Facebook and WeChat: Chinese International Students' Social Media Usage and How It Influences Their Intercultural Adaptation

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FACEBOOK AND WECHAT: CHINESE INTERNATIONAL STUDENTS' SOCIAL
MEDIA USAGE AND HOW IT INFLUENCES THEIR PROCESS OF
INTERCULTURAL ADAPTATION

by

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ABSTRACT
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This study examines how Chinese international students' Facebook and WeChat usage patterns influence their process of intercultural adaptation. It shows that Facebook (the host social media) and WeChat (the ethnic social media) usage both have positive impacts on Chinese international students' successful adaptation (especially their psychological adaptation) to the United States.

This study also takes additional variables of interest: host language proficiency, ethnic identity, and the intention to stay in the United States (the host country) into consideration. Consistent with previous studies, host language proficiency has positive influences on Chinese international students' sociocultural adaptation, and ethnic identity is a critical component for these students' psychological well-being. The results also expand previous research's findings. Besides a positive relationship with sociocultural adaptation, host language proficiency also has positive impacts on Chinese international students' psychological well-being. Chinese international students who have higher levels of host language proficiency (English proficiency) are more psychologically adaptive to American society. Likewise, this study's results reveal that ethnic identity not only can facilitate Chinese international students' psychological adaptation, but it can also help these students deal with behavioral and cognitive difficulties during the process of sociocultural adaptation. Chinese international students' age has a negative relationship with their social adaptation and has a positive relationship with their physical adaptation. Their length of residence in the United States also has a negative relationship with their physical adaptation.

This study's findings could help universities and colleges facilitate international students' successful adaptation to their new country of residence, which in turn, could enhance the possibilities of success in recruitment and retention of international students for these universities and colleges and improve the diversity of their student population.

Keywords: Intercultural adaptation, Mainland Chinese international students, Social media usage (Facebook and WeChat).

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Background of the Study

Each year students travel abroad to pursue their education. This is a global phenomenon. However, the sudden change and disruption in daily life make living in a foreign country a tough task for international students. As temporary immigrants, international students experience changes which can become physical and psychological stressors (Furnham & Bochner, 1986). Furthermore, sociocultural adjustment difficulties and psychological distress can negatively influence international students' adaptation to the new host country's culture and their identification with their own country's culture (Wang & Mallinckrod, 2006). Moving from one sociocultural system to another, international students not only need to adapt to changes created by cultural gaps, but they also need to take actions to shift their entertainment usage (Stephenson, 2000) and interpersonal relationships in everyday life. This process of changing previous routines of daily life and communication patterns to adapt to the host country's sociocultural environment, is referred to as intercultural adaptation (Sawyer & Chen, 2012).

Communication plays an important role in facilitating immigrants' adaptation to the host society. Among many forms of human communication, interpersonal communication and mass media consumption are the two most crucial factors influencing the cultural adaptation process (Kim, 1977). Immigrants can get social support and useful information from these two types of communication. Nowadays, social media blurs the line between interpersonal communication and mass media consumption (Ye, 2005). Empirical studies like the current study which examines how Facebook and WeChat

influences the intercultural adaptation of Chinese international students in the U.S., are

needed to figure out the role social media usage plays in the international students'

intercultural adaptation process.

Statement of the Problem

The U.S. is a popular country of study for a lot of international students and

particularly for Chinese students. According to the Institute of International Education's

Open Doors Report (2017), Chinese students represent 32.5% of all international students

studying in the United States and China has been the primary country of origin for a large

number of international students studying in the United States for the past five years

(Institute of International Education, 2016). However, multiple studies show that Chinese

students are often the least adjusted group among all international students, due to their

high level of stress, neuroticism, and perceived cultural distance (Galchenko et al., 2007;

Hazen et al., 2006). Large numbers of Chinese international students in the United States

struggle to adapt to new cultural customs and norms (Yan & Berliner, 2013). Several

studies (Han et al., 2013; Li et al., 2013) suggest that there is a substantial likelihood for

Chinese international students to develop mental health problems during the intercultural

adaptation process. The results from Wang's (2012) study found that over 20% of

Chinese international students in the U.S. remained "consistently distressed" or "culture-

shocked" (p. 430), after they spent three semesters in the U.S. Given the magnitude of the

problem, it is essential to understand what factors contribute to Chinese international

students' intercultural adaptation process and how these factors work.

