriate allocation of institutional resources” (p. 95).

Assessment Issues in ITA Training

Smith (1992) the literature suggests that for most American TA now teaching in large U.S. research universities, the means of assessing their work has not changed noticeably (p.47). The major problem of ITAs has been concerned with is a language problem, so some universities still apply the language test as the only criteria to offer the ITA positions. Compared with native English-speaking TAs, ITAs have more challenges in the use of English, which is also the primary concern for American undergraduates. Therefore, assessment of ITAs usually centers first on English language skills (listening, speaking, reading, writing, and grammar) in American universities (Smith, 1992, p. 51). Most universities consider matters of culture, pedagogy, and North American university life and languages necessary components of adequate ITA training ((Hoekje & Williams 1992; Rubin 1993, as cited in Chalupa & Lair, 2000, p. 120). In this research site, passing the SPEAK test is the only criteria for international students to apply for the teaching assistant positions.

Hoekje and Williams (1992) illustrated that the most widely used oral proficiency instrument in current use is the Test of Spoken English (TSE) and its institutional version, SPEAK (p. 260). “This 20-minute tape-recorded test requires the speaker to perform certain language functions (e.g., narrate a story, give opinions, present information) that are then rated

for accuracy and fluency of grammar and pronunciation” (Hoekjie & Williams, 1992, p. 260). The same with the research site, passing SPEAK Test is the primary condition to become ITA. However, according to Johnson (1991), students complained of "being tested in a tiny cubicle, having to interact with a tape recorder, not a person, and talking about unfamiliar pictures and topics" (p. 8). In fact, none of the content of SPEAK test content is closely related to the teaching context, like presentation and classroom management skills or interaction with students. Importantly, “the SPEAK test provides no opportunity for interaction between inter-locutors so that clarification requests, negotiation for meaning, and repair of communication breakdown cannot occur on the test” (Hoekje & Linnell, 1994, p. 121). The same situation happened in this research site, and many international students passed this test by practicing the test strategies. Some of them still complain about their English pronunciation and fluency from undergraduates. Hence, this assessment has some issues, and international students are lack training before and after taking this test. The only standard for ITAs is English speaking skills, which is just one of the elements for being an ITA.

Gorsuch (2003) stated assessments needs for ITAs, "culture" concept among this group, lacking classroom experience, stereotypes on their nationality and teacher-student role exchanges. Gorsuch (2003) believed that ITAs’ attitude plays an important role in showing their behavior in the classroom. The researcher also considered the comparison between faculty members and ITAs towards the attitudes. The study results showed that ITAs need faculty's support, and they were willing to observe the faculty's class and learn the teaching strategies from faculty. ITAs need to switch teacher and student roles in the university institutional culture. To identify their teaching attitudes and behaviors, they need to know their own educational culture and American educational culture.

Most research focus on ITAs' English language skills, pedagogy even American culture as the important challenges and main elements to train them professionally. However, a lot of researchers didn't consider the ITAs' original cultural backgrounds. Each nation implements a different educational system based on its national conditions. Thus, ITAs have various educational experiences and cognition of pedagogy, which influence their teaching and connection between students. The bridge of previous and current cultural background plays a significant role. Researchers can apply this bridge to explore the methods to help this group develop their professional teaching strategies in the American classroom. ITAs have their concerns and suggestions for being trained professionally. In other words, their thoughts and ideas matter for the ITA program and assessment. My research will explore more details of ITAs' personal experiences of teaching and learning, their needs in the classroom, expectations for the relevant programs, and suggestions for the ITA assessment.

Theoretical Framework

The first theoretical framework for this study applies Giddens' structuration theory. Giddens (1984) suggests that social life is an ongoing structuration of interplay between social structures and human agency embedded in the systems and he emphasizes the interaction of individuals and social relationship (as cited in Zhou, 2014, p. 179). Zhou (2014) interpreted each item of Giddens's theory: "structures are rules, routines, norms, and resources. Systems refer to the reproduced structural and organized relations between individuals as well as those between individuals and structures. Human agency means the capability to exercise a certain degree of power and control over one's role and action" (p. 179). In this study, the rules of the subject (ITAs) can be the instruction behaviors, like the moral rules in the classrooms or the labs, the teaching goals, teaching hours, etc. The resources of the ITAs are the institutions in the U.S.

higher education, such as departments, teaching and learning centers, international programs, English Language Programs, etc., which can supervise and support ITAs (Zhou, 2014, p. 179).

Definition of Giddens' Structuration Theory

Berends, Boersma, & Weggeman (2003) pointed out the following:

Structuration theory (Giddens, 1976, 1979, 1984) is an ontology of social reality that attempts to overcome dualisms that have become deeply entrenched within social theory: subjectivism versus objectivism, individual versus society and social atomism versus holism (p. 1039).

Bryant and Jary (2014) noted that “Giddens affirms that structuration theory is the label he attaches to his concern to develop an ontological framework for the study of human social activities” (p. 1). Structuration theory reconceptualizes the dualism of individual versus society as the duality of agency and structure. Agency and structure, the subjective and objective sides of social reality, are considered inseparable. They meet each other in recurring social practices (Boersma & Weggeman, 2003, p.1039), and the core of structuration theory is the relationship between individual and organizational learning (Boersma & Weggeman, 2003, p.1038).

In the case of ITAs, their teaching skills are based on the practice in the classroom as time goes on and their teaching experiences in the U.S. universities are their social activities. The connection between their previous knowledge and background and the current American academic environment exists. “Giddens refers to the investigation of the nature of human action, social institutions, and the interrelations between action and institutions as ontology” (Bryant & Jary, 2014, p. 2). In this study, human action is ITAs' teaching. At the same time, the social institutions generally are the U.S. universities and colleges, specifically, ITAs also can seek professional assistance from the department of the college, teaching and learning center, faculty

members, or the other ITA peers. Each ITA follows the different teaching instruction from their professors while facing the same group of undergraduate students. Hence, professional resources and platforms are beneficial for ITAs to make progress in teaching, linguistic, and culture (Zhou, 2014, p. 179).

The Emphasis of Giddens' Structuration Theory in ITA Language

Giddens had to rework both the concept of social structure and the acting individual. In the case of ITAs, the most significant interaction in the classroom is the relation between ITAs and undergraduates. They need to improve the relationship between students and themselves. Li et al. (2011) pointed out, “Giddens' theory also emphasizes the role of interaction and communication in social systems, but it also carries with it implications for creating change in those systems” (p. 463). Giddens (1979) emphasized that “language is part of a social institution” (Li et al., 2011, p. 464). The general understanding of language is grounded in daily language practice in various contexts. For instance, ITAs have to speak English in the classroom and negotiate meanings of knowledge with American students. Many ITAs are familiar with English grammar rules, but they lack practical English, especially in the teaching context. However, English skills and interaction in the classroom is the primary teaching element for ITAs, meanwhile, is also the fundamental factor for undergraduates to evaluate ITAs (Li et al., 2011, p. 464). Face with the different cultures and language environment, negotiation of meaning with students in the classroom always challenges ITAs. Li et al. (2011) also pointed that Giddens emphasized ITAs' language use in the interaction with undergraduates, “the possession of knowledge related to language use can render human beings corresponding agency no matter their level of subordination in a social relationship” (p. 464). Hence, ITAs can spread the major

knowledge to American students, and American students can promote the ITA's English language development with their native language (Li et al., 2011, p. 464).

Definition of Novice Teacher Learning

The second theoretical framework for this study applies novice teacher learning. Farrel (2012) believes a novice could be anyone teaching something for the first time. There is no consensus on how many years of teaching are necessary to end a novice stage (Karatas & Karaman, 2013, as cited in Cholam, 2018, p. 2). Kim and Roth (2011) consider any teacher with less than five years of teaching, a novice teacher (as cited in Cholam, 2018, p. 2). Most ITAs are novice teachers with limited teaching experiences in American higher education. Goodwin (2012) noted that the first year of a teacher's job is usually difficult because a lot of "beginning teachers feel ineffective and are left isolated in their classrooms with no support or guidance" (Arends & Kilcher, 2010, as cited in Cholam, 2018, p. 2). That's why many academic institutions offer ITAs orientation, training programs, and events to support ITAs as novice teachers and help them get familiar with the new teaching and learning environment.

"Within this theoretical framework, learning is viewed as participation in the social activities of a given community" (Lave & Wenger, 1991, as cited in Ashavskaya, 2015, p. 57). "For adult learning, the process reflects how adults learn their skills and abilities professionally and develop self-efficacy about their performance through social interaction and confirmation of their skills" (Kazin-Boyce, 2014, p. 16-17). ITAs, as novice teachers, need appropriate training and assistance before teaching in the new environment. When they face American undergraduates, it is necessary for them to practice pedagogy skills and learn in each class. After each teaching session, the reflection of learning and teaching is also essential for ITAs. To sum up, as Kazin-Boyce (2014) noted that "the development of expertise is achieved after thousands

of hours of experience, opportunities for collaboration with colleagues, and by engaging in guided activities that apply reflection-on-action and reflection-in-action” (Benner, 2004; Berliner, 2004; Dreyfus, 1980, 1986, as cited in Kazin-Boyce, 2014, p. 21-22), which will run through the entire professional growth for ITAs.

The Emphasis of Novice Teacher Learning on ITAs

Novice teachers, who experience an intricate transition from the teacher education institutions to life in real classrooms, often do not feel well prepared for the difficulties they face in their first years of teaching (Senom, Zakaria, & Sharatol Ahmad Shah, 2013, as cited in Cholam, 2018, p. 2). On the contrary, “a more experienced teacher is conceptualized as an expert, whereas the novice teacher is conceptualized as an apprentice who learns to teach through participating in activities related to teaching” (Wang & Odell, 2007, as cited in Ashavskaya, 2015, p. 57).

Most ITAs are new graduate or Ph.D. students in U.S. universities, and it is the first time for them to teach in American classrooms. Some may have previous teaching experiences in their home country; however, the education system and pedagogy have differences. So, they still need to adapt to the new teaching environment as soon as possible. It is common for them to experience challenges of “classroom management, content instruction, culture, social norms, and language” at the beginning of teaching (Ashavskaya, 2018, p. 103). To be specific, ITAs often experience a lack of control with a lack of information about the U.S. grading and testing system (Lin & Yi, 1997). When they face American classrooms, they encounter the instructional challenges, “such as feeling frustrated over having to change their teaching style” (Torkelson, 1992). Kim (2014) showed that many ITAs continue to apply a teacher-centered pedagogy method in the classroom instead of a student-centered approach because of their previous

pedagogical beliefs and cultural background. Except for the instruction challenges, “many ITAs find it difficult to adapt to the more informal relationship characteristic of the U.S. students and faculty” (Kuo, 2002, as cited in Ashavskaya, 2018, p. 102). It shows the multiple dilemmas as novice teacher for ITAs, and the process from novice to expert takes individual effort and time consuming.

Summary

Chapter 2 first illustrated the historical background and current situation of international students in the U.S. and then led to the International Teaching Assistants (ITAs) as the normal phenomena in American higher education. Comparing the similarities and differences with American graduate teaching assistants, ITAs demonstrated the particularity of ITAs’ identity and their greater challenges, including linguistic and communication challenges, the U.S. pedagogy and culture challenges, and undergraduates’ attitudes toward ITAs. It summarized the previous research on ITA programs in different research sites in the U.S. and how these programs support ITAs in their professional growth. Also, it stated the existing problems of ITA programs and ideal improvement in different aspects. The assessment issues in ITA training also were proposed in this chapter, which brought attention to the related departments and programs and tried to figure out the most scientific and fair assessment criteria for the group of ITA.

The first theoretical framework of this study is Giddens' Structuration Theory, which emphasizes the relationship between individuals and social institutions. This chapter demonstrates the definition and highlights the theory with an example of ITA. The second theoretical framework is novice teacher learning. It declared the definition of this theory and the emphasized case of ITAs theoretically. Based on the previous literature reviews, summarized the challenges and difficulties for ITAs as novice teachers.

Chapter 3 - Methodology

This study focused on the teaching and culture challenges of international teaching assistants (ITA) and professional training support in the universities in the United States. In previous chapters, with a brief review of the status of international students and ITAs in American higher education and the current challenges and difficulties for this group, this study applied Giddens' structuration theory and novice teacher learning theory as the framework. In this chapter, details of the methodology are explained: (1) suitability of the research design, (2) purpose of the research, (3) research questions, (4) research design of the study and rationale, (5) research site, (6) participants, (7) data collection, (8) data analysis, (9) trustworthiness, and (10) summary.