The connection between communication and intercultural adaptation has been

long accepted by scholars. The roles of interpersonal communication and traditional mass

media in facilitating intercultural adaptation have been explored by several researchers (Ryu, 1976; Ziegler, 1983; Shah, 1991). However, the role of the Internet and social media platforms in influencing intercultural adaptation has not been as thoroughly examined. Studying the connection between the usage of the Internet in general and intercultural adaptation, Chen (2010) suggested that "acting as a platform for information retrieval and a vehicle of communication, the Internet has the potential of enhancing interpersonal relationships and information 'richness,' hence facilitating the adaptation of immigrants." However, in comparison to the general Internet-based applications such as those examined in Chen's study, social media platforms more strongly emphasize "the creation and exchange of User Generated Content" (Kaplan & Haenlein, p. 61, 2010). In this user-oriented social media environment, users' interactions with other users on social media platforms can affect their interpersonal relationships and information retrieval. For example, compared to the communication on Chinese social media, communication on American social media may reflect different sociocultural values to Chinese international students, and have different effects on their process of intercultural adaptation.

Besides the magnitude of behavioral, cognitive and affective difficulties Chinese international students experience during their process of adaptation and the lack of research on the relationship between social media usage and intercultural adaptation, there is another reason for researchers to study Chinese international students in the United States: their bi-dimensional online behaviors which might be because of the Chinese government's internet censorship. Chinese government's internet censorship lays the foundation for the potential distinctions between American and Chinese social media's effects. "Chinese Internet censorship includes two types of measures: content

censorship over domestic websites, and access blockage targeting websites outside the state's jurisdiction" (Taneja & Wu, 2014, p. 4). In past years, millions of Chinese netizens could access any website by using virtual private networks (VPNs). However, the Chinese government ordered China's three telecommunications companies to completely block access to VPNs by February 2018 (the Guardian, 2017), which means that most American websites and social media platforms would be completely blocked in the mainland of China after that date. Growing up in a society where direct access to the global internet is blocked, Chinese international students do not have the same kind of experience with American websites and social media platforms that their other international counterparts have when they come to the U.S. Further, Chinese international students cannot use American social media platforms to contact their family and friends in China when they live in the United States. This lack of overlap between American social media and Chinese social media caused by censorship can result in bi-dimensional online behaviors among Chinese international students. They need to use American social media platforms to build new interpersonal relations and retrieve American sociocultural information while living in the United States. At the same time, they also need to use Chinese social media platforms to maintain their interpersonal relationships with people in the mainland of China and obtain Chinese sociocultural information.

For Chinese international students in the United States, developing and maintaining competence in both host and ethnic cultural contexts requires different types of cultural knowledge, positive attitudes toward both groups' members who have different value systems, self-efficacy for competency in both cultural contexts, proficiencies of language (English and Chinese) and nonverbal patterns, knowledge of

the appropriate behaviors in different cultural groups and occasions, and the skills of establishing social networks (LaFromboise et al., 1993). These factors can influence Chinese international students' communication in both host and ethnic cultural contexts and affect their process of intercultural adaptation. Effects of these factors have not been thoroughly examined in the social media environment and empirical studies are needed to examine the extent of these factors' impacts, which is a goal of this thesis.

Preview of the Thesis

Facebook is the dominant social media platform in the United States, and WeChat is the most important social media platform in the mainland of China. Compared to usage number of other platforms, Chinese international students' Facebook and WeChat usage are particularly significant. With over two billion monthly active users, Facebook is the most popular social media platform worldwide (Statista, 2018). In the United States, "roughly two-thirds of U.S. adults (68%) now report that they are Facebook users, and roughly three-quarters of those users access Facebook on a daily basis" (Pew Research, 2018). Also, WeChat is the most prominent social media platform in the mainland of China (Kantar, 2017). According to the report from Statista (2018), the number of currently active users of WeChat has reached 980 million. Besides the fact that both Facebook and WeChat have a strong presence of Facebook in the United States and WeChat in the mainland of China, Facebook and WeChat also have similar informational and communicational functions. These similarities make the two social media platforms suitable choices for this study comparing Chinese international students' host (American) and ethnic (Chinese) social media usage and further analyzing how this Facebook and WeChat usage influences their process of intercultural adaptation.

Intercultural adaptation is a multi-dimensional concept which can be divided into *sociocultural* and *psychological* adaptation (Ward & Kennedy, 1999). Based on empirical research, Ward and Kennedy argued that these "two adjustive outcomes, though inter-related, are conceptually and empirically distinct" (Ward et al., 1999, p660). The levels of individuals' sociocultural adaptation are based on their "behavioral competence" (Ward et al., 1999, p661), which can be influenced by factors, such as individuals' residence length in the host country, knowledge about the host culture, "amount of interaction and identification with host nationals" (Ward et al., 1999, p661), cultural differences between the host and ethnic culture, language proficiency, and cross-cultural adaptation strategies (Searle & Ward, 1990; Ward & Kennedy, 1993a, 1994; Ward & Searle, 1991). The evaluation of psychological adaptation is based on individuals' psychological well-being and their satisfaction with their life in the host country. Personality traits, changes in daily life, coping strategies and the social support individuals received (Ward et al., 1999) are the factors which can influence individuals' psychological adaptation. This study posits that the American social media platform, Facebook and the Chinese social media platform, WeChat provide different information sharing experiences and social support networks for international students and influence the process of their intercultural adaptation which is reflected through their sociocultural and psychological adaptation experience.

Further, host language proficiency (English proficiency) is a prerequisite for effective communication in the United States, for Chinese international students. According to Bennett, Bennett and Allen (2003), there is a connection between the host language proficiency levels and individuals' competence in intercultural adaptation.

Scholars have consistently concluded that host language proficiency has positive impacts on immigrants' process of intercultural adaptation (Berry et al., 2006; Yu & Shen, 2012; Zimmermann, 1995). Bennett et al. (2003) claimed that people with a higher level of the host language proficiency tend to be more adaptive to the host country's sociocultural environment. However, the overall magnitude of the association between the host language proficiency and intercultural adaptation (sociocultural and psychological adaptation) has remained unclear. Previous studies (e.g., Miglietta & Tartaglia, 2009; Meng et al., 2017) treat the host language proficiency as a competence or a skill which is closely related to sociocultural adaptation. Its effects on immigrants' psychological adaptation are less known. Also, the relationship between the host language proficiency and intercultural adaptation hasn't been thoroughly examined in the digital media environment. This study can expand extant research's findings on the relationship between host language proficiency and intercultural adaptation.

Besides the effects on intercultural adaptation, the host language proficiency is closely related to acculturating individuals' preferences for media consumption (Ryu, 1976). Immigrants prefer to choose the language they are familiar with. Due to the sociocultural characteristics of the contacts and the nature of the communication flow in American and Chinese social media, Chinese international students more frequently use English on American social media and constantly use Chinese on Chinese social media. As temporary immigrants, Chinese international students' host language proficiency (English proficiency) can influence their preference between the host social media and the ethnic social media. The proficiency of the host country's official language is thus an essential factor which needs to be considered when examining the host social media

usage and the ethnic social media usage's impacts on Chinese international students' intercultural adaptation.