Suitability of the Research Design

This study applied a qualitative research design. Strauss and Corbin (1990) offer five reasons for doing qualitative research:

1. The conviction of the researcher based on research experience
2. The nature of the research problem
3. To uncover and understand what lies behind any phenomenon about which little is yet known
4. To gain novel and fresh slants on things about which quite a bit is already known
5. To give intricate details of phenomena that are difficult to convey with quantitative methods (p. 19)

These reasons provide suitability of qualitative research for this study because the researcher also belongs to the group of ITAs, and both the researcher and the participants share similar experiences. The nature of the issue requires a detailed understanding of the participants and

their experiences and stories so that the researcher can dig into related aspects of the ITA group that the researcher has not considered. According to the participants' unique narratives, the researcher will gain different viewpoints on the research of the ITA group. The general process of this research cannot be conducted statistically because of the measuring limitations of quantitative methodology. Therefore, qualitative research becomes the most appropriate for the nature of this study.

In this study, the researcher interviewed and interacted with participants, shared her autobiographical story and experiences related to the research questions, and built the bridge between participants and herself. The ultimate purpose of this study is to discover the real needs and challenges for ITA participants, thus finding the appropriate and professional assistance and training strategies for teaching in American higher education.

Purpose of the Research

ITAs with different cultural backgrounds have various dilemmas in either communication capacity or classroom cultural differences. This research aims to explore the needs of ITAs in American classrooms and professional training. According to the interviews with ITAs from different departments, the study summarized the similarities and differences of ITAs' needs and tried to find a way to support them on linguistic, pedagogy, and social-cultural aspects in the classroom.

Research Questions

1. What are the ITAs' challenges and needs of linguistics, instruction, and culture in the U.S. classroom?
 - a. What are the ITAs' difficulties in teaching, learning, and individual lives under the COVID-19 pandemic?

2. What are the effective training strategies for ITAs, and how to be trained professionally?

Research Design of the Study and Rationale

Narrative Inquiry

As a qualitative research method, narrative inquiry serves the researcher to understand a phenomenon or experience rather than formulate a logical scientific explanation (Kramp, 2014, p. 104). Johnson and Christensen (2019, p. 425) wrote that "people have lived and told stories about their experiences for as long as we could talk." Clandinin and Rosiek (2007) wrote that "lived and told stories and the talk about the stories are one of the ways that we fill our world with meaning and enlist one another's assistance in building lives and communities" (p.35). This study will use narrative inquiry because it will study participants' lived experiences. The researcher will use narrative inquiry to anticipate the storyteller's use of context to connect and situate particular experiences to cohere and structure life as experienced. (Kramp 2003, p.105). In other words, each individual can be the resource of the unique and extraordinary stories, which preserve people's memories, promote their reflection, connect all of them with past and present, and assist them to envision the future (Kramp 2003, p.107).

Johnson and Christensen (2019) demonstrated that four terms emerge from the definition of narrative inquiry, which will also be applied in this study:

- (1) Living stories: narrative inquires is to understand that people live out stories and tell stories of that living
- (2) Telling stories: narrative inquires come alongside participants and engage in narrative inquiry into participants' lived and told stories.
- (3) Retelling stories: researchers also engage in narrative inquiry into their own lived and told stories as part of the process of coming alongside research participants.

(4) Reliving stories: participants and researchers are changed in this process of coming alongside each other as they retell their lived and told stories; they may begin to relive their stories. (Johnson & Christensen, 2019, p. 427)

In this study, the researcher narrated her own story and experiences for participants who had the same identity and similar academic life, intended to resonate with the participants' current experiences and find the common during the process. In the retelling, engaging in inquiring narratively into the lived and told stories, inquirers and participants may begin to relive the retold stories, shifting the institutional, social, and cultural narratives in which they are embedded. In sum, the human world is constructed and continually reconstructed through the processes of story living and storytelling, which can promote the improvement of human beings (Johnson & Christensen, 2019, p. 427).

Autobiographical Narrative

Autobiographical narratives reflect how personal stories are connected to social structures and normative discourses, and autobiography is a widely used term for life narrative, which relates to the individual life story (Smith & Watson, 2010, p.3). The two main components in the autobiography are memories and experiences. The "memory" is immaterial and personal (Smith & Watson, 2010, p.21), and the "experience" is already an interpretation of the past and our place in a culturally and historically specific present (Smith & Watson, 2010, p.24). The researcher's and the participants' stories interoscultate at some points, so the researcher's autobiographical narrative was also be involved in this study as a participant. The life story of the researcher illustrated how her identity formed in different stages of life and demonstrated the reasons for her changes within experiences in these years.

Research Site

The research site for this study is a public university located in the U.S. Midwest, which has three campuses, and this research will focus on the main campus. According to the International Student and Scholar Services (2021), the university's Office of the Registrar, (2021), the total student enrollment for Spring 2021 is 19,571, and the international population was 1,143 which is the smallest enrollment population during a decade at this university. In Spring 2021, the new international graduate students were 66, and the continuing international graduate students were 615. The total number of international graduate students was 681. The participants of this study will be selected from international graduate students.

Table 1. International student numbers at the university research site, Spring 2021

	Undergraduates	Graduates	Other*	Total
New Int'l students	19	66	19	104
Continuing Int'l students	400	615	24	1039
Total	419	681	43	1143

Note. The "other" category includes non-degree seeking students such as ELP Only, Exchange Students, Special Programs, and Professional degrees such as DVM.

Adapted from International Student & Scholar Service, Kansas State University, Spring 2021

Of the total of 1,143 international students, the top three populations were Chinese (284), Indians (124), and Saudis (110).

Table 2. Top 10 places of origin of international students at the university research site, Spring 2021

Country	Total Number of Students
China	284
India	124
Saudi Arabia	110

Paraguay	55
Nepal	39
Iran	33
Bangladesh	30
South Korea	30
Nigeria	29
Sri Lanka	27

Note. International Student and Scholar Services (2021) of the university research site
Adapted from International Student & Scholar Service, Kansas State University, Spring 2021

The top five fields of study of international graduate student numbers of 2020 Fall were as below: all top five fields of study were STEM (Science, Technology, Engineering, and Math) majors, and computer science was the most popular study filed for international graduate students.

Table 3. Top 5 field of study of international graduate student numbers at the university research site, Fall 2020

Field of Study	Graduate
Computer Science	48
Chemistry	39
Physics	37
Agronomy	36
Statistics	36

Note. International Student and Scholar Services (Fall, 2020) of the university research site
Adapted from International Student & Scholar Service, Kansas State University, Fall 2020

Participants

In this study, the researcher researched the international graduate students who also had teaching positions at the university. The researcher used purposive sampling, one of the standard nonrandom sampling techniques in qualitative research, in which the researcher solicits persons with specific characteristics to participate in the research. In purposive sampling, the researcher specified the characteristics of a population of interest and then tries to locate participants with those characteristics (Johnson & Christensen, 2019, p. 264). So, the specific group of the participants was located. With the knowledge and experience of the participants, their availability and willingness also need to be considered. Notably, the participants should have the ability to communicate experiences and opinions in an articulate, expressive, and reflective manner (Etikan et al., 2016, p. 2). The goal of purposive sampling is to concentrate on participants with specific characteristics who will better assist with the research (Etikan et al., 2016, p. 3).

According to Emmel (2013), there are several strategies for purposive sampling. This study will be centered on the four strategies among them:

- what to sample and how to use the sample
- what is known about the phenomena under the study
- select a limited number of cases towards producing the most usable information
- aware of participants for the research that will produce the most credible results

(Emmel, 2013, p. 4)

First, the researcher made judgments before, during, and after sampling. In this study, the researcher selected the samples based on the participants' lived experiences. The criterion would be international graduate students who had a teaching position, in short, ITAs (International

Teaching assistants). In U.S. higher education, only graduate students can apply for teaching positions. According to Table 2, international students' first three places of origin are China, India, and Saudi Arabia. So, the samples of this study were mainly focused on these three international groups. Based on Table 3, the participants were chosen from STEM majors, especially the top five fields of studies, which the most international graduate students enrolled. In other words, international graduate students would have more teaching opportunities and get teaching assistant positions in these five majors. All these characteristics made participants better informants for this study. Any participants who met all these characteristics would be chosen for the study: first, they should be international graduate students; second, they should be graduate teaching assistants; third, participants should be in the STEM major and the last, they should better be from the top 5 places of origin countries.

Second, the researcher examined the literature and found the similar to the research she hoped to conduct and see how many participants would be used in this study (Johnson & Christensen, 2019, p. 267). Since it was qualitative research and used the narrative inquiry, the sample size of this study would be one or more based on the previous literature review. Three participants were selected: three should be better in the STEM major, which offers the most prominent samples. Also, one of them should be Chinese because the most significant international student population at the research site has been from China for a decade at the research site, making them easily accessible to the researcher. In addition, the researcher is also from China with similar lived experiences and the same ethnic and cultural background, which is also easily accessible to the participants.

Third, If the researcher had difficulty reaching qualified participants, this study would apply snowball sampling. Each research participant was asked to identify one or more additional

people who meet specific characteristics and may be willing to participate in the research study (Johnson & Christensen, 2019, p. 265). With all these sampling strategies, the researcher started to seek the information-rich individual participants from her familiar social circle and kept expanding the searching scope until she found qualified participants who met all the criteria.

Data Collection

This study involved human subjects, and the researcher submitted a proposal to the Institutional Review Board (IRB) for review and approval before collecting data. Each participant received an email invitation from the researcher. Then the first interview would be scheduled if the participants' permission to be involved in this study. Meanwhile, the researcher gave each participant the consent form to review and sign. The entire process was confidential, and the participants have the right to finish or withdraw from the research anytime.

Data was collected from the one-to-one interviews. In total, there were three interviews for each participant, and each interview lasted 60-90 minutes. The length of each interview was slightly different due to the number of questions. The first interview questions (Appendix C) contained the participants' life stories: education background in their home country, academic life in the U.S. higher education, choice-making, and plans for the future. The first interview aimed to get familiar with participants and built trust between the researcher and participants. The background information of each participant was the foundation for the second and the third interview. The second interview (Appendix D) and the third interview (Appendix E) are tightly related to the research questions. The researcher recorded the entire interview and stored the files securely on a personal device with a password. After transcribing the interview content, the researcher sent the transcript to the participants to clarify or correct inaccurate information. Once the researcher completed data analysis, the researcher shared the findings with all participants.

Data Collection Procedure

The interview was conducted after the IRB reviewed and approved the research proposal. Each participant received an email from the researcher with all the study details and consent after participants reviewed all the details and sign the form. The first interview would be scheduled. The interview was in a comfortable environment, and the participants had the right to choose remote or in-person interviews depending on their preferences. All the interviews were in English, audio-recorded, and transcribed for data analysis.

Data Analysis

Data Analysis in Qualitative Research

According to Johnson & Christensen (2019, p. 589), the data analysis process in qualitative research demonstrates the cyclical figure below.