Other than host language proficiency, ethnic identity also plays a vital role in individuals' successful life adaptation. Previous research (Phinney, 1989; Phinney et al., 1997; Roberts et al., 1999; Ong et al., 2006) indicates that ethnic identity is closely related to individuals' psychological well-being. Ethnic identity is "an individual's self-concept that derives from his or her knowledge of membership in a social group (or groups) together with the value and emotional significance attached to that membership" (Phinney, 1992, p156). Unlike ethnicity (the objective group membership which is defined by individuals' parents' ethnic heritage) (Phinney, 1992), individuals' ethnic identity is continuously changing based on their development in different sociocultural contexts (Phinney, 2003; Atkinson et al., 1983; Parham & Helms, 1985; Weinreich, 1988). Existing research (Phinney, 2003) emphasizes how sociocultural contexts influence the formation of individuals' ethnic identity, and how a strong ethnic identity could decrease the negative psychological effects of the discrimination and inferiority experienced by immigrants. The relationship between ethnic identity and sociocultural adaptation however are rarely examined. The current study measures the overall magnitude of the relationship between ethnic identity and intercultural adaptation (sociocultural and psychological adaptation) to provide a more comprehensive understanding of it.

For minority groups, such as Chinese international students, an individual's subjective sense of belonging to a group or culture is likely to have important implications (Berry, Trimble, & Olmedo, 1986). Besides influencing Chinese

international students' intercultural adaptation in the United States, ethnic identity could also impact Chinese international students' interpersonal relationships and the kind of social values and customs they prefer to adopt. Major functions of social media are building interpersonal relationships and retrieving information. Thus, Chinese international students' ethnic identity could influence their usage of the host social media and the ethnic social media. It is therefore essential to take Chinese international students' ethnic identity's effects into consideration when examining the relationships between their social media usage and intercultural adaptation.

Research Goals

Analyzing Chinese international students' social media usage (Facebook and WeChat) and the sociocultural and psychological adaptation could help university campuses and faculty gain insight and help Chinese students (and other international students), successfully adapt to their new country of residence. The growing influx of international students reflects our fast-changing globalized world. With changes in demographics, however, it is inevitable for different cultural norms and values to emerge and potentially cause tension (Allen, 1995; Henderson, 1992). This study examines the relationships between Chinese international students' Facebook usage and WeChat usage and their sociocultural adaptation and psychological adaptation process in the U.S and offers insights that could help international students successfully adapt to their new country of residence. Understanding sociocultural and psychological adaptation could also help universities and colleges successfully recruit and retain international students and improve the diversity of their student population. Past research also documents that

diversity could help students define themselves in relation to others, experiment with different roles, and begin to make permanent commitments to careers, social groups and personal relationships (Bowen, 1999; Gurin, 1999). Further, diversity in institutions and universities could promote diversity in the rest of society (Jones, 2000; Rosser, 1990, p224), also a broader goal of this study.

Chapter Two: Literature Review and Research Questions

According to the UNESCO Institute for Statistics' (UIS) Global Education Digest (2006), the term 'international student' is defined by citizenship. In America, international students are defined as temporary immigrants who are enrolled at higher educational institutions. According to the data from Institute of International Education (2017), there are 1,078,822 international students who studied at U.S. colleges and universities in 2016/2017. Both opportunities and challenges exist for educational institutions and international students. For educational institutions, the increased enrollment of international students could promote the internationalization of their education and generate financial revenue. However, many educational institutions face challenges in providing enough support and resources to meet international students' needs (Bista, 2016). For international students, experiences of studying in the United States can increase their global competence (Koziol et al., 2011). However, during the process of developing global competence and adapting to host societies, international students need to face challenges from the sociocultural, psychological and behavioral changes encountered by them in the host country. At the same time, these changes can generate acculturative stress (Berry, 2003), which in turn could affect international students' physical and psychological well-being (Glass & Bieber, 1997). Among all international students, multiple studies (Galchenko et al., 2007; Hazen et al., 2006) show that Chinese students are often the least adjusted group, due to their high level of stress, neuroticism, and perceived cultural distance.

Chinese International Students' Acculturative Stressors

In the past decade, China has ranked either as the first or second place of origin of international students in the United States (Institute for International Education 2005/06 to 2015/16). Chinese international students are the primary student population for the American postsecondary educational system (Bertram et al., 2014). However, Chinese international students in the United States experience a higher level of acculturative stress, compared to international students from other ethnic groups (Yeh and Inose, 2003). According to previous research (Pedersen, 1991; Sandhu & Asrabadi, 1994; Yeh & Inose, 2003), academic pressures, language barriers, difficulties in adjusting to sociocultural values, lack of social support, homesickness, perceived discrimination and feelings of inferiority are the main sources of Chinese international students' acculturative stress. Cultural differences between American and Chinese culture can heighten these factors' effects.

For example, gaps between American and Chinese culture can increase Chinese international students' academic performance pressure, and heighten their acculturative stress. One cultural dimension from Hofstede's (1984) list of six cultural dimensions, which particularly applies to the Chinese students' adaptation experience and can act as a stressor is the *Individualism* dimension. Chinese culture is more collectivistic (with an individualism score of 20) compared to American culture (with an individualism score of 91), Chinese international students were taught for example, to "maintain a respectful and attentive silence in Chinese classroom" (Bertram et al., 2014, p108). Harmony and discipline are encouraged in the Chinese classroom, in contrast, American professors and teachers encourage and require active participation in classrooms and individual participation is emphasized.

The difference in the *Individualism* dimension between American culture and Chinese can impact individuals' communication style as well (Gudykunst & Ting-Toomey, 1988). Based on the how much knowledge is required for individuals to participate in interactions, communication styles can be categorized into: low-context communication and high-context communication. Compared to high-context communication, low-context communication is more direct and explicit. Individualism is more likely to foster low-context communication, implying that direct and explicit communication might be more prevalent in American culture. Chinese cultural which is less individualistic (more collectivistic), could however lead to more indirect and less explicit communication. Chinese international students who grew up in China amidst a high-context communication environment would need to learn how to directly and explicitly communicate with others, in order to become effective and efficient communicators in the United States.

Chinese international students would also need to change their behaviors to adapt to these kinds of academic and communication differences. During the behavioral adjustment process, Chinese international students might experience high levels of uncertainty, avoidance (Wang & Mallinckrodt, 2006) and anxiety. This finding is consistent with previous research. Lee, Lei and Sue's (2001) study investigates the anxiety level in different college student groups, and their findings indicate that Asian American group members have higher anxiety levels than the Caucasian American group members, due to their different levels of familiarity toward the American sociocultural contexts.

Collectivistic culture also impacts how Chinese international students respond and deal with their acculturative stress. Several studies (Wei et al., 2007; Zhang & Dixon, 2003) indicate that, to keep the harmony within the social group, Chinese international students tend to ignore and internalize their acculturative stress and emotional difficulties. At the same time, they prefer to handle problems through their own willpower (Mortenson, 2006). Unfortunately, empirical research (Wei et al., 2007) suggests that internalizing acculturative stress and emotional difficulties may increase Chinese international students' vulnerabilities to psychological problems, such as depression. The results from Wang's (2012) study reveal that more than 20% of Chinese international students in the U.S. are "consistently distressed" or "culture-shocked" (p. 430) after having spent three semesters in the U.S. Given the severity of the problem, it's essential to investigate what factors could facilitate Chinese international students' intercultural adaptation process and what channels could potentially be examined.