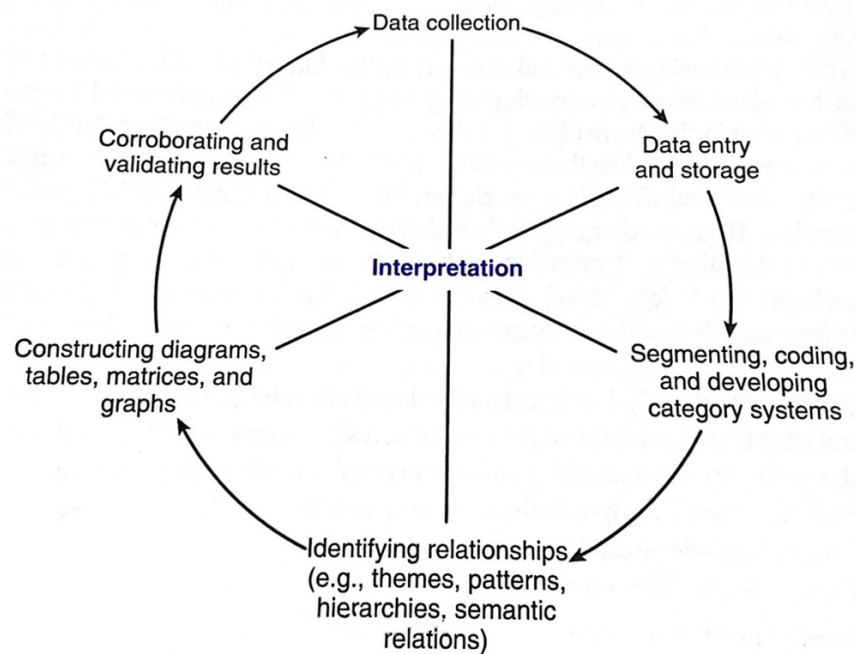


Figure 2. Data analysis in qualitative research, Johnson & Christensen (2019), p. 589

The researcher collected data after the interviews with participants. Then, the next step is data entry and storage. The primary section of this procedure is transcription, which is the process of

transforming qualitative research data, as the audio recordings of interviews with participants in this study, which involves listening to the recording and typing the recording into a word file (Johnson & Christensen, 2019, p. 591). After that, it requires the researcher to segment, code, and develop category systems. The researcher has to divide the data into meaningful analytical units and then mark data segments with symbols, descriptive words, or category names (Johnson & Christensen, 2019, p. 592). Qualitative researchers focus on examining the relationship among variables, and the term "relationship" refers to various relations or connections between things (Johnson & Christensen, 2019, p. 603). Johnson and Christensen (2019) illustrate that constructing a diagram is the tool to show the relationships among categories, which is helpful when the researchers try to analyze data (p. 606). Last, it is significant to consider the validity and use the strategies through the qualitative data-collection analysis process (p. 608).

Research Ethics

Research ethics is critical to identifying the ethical issues and a set of principles developed to guide and assist researchers in conducting ethical studies (Johnson & Christensen, 2019, p. 127). It is essential for the researcher and this study. Cited by Johnson and Christensen (2019), there are three areas of ethical concerns for doing the research:

- (1) the relationship between society and science
- (2) professional issues
- (3) the treatment of research participants (p. 127)

In this study, the researcher studied the minority group (international students) in American higher education. As the researcher mentioned in the literature review section, international students contribute the tuition revenue at American universities and the U.S. economy. The relationship between society and science revolves around how societal concerns and cultural

values should direct the course of the research (Johnson & Christensen, 2019, p. 127). Therefore, the research topic will support the international groups and offer new views for the related institutions. Specifically, the researcher and the participants belong to the minority group, and at least one of the participants is from the same race as the researcher. So, the academic and life background between participants and researcher was similar. Since the researcher applied the autobiographical narrative in the study, she wrote her experience as the narrator, which was the central part of the research.

One concern of this study would probably be the discomfort for the participants during the interview because some of the interview questions were a little sensitive and private, for example, the students' evaluation (TEVAL) for them. Some participants might feel awkward sharing their teaching feedback if they did not get the expected feedback. In this case, the treatment for the research participants would be considered in this study, and trustworthiness would be established. Each participant was given a pseudonym, and all the data was stored in password-protected files to protect participants' privacy. The researcher notified each participant of the study progress and shared the findings with them along with the entire research. The research appreciated participants' contributions and demonstrated gratitude for treating them for dinner, offering them gift cards, and even caring about them after the research. The participants would benefit from taking part in this study by reflecting on their teaching experiences. The findings of this study would help them reflect the identities and teaching in the U.S. universities to improve their teaching and life in a different cultural background. Other international teaching assistants will benefit from this study's findings as well.

Trustworthiness

The research validity in qualitative research usually refers to plausible, credible, trustworthy, and defensible (Johnson & Christensen, 2019, p. 299). Johnson and Christensen (2019) believe it is essential to consider validity in the research and examine some strategies that will improve the validity maximization (p. 299). One of the essential issues is researcher bias because qualitative research tends to be exploratory and is open-ended. It also tends to result from selective observation and selective recording of information. Besides, one's personal views and perspectives affect how data are interpreted and how the research is conducted (Johnson & Christensen, 2019, p. 299). In this study, the researcher will address biases, assumptions, or past experiences which may affect the validity of the data. One of the biases in this study was the same race of the researcher and one of the participants; another one was the similar lived experiences of the researcher and all the participants as ITAs. There are some strategies to improve the validity of the researcher:

- (1) **Triangulation:** A validation approach uses multiple investigators, methods, data sources, and/or theoretical perspectives to search for convergence of results. This study will build the process by systematic cross-checking of information and conclusion because the data will be collected through different sources such as interviews, transcripts, and field notes. In this study, the researcher demonstrates the background information of lived experience and how it might affect the research.
- (2) **Reflexivity:** The researcher actively engages in critical self-reflection about potential bias. The researcher will be more self-aware through reflexivity to monitor and attempt to control the biases. Some strategies, like peer reviewing and discussion will be applied to address the potential problems.

- (3) **Peer review:** It includes a discussion with a disinterested peer who can provide valuable insights into the research. This study is under the major professor's supervision, and the doctoral committee members will review the proposal and defense.
- (4) **Participant feedback:** It includes a discussion with the participants and other members of the participants' community for verification, insight, and deeper understanding. The researcher will ask participants to review the data, data analyses and interpretations, and findings for verification in this study. The researcher will provide participants with interview transcripts, data analyses, and findings of this study.
- (5) **External audit:** The outside expert can assess the study's quality. The doctoral committee of this study includes a professor from outside of the department, and the professor will review the research and participate in defense of this study (Johnson & Christensen, 2019, p. 301).

These five strategies were used to develop and maximize the validity of this study to ensure trustworthiness or validation.

Summary

This study used narrative inquiry to obtain the individual story and lived experiences as data sources. This chapter demonstrates the details of the methodology. It addresses the suitability of the research design for this study. Then it describes the research site, participants, data collection, and data analysis in detail. In addition, the research ethics issues, and trustworthiness are illustrated in the final section. In the next chapter, findings and analysis of the data will be discussed.

Chapter 4 - Findings

This chapter demonstrates the research findings and analysis based on the research questions: the challenges and needs on teaching and learning for international teaching assistants (ITA) in the U.S. higher education, and the necessary training methods and suggestions for the ITA program. According to the narratives of three participants, they shared personal stories related to the research questions, and the sections are organized by relevant findings and the researcher's analysis under different themes.

Research Participants Background

Cora

Cora is Brazilian, and she is 28. She is from the coastal city, Porto Alegre, south of Brazil. Her first language is Portuguese, and she can speak some Spanish. She used to take German classes so that she could speak basic German. Now she is the doctoral candidate in the Department of Industry Engineering and anticipates graduating in May 2022. Meanwhile, she is a graduate teaching assistant for the fundamental undergraduate classes, so her English is very fluent. I hardly believed that English was her second language when I interviewed her. She is very confident and optimistic about sharing all her stories with me.

When she was young, her family traveled to America's big cities several times, familiar with American culture. She was always a good student, and she was influenced by her father, who used to be an engineer. So, she studied engineering for her undergraduate study, and she got her bachelor's degree in engineering in Brazil in August 2016. Other than that, she visited her boyfriend, a Ph.D. student in the College of Business at K-State, in 2016. At that time, her boyfriend encouraged her to apply for the Ph.D. program and move to Manhattan, Kansas. Therefore, she took TOFEL and GRE and prepared the application materials when she returned

to Brazil. She got the offer in spring 2017 and officially moved to the U.S. to pursue a Ph.D. degree in fall 2017.

Her research concentration is human factors in ergonomics. She is researching using virtual reality (V.R.) technology and designing tests to detect cognitive decline in older adults. She is the laboratory instructor and sometimes gives lectures. She also holds office hours and weekly help sessions outside the classrooms to help students with class materials. Her goal after graduation is to apply for postdoc or teaching positions, and then, she would apply for a tenure track and work in academia.

Chang

Chang is Chinese, and he is 32. He is from Beijing, the capital of China. He is the only child in his family, and his parents are middle class. Both of his parents went to universities. So, his parents know the importance of education and always encourage him to study harder and study abroad to expand his horizon. He traveled a lot of foreign countries before coming to the U.S. because he enjoys learning about different countries and cultures.

He used to study broadcasting and hosting for his bachelor's degree at the Communication University of China. Then he chose to study in the U.S. to acquire a master's degree in the same area. First, he wanted to experience diversity and kept studying English; second, the education quality in the U.S. attracted him. After being in the U.S. for two years, some of his classmates changed majors and found jobs in the U.S., so he also changed his major to computer science to find a job quickly after graduation. Then, he transferred to K-State and started his Ph.D. program journey. However, he still loves news reports and public speaking, and he listens to the news and practices his broadcasting skills every day as his hobby.

Now he has been in the U.S. for eight years. He loves the multicultural environment in this small town, where he could meet diverse people and learn different cultures from each other. The doctoral candidate in the Department of Computer Science anticipates graduating in May 2022. His research concentration is big data because of the digital age, and he tries to find the critical information behind data. He taught weekly fundamental courses (one credit) to undergraduates before the pandemic, which was the highlight experience in his graduate study. Because it made him think of the old-time to give a public speech in front of people, meanwhile, he had office hours and replied to students' inquiry emails almost every day.

Mia

Mia is Sri Lankan, and her hometown is in the middle part of the country. She can speak Tamil, English, and a little bit Hindi. She is 31 now, and she has been in the U.S. for six years. She got her bachelor's degree in statistics back home and applied directly to the Ph.D. program at K-State. Now she is a doctoral candidate in the Department of Statistics and anticipates graduating in May 2022. Her research concentration is on analyzing spatial statistics, and her current research work is mainly focused on animal distributions and how to manage the land. She has a younger brother studying in the U.S. university for his Ph.D. in mechanical engineering. Her parents are proud of them because they are the first generation to go to the universities in her family.

Mia is always a great student since elementary school. The higher education enrollment rate in Sri Lanka is very low due to the limited number of universities in the entire country, so it is challenging and competitive for students to get into the universities. Meanwhile, students do not have the right to choose their majors; the universities create the major study lists for each student based on their entrance exam scores of each subject. Mia's math score is higher than

other subjects, so her undergraduate university chose statistics and math for her, so she started her journey in the statistics field. She is interested in interior design, and she even had part-time jobs as an interior designer while studying at the university. Unfortunately, her art score is now high enough to be selected to study interior design.

She likes studying and living in Manhattan, much bigger than her hometown, and she can get whatever she needs here. She meets other international friends here and participates in various events and activities on campus. She had both teaching and research assistant positions during these years. She teaches statistics (300 level) for undergraduates twice per week, and the average number of students in each is around 40. In addition, she needs to create quizzes and exams for the students.

RQ 1. What are the ITAs' challenges and needs of linguistics, instruction, and culture in the U.S. classroom?

All three of the participants are studying STEM majors, and they have or had teaching experiences in U.S. classrooms. Since English is their second or foreign language, they all have challenges of English in teaching, especially at the beginning of the teaching. All three participants taught fundamental classes, which included many formulas and calculating. Therefore, they do not need much American culture or background information compared with major art classes.

Cora's challenges in teaching and learning

English challenges

Cora spent a lot of time and energy preparing all the documents for the application for the Ph.D. program and teaching assistant position. During the application process, she felt challenges in English. Be specifically, the TOEFL test, cover letter, and related materials. After receiving

the offer and coming to the U.S., she started to teach for the first time. She was nervous and stressed to make a presentation in English in front of the class in the first semester.

I think language was the biggest deal. It is definitely one of the things we are going to be struggling the most when we first get here. When I got here, it would take me hours to prepare for a 15-minute presentation because I was like practicing the words and trying to understand what I was saying, you know, rehearsal. Yes, I used to do a lot of rehearsals before starting classes. And I would be freak out if a student like asking questions because I was like, please don't ask me something I don't know, or something too complicated for me to explain. So, I would feel much more nervous.

Most TAs are international students in Cora's department, only one domestic TA, who was more relaxed and easygoing about teaching according to Cora's interview. His previous industry experience also gave him confidence in the classroom. Compared with this domestic TA, Cora had more challenges in teaching due to the limited academic English proficiency in the classroom, especially in the first two years. Nevertheless, she feels more confident in the classroom because she is familiar with the teaching materials, and her English has improved dramatically. She believes the primary challenge of teaching now is not English anymore.