Intercultural Adaptation: Sociocultural and Psychological Adaptation

Intercultural adaptation is one of the most popular concepts for investigating how immigrants adapt to the host country's sociocultural systems. The original concept of intercultural adaptation was a one-dimensional phenomenon which measured the degree of psychological comfort individuals experience with their new environment (Klopf, 1987; Oberg, 1960; Torbiorn, 1982). In recent years, intercultural adaptation has been increasingly recognized as a multidimensional and multi-faceted phenomenon which includes numerous cognitive, affective, and behavioral changes experienced by people who desire to adapt to their host countries. Compared to other concepts, intercultural adaptation is an ongoing, dynamic, and interactive process which involves constant

interactions between individuals and the host country's environment. Also, every action is interdependent and mutually reinforcing (Anderson, 1994; Black, 1988; Kim, 1995). According to Anderson (1994), "all adjustment is a cynical and recursive process of overcoming obstacles and solving problems in present-environment transactions" (p293). Based on their own adaptation levels, individuals choose how to respond, and through those choices, create their own adjustment.

Acculturation theory is a concept which is similar to intercultural adaptation. Within the acculturation and adaptation research area, Berry's (1997) model is widely used to predict individuals' psychological acculturation and the prediction of acculturative stress (Berry et al., 1989). Berry (1974; 1984) claimed that acculturation could be divided into two dimensions: the maintenance of the ethnic cultural identity and the development of the host cultural identity. Based on these two dimensions, Berry (1974, 1984) developed four acculturation strategies to measure immigrants' acculturative attitudes: *assimilation:* absorbing the host culture but eschewing the ethnic culture; *separation:* sticking with the ethnic culture and resisting the host culture; *marginalization:* rejecting both the host culture and the ethnic culture; *integration:* imbibing both the host culture and the ethnic culture. Previous research's (Berry et al., 1987) results indicate that individuals' acculturation strategies are closely related to their acculturation outcome, *integration* strategy is associated with a low level of stress. However, Berry's model has been criticized for using four scales to measure two dimensions (Rudmin, 1996) and not including the independent impacts of individuals' identifications to their own culture and other cultures (Ward & Rana-Deuba, 1999). Besides these, according to Ward and Rana-Deuba (1999), three issues related to Berry's

model: first, several scale items are lengthy and involve multiple concepts. Second, items measure broader domains than the four strategies in Berry's model. Third, the model's measurements can be improved in terms of "user-friendliness and cross-cultural versatility" (Ward & Dueba, 1999, p427). Ward and Kennedy (1994) merged their own research with Berry's model on acculturation and adaptation. Results of their research (Ward & Kennedy, 1994) indicate that individuals who adopt integration acculturative strategy have the least psychological stress, and individuals who adopt assimilation acculturative strategy experience the least behavioral and cognitive difficulties. Based on these results, Ward and Kennedy (1994) also argued that there should be a distinction within individuals' cross-cultural adaptation outcome. Acculturating individuals' sociocultural and psychological adaptation should be evaluated separately.

In a more recent study, Ward and Kennedy (1999) suggested that acculturating individuals' intercultural adaptation can be categorized into two dimensions: "sociocultural (behavioral)" and "psychological (emotional/affective)" (Ward & Kennedy, 1999, p660), and there are four reasons for this distinction: first, sociocultural adaptation and psychological adaptation can be predicted by different variables. Second, the effects of residence length in the host country on sociocultural adaptation and psychological adaptation are different. Third, sociocultural adaptation and psychological adaptation are intercorrelated but conceptually distinctive. Fourth, acculturative strategies (*assimilation*, *separation*, *marginalization*, and *integration*) have different impacts on sociocultural adaptation and psychological adaptation. Sociocultural adaptation is related to individuals' behavioral competence, and it can be evaluated through measuring individuals' abilities on managing day to day life in the host sociocultural environment

(Ward & Kennedy, 1999; Brisset et al., 2010). The main predictors of acculturating individuals' sociocultural adaptation are residence length in the host country, knowledge about the host culture, "amount of interaction and identification with host nationals" (Ward & Kennedy, 1999, p661), cultural differences between the host and ethnic culture, language proficiency, and acculturation strategies (Searle & Ward, 1990; Ward & Kennedy, 1993a, 1994; Ward & Searle, 1991). With the development of skills, individuals' sociocultural adaptation can be steadily improved. Psychological adaptation can be interpreted within "a stress and coping framework" (Ward & Kennedy, 1999, p660). Acculturating individuals' psychological adaptation can be measured by their psychological well-being and how satisfied they are with their own transition in the host country (Ward & Kennedy, 1999). The main predictors of individuals' psychological adaptation are personality traits, life changes, coping strategies and the social support individuals received (Ward & Kennedy, 1999). Comparing with sociocultural adaptation, individuals' psychological adaptation is more fluctuant and variable (Ward et al., 1998).