I think I need to understand better who I am as a teacher; I feel like that's my current challenge. It's getting to know or figure out my teaching style. So, language was the biggest deal for me for the first two years. Now is like being a model for students, for students, and making sure that I know enough for classes. So, I don't look unprepared.

Pedagogy challenges

Cora likes teaching, and she has a passion for the classroom. However, she does not have past teaching experience, so she needs to figure out her teaching style and instruction methods in

the classroom. Since English is no longer the biggest challenge in her teaching, she believes she has to work on teaching effectiveness.

I think for me, the most important thing is making sure that I am effectively teaching them. So, I haven't been teaching for that long, but sometimes I already feel like I know too much, so that when I teach, I'm keeping some important information. That might be obvious to me already, but it might not be obvious to them. So, I think it is the biggest challenge: to be a clear communicator and make sure I don't skip stages of contents or important things to consider that are automatic to me, but they don't know yet. And that's one of the biggest mistakes I see from a lot of older professors. They assume that students know something, but you cannot assume that they know. No assumptions about past knowledge. Even though I explain every single, like all the details that I think are relevant, they still make mistakes. So that is challenging. Like the teacher, they didn't do the best job, like conveying the information to the students. So that's why I need to keep working on that.

Adapting different teaching and learning styles

Cora thinks the teaching styles between U.S. and Brazil are very similar. Furthermore, math, engineering is universal. She does not need cultural background unless she gives life examples in the class. However, the evaluation of students' learning is very different. She prefers the multiple ways to evaluate students' knowledge and learning abilities, which is new and different compared with her learning experience in Brazil.

There wasn't really any cultural shock when I came here and started taking classes here. So really similar style. I never had any crazy cultural shock when I got here, because there are not that many cultural differences between Brazil and the U.S. I guess the only the main difference not in teaching necessarily, but how classes are structured, was mostly related to the

type of assignments. So, I was used to having a test one final exam or test one test two final exam. So, I didn't really have lots of project homework. I've never had homework in my undergrad studies. There are so many opportunities to show your work and test their understanding. So, for me, that was new, and I kept thinking about my experience in Brazil. Your average the two tests, that's your grade, you know, so there was like what grading, and then I started to realize that here they have so many different things going on—homework, attendance, etc. But overall, I thought it was easy to adjust thing in most cases; I actually like it much better. Having to like the opportunity to get some feedback before taking the actual tests.

Students' attitudes in the classroom

Cora practices English and teaching every day before giving a lecture to the students, and most undergraduates are well behaved in her class. She likes the interaction with students in the class and building a trustworthy relationship with them. According to students' feedback and evaluation, most students are satisfied with Cora's professional knowledge and teaching strategies in the classroom. Some students like to ask questions in her office or outside of the classroom. They don't have boundaries because of Cora's student identity.

They're usually very well behaved. I have to say they are very respectful. In the sense that they don't really talk in class, they might not be looking at me, which I feel like it's normal. Sometimes you're teaching, they're not really paying attention to you, but they are not disrupting the class either. So, I think that's, that's not the worst. I mean, I can't force them to look at me, right? But besides that, I think they are very respectful. They don't necessarily interact a lot. Some students, they are super outgoing and extroverted. And they ask a lot of questions, but not all of them. So sometimes I kind of feel like no one is interacting with me; I'm kind of talking to the walls because they don't care much sometimes.

Challenges on major study and research

Cora has pressure on her major study and research. She takes three courses per semester which require much time doing assignments and research. Cora has to teach both lab and lecture. Teaching preparation costs most of her spare time; hence, time management is always challenging.

The TA assignments take a lot of my time, so that has been one of the biggest issues with my time here since I haven't always worked as a TA. It was really hard for me to find the time to work on my own research. So, at first, for the first two years, I would say I was still struggling with the language, I still getting more familiar with English, and more comfortable speaking English. Preparing for the classes, I was taking classes because I was taking three classes per semester. And then, I also had to work on my research, but I didn't really have the time.

Chang's challenges in teaching and learning

Chang was not TA in the first year of his Ph.D. study. He applied for the TA position when he received the department email. After the interview, he became a TA. He was surprised to get this position because he did not have any related teaching experiences in higher education. He had never given an English presentation in front of the public. He was the only Chinese TA at that time, and his coworker is an American TA who is more confident to give a lecture in the classroom.

English and pedagogy challenges

Chang thinks his English level is medium at the beginning of teaching. He prepared the lecture content several times before the class; however, he was unsure about the unpredictable situations in the class, like students' random questions. So, he prepared some possible scenarios according to the lecture content and tried to solve all the situations as perfectly as he could.

Chang read the teaching materials several times when he prepared the lesson plan and found the bullet points to explain. In addition, he designed board writing to attract students' attention.

When you are teaching, especially if you want to be a good teacher, then you, you want to talk a lot of things, you want to make a lot of metaphor to help students understand the concepts. So if you are really fluent in English, make a metaphor, and then it will help students understand. But because of the language limitations, and some of the years I prepare some of the content before the class, but for example, if there are some unpredicted situations, and you have to use in your accumulated knowledge, your experience, yeah, it required me to have a good English proficiency to respond on predicted situations.

He cares about if students understand his lecture to focus on practicing English in his daily life. For instance, he listens to the English program, radio and reads English articles every day to improve his English skills, and it has become his daily habit now. Sometimes, he used the daily news to lead the class as the worm up, and his students were surprised about the professional vocabularies he talked about, and they liked his teaching way. Therefore, he gained much confidence to talk in front of students.

Students' attitudes in the classroom

Most of the students in Chang's class are motivated, but he received inquiry emails almost every day in his first teaching semester. Students asked questions about class materials, which they could not understand during the class. According to Chang, most students treat him as a friend due to the small age gap and personality.

Challenges of American cultural background

Chang believes American cultural background is an essential element in his teaching.

He believes that a multicultural classroom requires instructors' consideration of the background culture, which is different from the monoculture classroom from his home country. That is why he insists on reading and listening to daily news and TV programs to gain background knowledge of America, and then he can apply it in his classroom.

American culture is very important that you don't want to cross the right line. This is a multicultural country. So, you have to know a lot. There are a lot of taboo that you have to know. So, you're not only in American culture, but culture from all over the world. Sometimes it's hard, you can see in a classroom, even though that there is a freedom of speech, you still need to consider our students' feelings. So, you know, in the classroom, you'll have people from all countries all over the world. So, you have to consider that they are feeling when you are making an example showing the pictures or every sentence.

Challenges on major study and research

Since it was his first-time teaching, he spent more time and energy on teaching instead of his course work and research. For example, He always rehearsed many times before giving a lecture, which cost him a lot of time.

That's a tough time I remember; when I recall, I need to prepare in a class. I have a morning class, sometimes I have the morning class, and I have to get up early to prepare the class to rehearsal. And you really need to balance the time, but I, I don't think I'm doing a good job on the balance. Because indeed, that TA take your time, and I am also the person that really pay attention to other people's judgment. So, I'm really consider or think about how the student will evaluate to me. So, I will spend more time on the TA instead of my own course. Yes, I don't think I'm doing the balance that very well.

Mia's challenges in teaching and learning

Mia applied for a Ph.D. in statistics and teaching assistant simultaneously. Because some of her undergraduate friends came to the U.S. earlier and gave her many suggestions, she taught undergraduate statistics for one semester after she got her bachelor's degree in her undergraduate university. So, she was familiar with teaching at the university level, which gave her confidence and preparation for teaching in the U.S.

English and pedagogy challenges

Mia was confident in her English skills because her undergraduate courses were taught in English, and she used to teach statistics in English as well. Compared with the other two participants, she had more experience in English and teaching. Most of the TAs in her department are internationals; few of them are domestic TAs. According to her, there are no apparent differences between domestic and international TAs.

We all were given the same responsibilities. And the department was pretty clear about, okay, this is what you need to teach, and this is the grading system, and things like that. So everyone has their own teaching techniques. Because you have the same teaching materials. Maybe the only difference is English.

Mia believes her English is good enough to give a lecture now, and all her English skills have improved in these years with a practice in teaching and studying. Meanwhile, her accent has been changed obviously. At the same time, her pedagogy has developed during these years. Now she is familiar with the class materials, and she only needs to review the knowledge points before the class and give a lecture naturally.

But earlier, I would say like first year, then I had to put more time for like, reviewing the cause work. And you know, what I'm trying to teach the presentations, and also, we had to grade and things like that. So, it took more time those days.

There are around 40 students in Mia's regular class, and most students are motivated in her class. Even though they do not actively answer her questions, they behaved well in her class. Since her students are from different majors, she tries to apply daily examples in her class. She got an excellent teaching evaluation each semester based on her teaching evaluation.

You know statistics, it's always going to be like math and calculations. And you know, when there are like people from trance from different majors, it's going to be pretty overwhelming. So, I always try to connect the statistics to the real-world situation. So, it's easy for them to understand.

One of Mia's teaching challenges is grading in the first couple of years. Because of the large number of assignments, quizzes, and exams, it was challenging for her to manage time with grading. Another challenge is getting everyone to talk and share their opinions, which is classroom engagement.

Adapting different teaching and learning styles

Mia believes there are two main differences between Sri Lankan and American classrooms: grading system and classroom technology based on her teaching experiences. Grading is more serious back home, and there are no extra points for students. All students will get the actual score from their test paper and participation. When she started to teach in the U.S., Mia realized that she needed to grade based on assignments, quizzes, tests, and participation, and she needed to stand in students' point of view. The classroom activities are designed differently under these two cultural backgrounds classrooms. For instance, Mia used to organize group or

individual competition activities back home because students in Sri Lanka get used to the competitive atmosphere in the class and are eager to win. However, she has never tried to make students have competition when she is teaching in the U.S.

When I was back home, we were pretty strict in grading. And then I realized after coming here that, you know, it's very flexible to give partial points and you know, partial points to them and things like this pretty easy. I don't think I can categorize it's like positive or negative. In the beginning, students are asking for like partial points and things like that. Then I realized, okay, I should give more partial points. So, I'm being generous now.

Mia is used to the traditional teaching method, which relies on the blackboard. Back home, the instructors need to write a lot on the blackboard to explain the knowledge, demonstrate formulas, and solve the math problems. She was surprised when she first taught in America and all the technology she could use in the class. She still likes to write on the board and lead students to think and solve statistic problems. However, she also enjoys using the projector in the classroom and gives students the general idea of each bullet point.

Teaching here is like more technology. Yeah, we have projectors, and you know, document cameras, and all these kinds of new like technologies. But back home, we just use blackboard, yes, more traditional. So that's a big difference. I like to combine both of them (traditional and technological methods). So, I share the PowerPoint presentations in the screen, I also use the whiteboard too. And I also use the document cameras.

RQ 1. a. What are the ITAs' difficulties in teaching, learning, and individual lives under the COVID-19 pandemic?

Three participants have already adapted learning and teaching experiences in the U.S. for many years and are ready to graduate. However, the COVID-19 pandemic changed their teaching and learning routine, even brought more difficulties in their personal lives.

Cora's challenges under pandemic

The first change is teaching online, and it was Cora's first time teaching virtually. She spent more time on online teaching and learned new online teaching tools to draw students' attention. It was not easy for her to take and teach online classes simultaneously. According to Cora, not only ITAs had these challenges in online teaching, the instructors and professors in her department also needed help for transition to remote classes. Everything was new, and they only had limited time to prepare for the rest of the semester.

So, I guess one of the biggest things was that we had to figure out a good way of teaching online. Yes. And for me, that was one of the biggest changes because students don't accept simple teaching methodologies anymore, especially online. So, for example, when COVID hit, we had to rush to get something online, right? So, we didn't have really good resources. It was whatever we could possibly do in one week to start teaching online. So that was, that was crazy. It was super hard. I remember professors freaking out and some professors, they have been using some really old school techniques to teach, like writing down on a piece of paper with a projector. And then just projecting what he was writing. So, the end, some professors, they actually did that. So, I think with COVID, we had to learn better teaching methods. I think that changed a lot. But in order for it to be good, it needs 10 times more work.

Cora's workload has become double that before. So, she has more pressure on online teaching method and workload, meanwhile, she also needs to focus on her own research.

I have double the workload right now that I have before that I have before COVID. Oh, because they (department) had some budget cuts. So, they could not hire as many T.A.s as before. So, I used to get one class per semester to help a professor with. And after COVID, I started getting two classes to help them. So, it's doubled the workload. So, I think it's really challenging, I try my best to make sure that my time is kind of evenly split. But it doesn't always work like that. I mean, some weeks, I am mostly grading and talking to students having like office hours and help sessions.

Cora also took online courses with other professors, and she got some inspiration from some of them. So, she stood in students' point of view due to her student identity, and she knew what students need for online courses. Cora started to learn new teaching strategies and tools from YouTube videos and video editing with software to include animations in her teaching videos. She recorded herself and edited herself in the corner of the video so that students could see her face all the time. Since it was her first time to try video editing and recording, it took her more energy and time than before. For example, a 15-minute video would take her around five hours to record and edit before publishing it on Canvas. Because she cared about students, and she wanted to engage students in online study. As a result, her students appreciated her work and were motivated to participate in the online learning. The positive aspect of her hard work of making those teaching videos is that she has more teaching materials now, and she can share the videos with students when they need help.

But the good thing is that I recorded so many things during COVID that I had a lot of materials ready for next semesters. So, for example, then students were asking me I don't

understand this homework problem. I already had a video for that. So, I just sent the link to the video. So that would save me a lot of time later flame out. One video was explaining how to solve it. So, I would send them before the solutions were posted. And then I would have another video after solutions were posted where I actually go step by step solving the problem. So now it's helpful that I have all the all those videos recorded. They (students) liked it, too.

Her social life also changed since the pandemic. Cora is an outgoing person, and she loves to make international friends. So, she participated in different activities and met different people. However, Cora had to change her social life online, zoom with people, plan a couple of online events, and participate in some workshops about surviving through COVID. Cora missed her family back in Brazil, and she has not gone back home for more than two years, and it is not easy for her family to travel to the U.S. to visit her. Gradually, she had some physical and mental issues during this particular situation.

So, I was happy at first, because I loved the idea of working from home and you know, staying home. Then I got a little tired of working from home, after some time, I was like, Oh, I want to socialize. But I guess the biggest problem for me was, because I was afraid of what was going on. So, I was really, I wouldn't say depressed, but extremely anxious. But since we didn't know what was happening, and there was like people dying. And I was afraid of everything, like going outside for some time, I wasn't even leaving the house, because we were like, oh, we're not sure if it's airborne. Yeah. And I got I got sick a couple of times because of spending too much time in front of the computer. So, I had some really bad headaches. I had like some blurred vision for a while because I was pending just the whole day.

Chang's challenges under pandemic

Chang's major is computer science, and he likes technology. He enjoys online teaching and learning, which is more convenient for him to acquire knowledge.

I like online teaching, because it saves a lot of time. You don't need to go to the classroom. I also like that because you can make some screenshot. So, you don't need to take the notes just to make a screenshot and then you'll get notes. And other why I like online teaching, if you don't understand some part, you can repeat and listen to that.

However, Chang believes online teaching and learning lacks interaction because it is hard to visualize what students want to express, which will affect students' motivation to learn and peer pressure from classmates. Because studying at home is more relaxed than studying in the classroom, and self-discipline is not easy for each student.

So, it's a less interactive, actually less interaction with your professor and classmates. Of course, they save a lot of time that you don't need to go to the classroom. But the interaction, the peer pressure, because you feel more relaxed at home.

Chang suggests making students more motivated in the online class, creating a group chat during the class.

I think we can create a group chat like Slack, or Microsoft, or any other social communication tool to make a small group, and people can talk in that group, ask questions, and answer questions to each other.

Since Chang had more free time during the pandemic, he purchased some extra online courses to improve his major knowledge. At the same time, he also learned the organization of the online teaching content, lesson plan designing, and application of animation from the online course, which he can apply in his teaching and learning in the future. Chang also participated

online study group, so he turned on the camera and studied with many strangers simultaneously for a couple of hours every day. He thinks the function of the online study group is like the library or study room, and people will be more concentrated on the study with others' supervision. Otherwise, he lacked the learning motivation at home.

Since the pandemic, Chang chose to stay at home and cut all the socializing activity in person. He is very cautious, and he still orders groceries and food online. Chang has not traveled back home for three years, and it is not easy for his portents to come and visit him in the U.S. due to the strict traveling policy in China. Fortunately, he and his family can communicate online frequently.

Mia's challenges under pandemic

Mia always has around 40 students in her class, and it is impossible to see them all when she gave the online teaching. Her supervisor prepared the teaching materials, pre-recorded files, and uploaded them before each class. Mia needed to review all the files and summarize each lesson to her students. As mentioned above, she also likes traditional teaching methods, like writing on the whiteboard. Nevertheless, she could not write enough on the pad during the virtual class. Additionally, it was limited to creating classroom activities. Unless students emailed her to ask questions, otherwise, she had no idea if her students were motivated in the class or not, only from the test scores.

That's not my favorite thing online, because I can't see the faces of the students, right? And then I didn't want to ask them to keep turning on the camera. But it's very hard to do a proper communication on Zoom. So, I like the direct communication. I mean, I want to see the students.

Mia also sees the positive aspect of online teaching: an online grading platform. It saves her time to grade students' assignments, and she still uses it after returning to the classroom teaching.

I think in the positive side that the online learning experience like you know, we set up an online platform, and it doesn't take that much of time. Multiple answer questions or things so they can just solve it and then put it the answer. So, I think that's pretty good. So, all those things I think, the timewise and the learning wise that is something positive.

Mia enjoys joining various activities and events on campus, so that she can make friends from all over the world. But she only could participate the online event to socialize with people during the pandemic.

It was very difficult, and productivity went down. Socializing was pretty limited. There were game nights, so you could do some online games. We had the zoom dance party, so people can dance face to the camera. It was good. I mean, for what we had that during that time, we didn't have any socializing, right. You know, having something like that is very interesting.

Even though she has not traveled back home for almost three years, her younger brother studies in the U.S. as well. So, they had some gatherings in the holidays, which is her comfort.

RQ 2. What are the effective training strategies for ITAs, and how to be trained professionally?

Cora's teaching and training experiences

Experiences in taking SPEAK Test

Cora had to take the SPEAK Test from English Language Program (ELP) before class. She did not know any information about this test, but she passed once. Cora thinks the test content is not complex but lacks communication skills; for example, giving direction and

describing pictures is not common in our daily lives and the classroom. She prefers real-person communication in the teaching context to be prepared for actual classroom teaching. Now Cora's department has already made changes depending on students' feedback.

So, I kind of think it's good to have an idea of how well the T.A. can communicate before you put that T.A. to teach. Because I don't think the TOEFL and IELTS, the speaking tasks are very specific to teaching. I know that my department is not using that test (SPEAK Test) anymore. They had the department head, a faculty, another faculty member. And then I think one graduate undergraduate student. And the test was just to interact with the student and ask some questions. Like, can you describe this? Can you tell me about this? Simple things. And then the basically like the panel, the judges, they would define if they would decide if the person was clear, and able to communicate well. So, I guess they are now doing this within the department. Yes, because that's a real person.

Assistance from supervisor

Cora recalls her memory, and she has not had any official training before teaching. She went to the orientation week and got general ideas for teaching. Furthermore, Cora also had online training on protecting students' privacy and rules in the classroom. Cora heard about the Teaching and Learning Center workshops for all the graduate teaching assistants, so she went to several workshops, but she could not participate all the workshops because of a time conflict. She thinks some of the workshops were very helpful, while some were not, which depends on the classes and job as a TA.

Therefore, Cora got all the teaching assistance from her supervisor, who guided her step by step when she first taught the undergraduate class. Cora observed her supervisor's lecture and lab and took notes several times per week for the first semester. After class, she and her

supervisor discussed how to give effective teaching. In the second semester, Cora got a chance to teach 10 minutes per lab with supervision. Gradually, she can teach the entire lab and even the lecture. Her supervisor has been patient and supportive of Cora during these years. They always discuss the teaching material, quizzes, and exams. In a word, her supervisor helps her become a good instructor.

I always meet the professor I'm working with on like a weekly basis. So, for the semester for example, every Monday morning at 9:30 we meet, and we discuss students have results so for example, I just finished for one class how I finished grading some questions from the exam. And I was providing some feedback to my advisor, so we discussed what was wrong, and we like discuss what is going to be in the next quiz. Because me and my advisor, we really do a lot of teamwork there. I don't feel like I am just a TA, you know, I have I do have the same and in what goes in the class, what happens in the class. So, when we decided on the quiz for example, we build exams together, we build the quizzes together, like co-teaching.

Teaching philosophy

Cora has her teaching philosophy during the years of practice. First, she emphasizes the trustworthy relationship between instructors and students, so she treats students the same and weakens the distance between students and her. Second, Cora prefers interaction with students instead of monologue lectures, especially in the labs. In this way, she can give students examples for each step and guide students to learn the experiment-based knowledge.

I don't like to have this barrier between students and student and professor. I also always want to have hands on activities. So not only the monologue lecture. So having exercises, that's why I like teaching labs, I think they're so important, because you have all those concepts. So sometimes I bring stuff from Tik Tok because I know that they're doing something on Tick Tock

or a TV show. So sometimes it's like making the material closer to them and their world, you know.

Self-reflection on teaching

Cora has had five-year teaching experiences, so she improved in different aspects of teaching, like English proficiency, pedagogy methods, interaction with students, and confidence in the class. She usually reflects on her class and knows the importance of students' feedback and evaluation. So, Cora always asks students' opinions to improve for the next class. Cora is clear about her strengths and weakness in teaching, and she has set her teaching goal and worked in that direction.

I think now, I try to simplify my language as much as I can. So, I avoid jargons and weird words, complicated words. And I've been practicing that a lot. Like, how can I explain the all the complicated stuff that I'm doing in simpler terms, because that's how people will get it. So, that's something that that changed completely when I was teaching when I'm teaching. And I try to be more laid back when I teach. Because I used to rehearse a lot. And I would sound like I was basically, like a speech. And now I try to make the class more interactive. So, I try to ask them questions, and then depending on their answers I move on. So, I think this way, the class becomes a little bit more dynamic, and less boring. So, I try to force them into asking questions. That changed a lot. I was afraid of questions before. Yeah. Because I was worried that I would not be able to answer because I wouldn't know the material. I think at this point, I'm fine with the cultural with the cultural things, I'm fine, I'm fine with the language, there's not really much for me to do right now. So, it's more like how to improve learning of students from students, how to be a better communicator. So not in terms of language but expressing your ideas clearly. And presentation skills, you know, so I think those are things that as you make progress.

Professional development

Cora always takes opportunities to participate in different academic events and conferences on campus or nationwide associations. She thinks it is beneficial to gain open-minded ideas on research and teaching and meet people from academia. She continued to take part in the virtual conferences during the pandemic to update her knowledge on the recent research in her field.

So, I love the events that they have on campus. So, the Teaching and Learning Center, they have great events. I've been to lots of them. So, I will I always keep an eye on events and workshops that are being offered. I have been to conferences most of them were virtual because it was during COVID. But my conferences were not related to teaching specifically. So, it's related to research. I keep going to conferences, I think it's important that we are very updated to new stuff that is coming up. So we are in class, and we can always bring brand new fresh examples. So, there's that part, and then the stuff on campus, trying to participate in workshops, professional development, workshops, graduate school workshops, so and always trying to get better, I guess.

Suggestions on ITAs and ITA programs

Cora has many experiences in graduate learning and assistant teaching. So, she shared the suggestions with the other international students, especially for ITAs. Cora proposed advice for the future ITA programs, which will support the ITA group in linguistic, pedagogy, and American cultural issues. The hypothetical ITA program will also bond all international students together and build a platform to communicate and share individual thoughts and stories.

I would recommend to participate, like, attend as many workshops, like teaching and learning workshops as they can try to talk to as many students as you can interact with students.

Because I think that's, that breaks a little bit the ice. But try to immerse yourself in the language and the culture. So, try to meet other graduate students try to live the American culture. And to me something about learning with my students, learning from them and learning as a student. So just keeping a really good mindset of learning every day, trying to always meet new people, other graduate students, because it was nice to know that I was not that it's nice to know that I'm not alone. And students don't expect you to be perfect. They expect you to be a good example. Like someone that cares about the class that is relatable, that will help them to become better professionals. So that's the goal.