Intercultural Adaptation and Communication

One way to understand what factors contribute to acculturating individuals' intercultural adaptation is by looking at their interpersonal communication and information retrieval. Communication can be recognized as a crucial factor in facilitating the acculturation of immigrants --- it acts as a mechanism for social cohesion, and a medium for social interaction (Kim, 1980). Among many forms of human communication, interpersonal communication and mass media consumption are the two most significant forms of the cultural adaptation process (Kim, 1977). Immigrants can obtain social support and information from both types of communication. Several studies

(Ruben, 1979; Gudykunst & Kim, 1984) have shown that interpersonal communication can help immigrants adjust their psychological and physical stress (Kim, 1978). One such study focusing on interpersonal communication of Asian Indians in the United States (Shah, 1991) indicates that interpersonal communication is the most salient indicator of intercultural adaptation over other mediated forms of communication.

Mass media consumption is another variable that plays a key role in the intercultural process of international students since it is highly related to an individual's language skills, communication behavior, information seeking options, and opportunities for social interaction (Yang et al., 2004). Ryu (1976) made two claims about mass media's advantages on facilitating individuals' intercultural adaptation. First, compared with face-to-face communication, people have less psychological reluctance when they use mass media to retrieve information. Second, the ubiquity of mass media and mass media messages can increase the efficiency of getting through the process of acculturation. These two advantages make mass media a salient platform for acculturating individuals to retrieve information and ease the stress of intercultural adaptation. However, mass media consumption's positive effects on intercultural adaptation is not a certainty. The results of Huang's study (1993) show that mass media consumption indeed affects the research subjects' intercultural adaptation, but higher mass media use does not necessarily lead to higher acculturation. Effects of the mass media usage can be influenced by the usage quality and things sacrificed for the usage.

Interpersonal communication and mass media consumption both can act as resources which satisfy audiences' informational and communicational needs. In addition, interpersonal communication and mass media consumption can complement

each other (Rubin & Rubin, 1985). Uses-and-gratifications theory assumes that individuals communicate or use media to gratify their needs. Individuals' selections on interpersonal and mass media channels can be influenced by their sociocultural backgrounds, psychological characteristics, attitudes and perceptions toward channels (Rubin, 1993; 1994). For immigrants, their identifications with the host culture and the ethnic culture, psychological well-being, attitudes toward the host media and interpersonal communications, and attitudes toward the ethnic media and interpersonal communications can influence their choices on interpersonal and mass media channels, which in turn, influence their intercultural adaptation.

Intercultural Adaptation, Host Language Proficiency, and Ethnic Identity

As mentioned before, cross-cultural adaptation could be divided into two dimensions: the maintenance of the ethnic cultural identity and the development of the host cultural identity (Berry 1974, Berry 1984). In general, immigrants maintain their ethnic cultural identity by communicating with previous relationships in their ethnic country and consuming the ethnic country's news and entertainment. To develop the host cultural identity, immigrants usually build new relationships with the host country's members and retrieve the host country's media content. However, the bulk of studies related to intercultural adaptation only focus on the roles of the host society's mass media consumptions (Chen, 2010) and interpersonal communication with the host society's members.

Previous research's (Lin et al., 2012; Sandel, 2014) results indicate that interpersonal communication with the host country's members and the ethnic country's both can provide emotional support and the sense of belonging to immigrants. And the

host mass media consumptions can facilitate immigrants' cross-cultural adjustments by offering information related to the host society's norms and customs. Among existing research, there are debates about the ethnic mass media consumptions' effects. This study suggests that individuals' host language proficiency and ethnic identity's effects should be included when examining the relationship between the ethnic mass media consumptions and immigrants' intercultural adaptation.