Chang's teaching and training experiences

Chang did not take the SPEAK Test because his TOEFL speaking score is enough to be an ITA. During the weekly meetings, he got teaching assistance from his supervisor; they discussed the teaching materials and procedure and designed the student quizzes and exams. Chang went to workshops organized by the Teaching and Learning Center, where he learned some teaching strategies from other professors and instructors.

Teaching philosophy

Chang has never considered his teaching philosophy in detail. Nevertheless, he has the general idea of making learning and teaching fun and teaching through lively activities. As a student, Chang prefers the entertainment classroom, and students can easily learn from classroom activities. He believes that if the instructors can make the classroom activities enjoyable, students will be more motivated to learn. Furthermore, the relaxed learning atmosphere is necessary to build interaction with students.

My teaching philosophy in general would be entertainment, I know that nobody wanted the course becoming entertainment. But I hope that my course can be the entertainment class.

When I was a student, very few of teachers and professors are funny. I want them to be funny at that same time knowledgeable. Science is a little bit different because science is not directly related to your life. So, if you want to make a connection or expand the knowledge that you have to find some other relative interesting content.

Self-reflection on teaching

Chang was very nervous at the beginning of teaching because he was unfamiliar with the teaching context, including teaching materials and tools. He had to go to the classroom very early to get familiar with the technical issues before students showed up. Chang had trouble with time management for the class. Since he is getting familiar with the materials, he does not need to memorize all teaching plans step by step and teach in the class. It is more natural for him to give a lecture without memorization, and he only needs to review the outline of the teaching plan before each class or lab. The class style changes to discussion-based instead of a monologue. Chang believes that he still needs to work on the cultural background so that he can bring the living examples to the classroom and get closer and familiar with students' cultural backgrounds. He believes this is the key to maintaining a trustworthy relationship with his students, and he is working on it.

So, I think that the oral challenges I found a start in the beginning because I'm not very familiar with the whole process. I don't think that you should just be the only rely on textbook. Yes, you have to master materials, borrowed ideas from others from the internet because there are a lot of material online available. And now I have more focus the class environment, the student's interaction, students' feelings. I will add some interactions with students, asking students a question or design some activities that require them to come to the whiteboard and write something on the whiteboard. I also think the cultural background is the most the thing that

I need to learn. You cannot rely on the information from the Internet, which may mislead you in the life situation. I think it's better to have a local people to teaching the cultural background.

Professional development

Chang went to several conferences, but he does not often go to the conference because he does not write the extra research paper for the conference presentation. According to his little experience of being in the conference, he met researchers and scholars from different countries, and they all demonstrated different presentation styles, public speaking skills.

Suggestions on ITA programs

Chang thinks the ITA program will be the platform for all the international students to share the international perspective on teaching and learning. With various cultural backgrounds and previous educational experiences, international students will obtain valuable knowledge and opinions from each other. And everyone can discuss how to apply the previous educational experience in the current teaching with American culture. Additionally, the group or individual presentation workshops would be an excellent option for ITAs to practice their public speaking skills and time management. After that, peer evaluation could help improve basic teaching abilities.

The technology cannot be voided in modern classrooms, especially during a pandemic. Everyone in the education field has realized the importance of technology (electronic teaching and learning tools). Chang thinks if any department or hypothetical ITA programs could offer all TAs online technical training workshops, it would be a timesaver for self-learning and self-researching.

Mia's teaching and training experiences

Mia did not take SPEAK Test because her TOEFL speaking score is enough for being an ITA, the same situation with Chang. Mia had teaching experience in her undergraduate university six months after getting her bachelor's degree. Mia is the only research participant with previous teaching experience in higher education, and she taught in English back home. Compared with the other two participants, she is more confident to work as a TA in the beginning.

Teaching philosophy

Mia believes clarification is the critical element of her teaching. Because statistic classes require formulas and calculations, it would be hard for the instructor to move on to the next section if students are not familiar with the concepts and formulas. So Mia always observes students' reflection after interpretation on the new knowledge point, and she makes some retaliative questions for students to check if they understand the class materials completely.

So, I think mostly, teaching in a way and meaning making sure that they (students) understand the questions, understand the material. So, I think rather than like carrying to complete the sections, I know that we have a timeline to write. So, I always prepare my material, the way that they understand it, even the material is overwhelming. So, I kind of, like simplify most of the things and then I change the way so they can understand. So, it's mostly about I want them to understand what they're doing.

Self-reflection on teaching

Mia asks students questions constantly during the lecture. She always asks related questions if they finish one section and confirms whether students thoroughly understand the concepts or formula. Mia will go through the section again if students' feedback is hesitant, make

sure everyone gets the point, and move on to the next section. Since she teaches the introductory statistic course for students from different departments, she always tries to apply real-world scenarios in her class and help students understand practically.

On the side of teaching tools in the classroom, Mia embraces the classroom technology and applies various tools in her class, and now she is getting used to it. Whether in the classroom or virtual teaching, she relies on technology while still keeping traditional teaching methods as much as possible.

Being the beginning there was a there was a time that I'm getting used to the class because this is a totally different environment. I think mostly the equipment changes. I mean, my prior teaching experience in my country, like the technologies. So, there were things that I changed along with, that I tried different methods, like using the whiteboard, and using the project and showing the presentation.

Assistance from supervisor

Like the other two participants, Mia also has a responsible supervisor, who helped her with teaching and major study in all these years. Her supervisor prepared the lesson plan for each TA and asked them to teach step by step based on the lesson plan. So, there is limited creation space on teaching for all the TAs. Except for teaching materials, she has weekly meetings with her supervisor to discuss the content of assignments and exams. Her supervisor also observed each TA's class in the first semester randomly, and she would provide some feedback and suggestions for them to improve on pedagogy methods, teaching styles, classroom actives, and other aspects. According to Mia, all TAs benefit from her supervisor and appreciate the support from their supervisor.

I think, for teaching, it's a big part that we don't have to make cover nodes. So, it was pretty straightforward what we should teach. So, it (supervisor's guidance's and provided teaching materials) was very helpful. And also, the grading scheme and everything, it's pretty clear the supervisor for the teaching, provided all those for the whole time. Once a week we discuss about the material and like all upcoming deadlines, like when to give a homework and what kind of materials to cover in an exam so all these years once per week. When we were in the first year, my supervisor came to our class like randomly for every T.A. Just one day she (supervisor) comes and sit in the class and then just see how we teach. I thought that's pretty cool. You know, she took time to do that.

Professional development

Mia is an active participant in all the professional development activities held on the campus or other national professional statistics organizations, and she is strongly motivated to pursue what she needs for her professional development. She keeps attending the conferences each year and presents research-based topics, and she keeps an eye on all the academic seminars or competitions for graduate students on campus. Mia won a couple of awards during graduate study and got many opportunities to practice public speaking. She is proud of herself, and she believes all her experiences will help her after she graduates in the future.

So, I was also participating in events like poster competitions, talk speech competitions. I think I have given close to 15 conference presentations and like other like talks during my Ph.D. Sometimes they're related sometimes that they seem somewhere different. Mostly they are research related. I participate in the three-minute competition. Yes, I participated in almost all competitions on campus for graduate school graduates. I thought it's a pretty good thing to improve public speaking. I won couple of awards too, I won the award for the three-minute

competition and there's this graduate school poster competition. I won and I represented K-State to the state competition. Every year I go to conferences, whenever I started my research, I at least go for one conference a year. I think all this helped in, like professional development, networking people, talking with students from other majors as well. Yes, I think there are a lot of like professional development kind of things, even on campus.

Suggestions on ITA programs

Mia is a model for the other international students and ITAs based on her teaching and learning experiences during these years. She believes the ITA program will benefit all international students, especially ITAs. This group with various cultural backgrounds but with the same academic goal. If they can acquire the relevant training and professional feedback from professionals and international peers, they will be more prepared for teaching undergraduate courses and for their future career.

People will be coming from different parts of the countries and it's nice to have like a seminar, training mostly in public. Talking in front of more than 10 people and to come out of your comfort zone, you know, those kinds of training would be great. And it would be nice to have the zoom teaching workshop to get used to the software. So, you can improve your public speaking, improve your presentation skills, and then that helped a lot, and they also have the profit professional development series.

Summary

In this chapter, data was collected from three participants, including their previous learning or teaching experiences in their home countries and current graduate life in the United States. Three participants will all expect to graduate and receive their Ph.D. degree in May 2022,

and they are in the same phase of doing the research and hunting for jobs either in academia or industry companies.

Data interpretation illustrated that all three participants had similar educational backgrounds and academic goals. They are all in the STEM field and teach fundamental courses or labs for undergraduates. They are fluent English speakers, and they are confident when they teach during the years of practice. However, three of them had similar challenges on English, pedagogy, and American culture at the beginning of teaching. They are diligent students and teachers and continually reflect on their teaching, improving dramatically year after year. However, they all have problems with time management for their research and teaching, especially in the first couple of years of graduate study.

During the COVID-19 pandemic quarantine, all participants needed to prepare the online teaching and learning materials quickly and tried to engage students for online learning. They also felt temporary depression and isolation due to an unpredictable future. They live far away from their family, and the travel policy was straight, so all the social activities were held online and adjusted their mood for teaching and learning.

According to their students' feedback and evaluation, they are qualified teaching assistants and welcomed by their students. Three of them all received assistance from their supervisors on teaching and research. However, they wish to have more teaching training by department or related programs on the campus so that they can easily access the platform with other international students and teaching assistants, which will benefit them to communicate and learn from each other on teaching and learning.

Participants also have different personalities based on their different home country culture, school, and family education. When they came to study in the United States, they had a

different experience in their learning and teaching and living in the new cultural context. So, they also have different opinions on practice teaching methods and the importance of American cultural background in the classroom. The next chapter will discuss the research findings, instruction implications, and recommendations for future research, and the conclusion will be addressed.

Chapter 5 - Discussion

In chapter 4, interview data were presented and analyzed based on the research questions. This chapter, as the last chapter of this research, contains the discussion based on the findings of international teaching assistants' experiences of teaching and learning in universities in the United States. This chapter consists of three sections: (1) discussion of the findings, (2) implications and recommendations for future research, and (3) conclusion. The first section provides the analysis of the findings from the presented data. The second section emphasizes the educational implication on the themes, the limited research area of this study, and the recommendations for future research, followed by the conclusion of this research as the last section.

Discussion of the Findings

This study examined the individual teaching and learning experiences by three international teaching assistant (ITA) participants with two research questions: (1) What are the ITAs' challenges and needs of linguistics, instruction, and culture in the U.S. classroom and (2) What are the effective training strategies for ITAs, and how to be trained professionally. The first research question examined (a) the ITAs' difficulties in teaching, learning, and individual lives under the COVID-19 pandemic. The table below shows the challenges of participants on linguistic, pedagogy, American culture in the U.S. classrooms. It also demonstrates the challenges on adapting different teaching and learning styles, balancing teaching, and learning. Last it illustrates the challenges under the COVID-19 pandemic on teaching and learning, mental health, and social lives.

Table 4. Challenges of research participants. Copyright 2022 by Xinran Wang.

Name	Cora	Chang	Mia
Challenges			
English	Lack of communication competence	Limitations in teaching	NA
Pedagogy	Simplify the teaching language	Unfamiliar with teaching content	Review the course work and grading
American culture	NA	Know the taboo	NA
Adapting different teaching styles	Types of assignments	From big classrooms to small classrooms	Grading system Teaching technology
Study pressure	Balance on teaching and learning	Balance on teaching and learning	Balance on teaching and learning
Under pandemic	Online teaching strategies Double workload Anxiety	Lack of interaction	Lack of interaction Low productivity

RQ 1. What are the ITAs' challenges and needs of linguistics, instruction, and culture in the U.S. classroom?

The findings showed that the participants experienced linguistics, pedagogy, and social-cultural challenges since they started teaching. The primary challenge was linguistics because English was their foreign or second language. Participants needed to apply academic and former English in the classroom to deliver professional knowledge to the undergraduates. Two participants always rehearsed several times before giving the lecture, especially in the first year of teaching. They were highly qualified in their fields of study, but they were afraid of making mistakes in English. They lacked English and teaching training from their supervisors, faculty, and departments. Two participants reached the minimal requirement on TOFEL speaking, and one of the participants passed the SPEAK test from English Language Program (ELP). However,

those language tests are not related to the instructional lecture or presentation. They were not confident to lecture in the first year. Fortunately, all the undergraduates supported them in the class, and they were gradually familiar with the teaching materials, lesson plans, and instruction mode. Even after a few years of teaching, the participants were still learning new vocabularies and knowledge in English every day, and it would be their life-long learning.

The English proficiency of all participants generally was good enough to give a lecture, but it existed the different levels according to participants' academic and life experiences. They all acquired their bachelor's degree in their home counties. However, Mia's undergraduate courses were all in English. She started the formal and academic English study earlier than the other two participants. All her textbooks were in English as well, so she cultivated her English thought in the beginning of her major study. Compared with other two participants, their undergraduate studies were in their first language. Therefore, they needed to transfer the language mode and thoughts when they further their graduate studies in the U.S. Mia also had teaching experiences in her home country after she got her bachelor's degree. She taught students in English as well for six months. So, it was easier for her to teach in American classrooms with her teaching and learning experiences before coming to the U.S.

According to the participants, the differences of educational system and teaching mode existed in the number of students, student-centered and teacher-centered model, teaching technology, and evaluation system aspects. In addition, the education system and teaching mode were different between their home countries and America. They did not realize these differences until they were in the classrooms, and none of them got the specific teaching training before or at the beginning of teaching. Therefore, they needed time to adjust the different teaching modes and

methods in American classrooms. In the meantime, they learned effective teaching strategies in their graduate classes from other professors and applied them in their teaching.

Two participants believed American cultural background was necessary for their teaching; even the course knowledge is related to numbers and formulas. When they made practical examples to explain the bullet points in the classroom, they had to ensure the accuracy and appropriation for those examples when they faced the diverse classroom. One of the participants consistently applied the daily news as a warm-up for each class, so the supplement of American culture and social issues was the critical element in his classroom. As international learners in the U.S., the participants understand the importance of cultural respect and communication, especially in the classroom. They believed the premise of delivering professional knowledge is interaction with students and building a trustworthy relationship with students. Therefore, knowing students' cultural backgrounds helps them succeed in teaching and learning.

All participants are graduate students, so they needed to take courses, research, and teach simultaneously. Three participants all had time management issues, especially in the first couple of years, and they were still learning how to balance teaching and learning. They were all in the last year of major study and the middle of their research, so the work priority turned to research and graduation instead of teaching. They repeated teaching the same courses for several semesters and were familiar with the teaching content. So, they did not need to rehearsal before teaching, instead of reviewing the outline of teaching plans. One of the participants would like to work in academia after she gets the Ph.D. degree because she found her passion in teaching and research. The other participants planned to apply for different jobs in manufacturing, companies,

and academia. They claimed that teaching experience would benefit their future occupations and life-long learning.

1. a. What are the ITAs' difficulties in teaching, learning, and individual lives under the COVID-19 pandemic?

All participants were familiar with the teaching materials and mode before the COVID-19 pandemic was spread worldwide. Like the other professors and instructors, they needed to transfer to online teaching with limited time. According to their interviews, some professors in their departments had challenges transferring to online courses with short notice and limited technical tools at home. It also happened for the ITA group. One of the participants needed to make lecture videos and upload them on the Canvas weekly. She stood on students' perspectives and tried to apply new technology and skills in each video. So, she self-learned video editing from online recourses, which took her four times effort to record the videos. The learning outcomes showed that all her students appreciated her hard work, and they enjoyed learning from her teaching videos.

Another participant's online teaching was difficult because she could not see students' faces, and no one interacted with her in Zoom classes. So, she was not sure if her students were participating behind the cameras. Teaching became inflexible, which was against her teaching philosophy. Fortunately, grading became more convenient and accessible for her since she had utilized the grading platform online, so she kept this grading system until now.

The researcher also taught virtual classes for two semesters, but language classes required students to engage and participate fully. So, it was more challenging for the researchers to teach language online. The researcher created different assignments for students to practice the language. For instance, one of the assignments was welcomed by all students during the

pandemic: individual sessions. The researcher had a 10-minute Zoom talk with individual students biweekly. The content of each session depended on students' personal needs. If they had grammar questions, the researcher would help them work on the grammar patterns. If they did not have questions, they would have a conversation based on the topic of each lesson. According to students' feedback, they even had more learning and practice opportunities and emotional support from the researcher because of an individual session.

Three participants also needed to take their major courses during the pandemic. Even though they were not motivated by online learning, they found the different online teaching methods and tools from other professors, which could be applied in their online teaching. One of the participants even purchased extra online courses to collect thoughts and ideas for his research and teaching. All participants had been through the depression for a certain period during the pandemic, and it was hard to travel back home. So, they participated in virtual activities with family, friends, and other international students to keep socializing with people. One participant participated in the virtual daily study group to concentrate on his study with supervision.

RQ 2. What are the effective training strategies for ITAs, and how to be trained professionally?

Table 5. Training strategies and suggestions from research participants. Copyright 2022 by Xinran Wang

Name	Cora	Chang	Mia
Training Strategies			
Assistances from supervisor	Weekly meetings Co-design assignments, quizzes, and exams	Weekly meetings Discuss on teaching procedures, assignments	Weekly meetings Discuss on teaching procedures, assignments
Professional development	Workshops Seminars National conferences	Workshops on campus	Workshops Seminars National conferences

Reflection on teaching	Activity-based More interaction	Improve English and teaching Knowing students	Observe students More interaction
Necessity of ITA program	Practice public speaking skills Support for ITAs	Platform for international students Online training	Sharing teaching and learning experiences Online training

None of the participants got specific teaching training at the beginning of teaching. However, their supervisors supported them and guided them to be familiar with teaching content. They meet with their supervisors weekly to discuss the lesson plans and assessments. Meanwhile, their supervisors observed their classes several times in the first semester and commented on teaching. In Mia's department, all teaching assistants got the opportunity to observe each other's classes and learn from each other. However, they did not receive specific teaching training from their departments and university.

Self-learning was a significant element in participants' graduate teaching and learning life with limited resources. They all believed in the importance of English speaking in the classroom, so individual participants had different strategies to practice English and train their speaking skills. Chang focused on reading and listening to daily news, and he believed it helped him in both language and cultural background. He also applied the daily news as the warm-up in his class to lead the teaching content; Cora and Mia were socialized and actively participated in various activities and events organized by the university, which helped them meet other international and American students and communicate with them. They tried to create a language environment and forced them to think and talk in English. All participants were engaged in their professional development, which benefited their research and teaching career. For instance, attending the seminars, presenting in the conferences, and participating in competitions. They

maximized the practice opportunities for public speaking and presenting in their second language.

However, they still had challenges with teaching after teaching for several years. According to Cora, the primary challenge is to stand in students' perspectives in the classrooms. Compared with her students, she was an expert for the class content, so she went through knowledge points fast naturally while her students might not catch up with her. The same situation happened in Mia's class as well. So, they needed to observe students' learning outcomes during the lecture constantly. Then, they asked related questions to check students' understanding of the new concepts or formulas.

All participants were thrilled about hypothesis ITA programs or courses. They claimed that the path of research and teaching was lonely, and they did not realize the number of ITAs had the same challenges in other departments. They believed the ITA program would be an excellent platform for all ITAs to communicate and exchange teaching ideas and do research, which would give them a sense of belonging in the university. Cora suggested that group presentations and peer evaluation would benefit ITAs prepared for the teaching. Peer evaluation was also the brainstorming for suggestions and advice on teaching methods instead of the traditional score system. Chang suggested that ITAs with experiences would demonstrate their classes to other ITAs, primarily first-year ITAs. In this way, new ITAs would be mentally prepared for their teaching. All participants had time-management issues, and it was difficult for them to balance teaching and learning until now. Therefore, they needed suggestions for time-management strategies as graduate students and ITAs. Cultural adjustment can be considered in the training program to help ITAs adjust the cultural differences in academic and daily lives. The hypothesis ITA courses also attracted all the participants. They believed they needed language

and pedagogy training which was significant in the first year of teaching. Nevertheless, they preferred to take a selective course instead of a mandatory one with less pressure but more flexibility.

The researcher believed English and pedagogy training would benefit the new ITAs while the career advising should also take an essential role for experienced ITAs in the programs. All participants in this research were in their last year of study and research, and they faced to graduate, job hunting, and career choice, which was even more challenging than graduate study. Because of their identities, they have limited job options if they decide to stay in the U.S. The career advising for international graduate students would prepare them for career planning and development before they graduate.

Implications and Recommendations for Future Research

Areas to Improve the Research

The research method was a narrative inquiry, and the researcher listened to participants' academic and life stories, then summarized the research findings. Even though three participants were from different countries and departments, their teaching and learning experiences were unique and different. Some of their experiences would be conducive for ITAs, while some were subjective due to different personalities, backgrounds, and experiences, which cannot represent and is generalizable for the ITA community. The limited number of participants limited the generality of the findings of this study. Quantitative research methods will validate the research results.

Another limitation is the English proficiency of the researcher and the participants. The researcher and participants communicated in English, their second or foreign language. It increased the risks of misunderstanding and affected the data accuracy. If they could

communicate and answer the research question in their native language, the research outcomes would be more incisive. The researcher and all participants shared similar lived experiences. One of the participants is Chinese, the same as the researcher. All the interview questions were related to the researcher's teaching and learning experience, which might affect the researcher's bias in this study. However, the participants provided feedback on the study results, and the peer review was conducted throughout the entire research, reducing the validation risk.

Educational Implications

This research is significant to draw attention to the ITA group in higher education. ITAs make an outstanding contribution to U.S. higher education. They bring diversity to the campus, inspire creativity, and drive innovation in teaching and research. In the classroom, they help students cultivate their cross-cultural awareness. Notably, many ITAs will continue to work in academia after they graduate. Therefore, it is necessary for faculty, departments, and universities to support ITAs to overcome their difficulties and challenges. The study explored the methods to help the ITA community in different aspects: English proficiency, communication capacity, pedagogical strategies, balancing teaching and learning, and setting the professional development platform. All the suggestions and thoughts from participants in this study can be applied to the particular program or course in the future.

The research findings summarized the ITAs' challenges and needs on teaching and learning and even explored the social-cultural difficulties of living in the U.S. It emphasized the development aspects of linguistic, pedagogy, academic pressure, and social culture for ITAs and illustrated the outlines and direction for ITA groups and institutions. The research results proposed the suggestions and ideas for hypothesis ITA program and courses, which would be befitting for both ITAs and universities, and contributed to ITA classrooms. Notably, the

research demonstrated the new challenges for ITAs under the COVID-19 pandemic and how they struggled by studying, teaching, and living abroad. Then they gradually adapted the virtual teaching and learning and applied the advantages of online teaching to an in-person class.

The findings showed participants' learning process and life journey when they faced external and internal challenges in different learning environments. It demonstrated different perspectives of overseas study situations and encouraged and supported professional development for all international students. ITAs can be the model for other international students in the U.S. because of their diligent work, self-discipline, and life planning.

Suggestions for Future Research

To expand the generalizability of research results, the researchers can study ITAs from different institutions and departments to expand the sample size for the studies. The mixed quantitative and qualitative research methods will provide a more comprehensive analysis of ITAs' experience differences with undergraduates in the U.S. context. Future research can apply classroom observation as one of the research approaches to collect first-person data. So more comprehensive analysis of the student-teacher relationship, interactions, and classroom activities would be utilized in the study. According to the research findings in this study, the different instruction settings had different characteristics, and it also influenced ITAs' pedagogy strategies and teaching outcomes. For instance, lecture and lab sessions are different, and the size of the instruction settings also matters. ITAs have different interactions and classroom activities in different teaching settings. In addition, the subjects' differences require different skills in the classrooms. This study focused on the ITAs in STEM majors instead of the humanities. So, this study calls for researchers to study ITAs in both science and arts fields and analyze the different needs and challenges for ITAs in different fields.

Besides the language and social-culture perspectives, future research can always explore the different variables like L1 cultural background, personalities, and previous language learning experiences or dig the depth on the current research studies with different angles of the view. For example, the transition of ITAs and international faculties: the international faculties also need attention in higher education. Most of them have ITA experiences when they pursue their Ph.D. degrees. They bring diversity to higher education and American society, and they will be the model for all international students. Second, building the interaction between ITAs, international faculties, and American undergraduates, cultivating their cross-cultural awareness in the classrooms. Third, influences on international students and ITAs by COVID-19. For the educational administration and leadership, the researcher can discover the improvement on ITA program and courses, aiming to practice leadership and management skills in the classrooms. With the increase of international students after the pandemic and the importance of the American higher education system, ITAs deserve continuing scholarly attention.

Conclusion

This study explored the teaching and learning needs and challenges of ITAs in American university classrooms by interviewing the individual participant. The research applied the Giddens (1984) Structuration Theory and studied the human agency (higher education institutions, departments) and the social structures (rules and norms in teaching settings) for the ITA group. Except for paying attention to the social structures (classrooms or labs), the interaction between undergraduates and ITAs is also valued for effective teaching. Giddens (1984) Structuration Theory emphasized the importance of language in teaching settings: the rules of language skills, social interaction, and practical communication with students. Most ITAs are familiar with the language rules but lack pragmatics knowledge, which requires

practice and training before teaching. The second theory of this study is novice teacher learning, which can be applied to most ITAs who do not have previous teaching experiences. Therefore, the first couple of years of teaching requires professional training and self-learning and are time-consuming. The research data showed a similar learning process from each participant; for instance, they all get teaching assistants from their supervisors, reflect on their teaching and practice English and teaching skills every day to improve pedagogy methods.

The research data were summarized by the similarities and differences of ITAs' teaching challenges and linguistic, pedagogy, academic pressure, and social culture. In addition, the research focused on ITA participants' professional training experiences and collected their thoughts and suggestions on the ITA training program and course. The participants and the researcher all believed in the necessity of the ITA programs or courses, which would set a platform for ITAs to communicate and learn from each other and help them improve different skills and knowledge effectively. According to ITA participants' lived experiences and personal stories, this study discovered some professional training methods to improve linguistic, pedagogy, and sociocultural strategies in university classrooms in the U.S. and encouraged other researchers to study different variables and dig into the depth of ITA community.

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Appendix A - IRB



TO: F Goodson
Curriculum and Instruction
Manhattan, KS 66506
Proposal Number IRB-10841

FROM: Rick Scheidt, Chair
Committee on Research Involving Human Subjects

DATE: 09/24/2021

RE: Approval of Proposal Entitled, "The Needs and Challenges on Teaching and Culture of International Teaching Assistants (ITAs) in the U.S. Classroom and The Effective and Professional Training Strategies for ITAs."

The Committee on Research Involving Human Subjects has reviewed your proposal and has granted full approval. This proposal is **approved for three years from the date of this correspondence.**

APPROVAL DATE: 09/24/2021

EXPIRATION DATE: 09/23/2024

In giving its approval, the Committee has determined that:

No more than minimal risk to subjects

This approval applies only to the proposal currently on file as written. Any change or modification affecting human subjects must be approved by the IRB prior to implementation. All approved proposals are subject to continuing review, which may include the examination of records connected with the project. Announced post-approval monitoring may be performed during the course of this approval period by URCO staff. Injuries, unanticipated problems or adverse events involving risk to subjects or to others must be reported immediately to the Chair of the IRB and / or the URCO.

Electronically signed by Rick Scheidt on 09/24/2021 4:38 PM ET

Appendix B - Consent-to-Participate Letter



Institutional Review Board (IRB)

Informed Consent Form

comply@k-state.edu | 785-532-3224

PROJECT TITLE:

The Needs and Challenges on Teaching and Culture of International Teaching Assistants (ITAs) in the U.S. Classroom and The Effective and Professional Training Strategies for ITAs

PROJECT APPROVAL
DATE:

8/25/2021

PROJECT EXPIRATION
DATE:

5/2022

LENGTH OF
STUDY:

3-6
months

PRINCIPAL INVESTIGATOR: Dr. F. Todd Goodson

CO-INVESTIGATOR(S): Xinran Wang

CONTACT DETAILS FOR PROBLEMS/QUESTIONS: Xinran Wang, xinran@ksu.edu, (785) 770-5168

IRB CHAIR CONTACT INFORMATION: Rick Scheidt, rscheidt@ksu.edu, (785) 532-3224
Cheryl Doerr, cdoerr@ksu.edu, (785) 532-3224

PURPOSE OF THE RESEARCH:

This research aims to explore the needs and challenges of ITAs in American university classrooms. ITAs with different cultural backgrounds have various dilemmas in either communication capacity or the differences of education systems between home countries and the U.S. Besides, they may struggle with some difficulties in other perspectives, which the researcher has not considered. This study will also focus on ITA participants' professional training experiences and collect their thoughts and suggestions on the ITA training program. According to the interviews with several ITA participants from different departments at Kansas State University. The study will summarize the similarities and differences of ITAs' teaching needs and difficulties and try to find a way to support them on linguistic, pedagogy, and social-cultural aspects. Based on ITAs' narratives and their suggestions, this study will discover some professional training methods to improve ITAs' linguistic, pedagogy, and sociocultural strategies in the classroom.

PROCEDURES OR METHODS TO BE USED:

This study consists of three interviews administered to ITA participants on campus. You will be interviewed at least three times: (1) your life story: education background in participant's home country, academic life in the U.S. higher education, choice-making, and plans for the future (2) what are your challenges and needs of linguistics, instruction, and culture in the U.S. classroom before and under the COVID-19 pandemic, and (3) what are your suggestions for the practical training strategies and how to be trained professionally. Data will be collected through interviews and field notes from casual conversations with me. You will be contacted if the fourth interview is needed for any follow-up questions.

RISKS OR DISCOMFORTS ANTICIPATED:

1. English proficiency might affect data accuracy.
2. Researcher has similar lived ITA experiences, which might affect the bias of the researcher.
3. Some interview questions (related to students' TEVAL evaluation) might be sensitive.

BENEFITS ANTICIPATED:

The study will summarize the similarities and differences of ITA participants' needs and try to find a way to support you on linguistic, pedagogy, and social-cultural aspects. According to the interviews with each of you from different departments, your narratives, and suggestions, this research tries to find some professional training methods to improve your linguistic, pedagogy, and sociocultural strategies in the classroom.

EXTENT OF CONFIDENTIALITY:

Interviews will be audio-taped and transcribed. Interview transcripts will be sent to you for review, and you are free to make any appropriate changes as needed. Recording files and interview transcripts will be safely stored on a computer with a password only accessible to the researcher. Field notes will be destroyed after they are converted into PDF files and stored with the recording files. Three years after completing this study, all data will be destroyed unless you agree to allow the researcher to keep them for further research or publication purposes.

The researcher will share the findings with you after the research is completed. You may view the final version of the dissertation and ask questions. Your names will not be revealed in research findings, and the identity as a participant will be known only to the researcher. Pseudonyms will be used when data and findings are presented. If the findings are submitted for publication or presented for conferences, your identity will be kept confidential.

The information or biospecimens that will be collected as part of this research could be used for future research studies or distributed to other investigators for future research studies without additional informed consent.

Terms of participation: I understand this project is research, and that my participation is voluntary. I also understand that if I decide to participate in this study, I may withdraw my consent at any time, and stop participating at any time without explanation, penalty, or loss of benefits, or academic standing to which I may otherwise be entitled.

I verify that my signature below indicates that I have read and understand this consent form, and willingly agree to participate in this study under the terms described, and that my signature acknowledges that I have received a signed and dated copy of this consent form.

(Remember that it is a requirement for the P.I. to maintain a signed and dated copy of the same consent form signed and kept by the participant).

PARTICIPANT NAME:			
PARTICIPANT SIGNATURE:		DATE:	
WITNESS TO SIGNATURE: (PROJECT STAFF)		DATE:	

Appendix C - Frist Interview Questions

Time of interview:

Date:

Place:

Interviewer:

Time taken:

First interview: Demographic information and personal life and academic story

Biography of the participants:

1. Country of birth:
2. Age:
3. Language(s) spoken:
4. Length of time in the United States:
5. Length of time at current university:
6. Degree and major:
7. Anticipated date of degree completion:
8. Type of teaching assistantship:
9. Length of time of being an international teaching assistant:
10. An approximate number of students in the class:
11. Basic teaching tasks:
12. Preferred field for career:
13. Preferred location for career:

Interview Questions: Personal Life and academic story

1. Please introduce your hometown and your family.
2. How was your study experience in your home country? How did you spend your elementary, middle, and high school, even undergraduate years?
3. What made you think about coming to the United States to study?
4. What was your biggest expectation of studying in the United States?
5. Why did you choose the current major?
6. What is your plan for higher education in the United States?
7. Why do you like teaching?
8. Which do you prefer? Teaching or research? And why?
9. Have you had teaching experience back home? If you have, what are the differences between your previous and current teaching experiences?
10. Are you satisfied with your life in the United States? Why?
11. What is your plan after graduation?

Appendix D - Second Interview Questions

Time of interview:

Date:

Place:

Interviewer:

Time taken:

Second interview: Research Question 1. What are the ITAs' challenges and needs of linguistics, instruction, and culture in the U.S. classroom?

1. How do you become a graduate teaching assistant?
2. Is it difficult for you to get the teaching assistant (TA) position? How was the process of getting TA position?
3. How do you notice differences between you and domestic TAs?
4. How do you balance your major study and teaching?
5. What do you think of your English level? Does English influence your teaching in the class?
6. Do you like the current curriculum? Do you notice any issues in current curriculum?
7. How do you prepare your teaching plan?
8. What do you think of your students' attitude in your class?
9. What are the students' evaluations for you? Do you think the students' evaluation is fair?
10. Have you gotten any assistance on teaching from your supervisor, department, or others?
11. How often do you communicate with your supervisor about the teaching schedule?
12. What is your primary challenge of teaching now? Why?
13. Please tell me about the unforgettable experience in your class, either positive or negative.
14. Did you notice any differences in teaching compared with your home country and the United States? Please tell me the details of those differences.
15. Did you have any cultural shock when you started teaching in the United States?
16. Do you need American cultural background knowledge in your teaching? Do you think it is important or not in your class?
17. Which aspect of teaching do you need to work on in the future?
18. What do you learn from your teaching experience?
19. Do you think you are a great instructor? Why or why not?
20. Will you choose to teach after graduation?

Research Question 1-a: What are the ITAs' difficulties in teaching, learning, and individual lives under the COVID-19 pandemic?

21. What are the changes in teaching and learning during the COVID-19 pandemic?
22. What do you think of online teaching? Do you like online teaching? Why or why not?
23. Were your students motivated in remote learning? How did you keep students' learning motivation online?
24. Do you need to take online classes for your major? If so, how were they? Do you get any online teaching inspiration from other professors or instructors?
25. Do you have any difficulties with remote teaching and learning?
26. What do you learn from online teaching and learning experience?

27. How do you socialize during the pandemic?
28. Do you have any depression during the pandemic?
29. Were you active in participating in online events?
30. How long haven't you traveled back home?

Appendix E - Third Interview Questions

Time of interview:

Date:

Place:

Interviewer:

Time taken:

Third interview: Research Question 2. What are the effective training strategies for ITAs, and how to be trained professionally?

1. Have you ever acquired any professional training from your department, graduate school, or somewhere else before becoming an International Teaching Assistant (ITA)? How was that?
2. How was your experience of taking SPEAK test from English Language Department (ELP)? What do you think of this assessment?
3. How was your teaching method in the beginning? How about now? Do you make any changes of your teaching method and strategies?
4. What is your teaching philosophy in general?
5. Do you think it is necessary to be trained before becoming an ITA? Why or why not?
6. How do you do to improve your professional development?
7. How often do you attend the conference? Please talk about the most impressive conference experience and what did you learn from it?
8. What type of assistance do you need most for teaching? English, instruction, cultural background knowledge, or the others?
9. What do you think of necessity of participating in the ITA seminar?
10. What's your idea for the hypothetical ITA program? Any suggestions?
11. Do you think it is necessary to be trained before transferring to online classes? Why or why not?
12. Did you get any assistance from your department for transferring courses online? If so, how was it?
13. Were you familiar with Zoom before the pandemic? How about now?
14. Do you have any suggestions for the other ITAs according to your experiences?