One study (Yang, 2004) on mass media consumption of Chinese international students in the United States indicates that mass media not only transmit information about current events or provide entertainment, they also reflect the host country's sociocultural system. The mass media content that contains information about American culture and value systems could reduce Chinese international students' uncertainty and help them adapt to the host society. Besides the content, the language of the host media could affect how individuals learn about the host culture (Miglietta & Tartagila, 2009). The language of the host media could also help international students better understand the differences between the ethnic culture and the host culture. Philipsen (1992) argued that language can reflect culturally distinctive psychology, sociology, and rhetoric. Through exposure to the host media, acculturating individuals could learn about a wider range of cultural elements. In turn, these cultural elements could help individuals get insights about the social norms and values of the host sociocultural context (Landy & Bourhis, 1997), in turn, facilitating their process of intercultural adaptation.

The effects of the host media's content could therefore be impacted by acculturating individuals' host language proficiency and ethnic identity. Ryu's (1976) study points out that immigrants' mass media usage is related to their host language

proficiency. These immigrants are more willing to choose the language they are familiar with. In other words, individuals may continue using their ethnic media because of their familiarities with the mother tongue and the ethnic sociocultural value systems of their home country, despite the benefits of the host media usage. Fortunately, the host media's content and language's direct and indirect positive associations with these individuals' process of intercultural adaptation are not absolute after taking ethnic identity's effects into consideration. On the one hand, host language proficiency can facilitate acculturating individuals' adaptation. On the other hand, the maintenance of ethnic language and the ethnic media consumption can strengthen their ethnic identity, which has positive effects on their psychological well-being (Chen, 2008).

Ethnic identity is a dynamic and multidimensional construct (Phinney, 2003) which refers to the way that ethnic minority group members interact with their own group as a distinct subdivision of the majority of the society (Chae et al., 2004; Phinney, 1990; Phinney et al., 2001). Results of several studies (Ong et al., 2006; Phinney, 1989; Phinney et al., 1997; Roberts et al., 1999) show that an ethnic minority group member with a strong ethnic identity has higher level of the personal well-being and lower level of adaptation difficulties. Ethnic identity can help ethnic minority group members realize the positive virtues of their own ethnic group (Outten et al., 2009) and decrease negative effects of the discrimination and differentiation experienced by these individuals. Results of a meta-analysis study (Smith & Silva, 2011) reveal that the association between ethnic identity and psychological well-being is stronger among adolescents and young adults than among adults over age 40. Based on results of Smith and Silva's (2011) study, the majority research of ethnic identity has focused on adolescents whose parents are

immigrants. There are three reasons behind that: first, these adolescents' parents carry with them, the language, values, and customs from their country of origin, and they may deliver this cultural heritage to their offspring through daily interactions (McCoy, 1992). Second, these adolescents are educated in the host country's school system, which emphasize the host country's official language proficiency and sociocultural values. Third, these adolescents have access to interactions with peers from their own ethnic group and peers from host and other ethnic groups (Phinney, 2001). The continuously growing population of Chinese international students in the United States, and the prevalence of the Internet and social media create similar conditions and situations for Chinese international students. However, ethnic identity's effects on Chinese international students are barely examined. Empirical studies should therefore examine the relationship between host language proficiency and ethnic identity and Chinese international students' media usage and their process of intercultural adaptation. This study therefore incorporates language proficiency and ethnic identity as additional variables of interest in the analysis examining the relationship between social media usage and intercultural adaptation.

Besides enhancing immigrants ethnic identity, Ziegler (1983) found that exposure to the ethnic press while living in the United States serves three major functions: firstly, it provides a medium for communication for immigrant groups whose native language is not English; secondly, it serves as an outlet for news about one's home country that would otherwise be unavailable; and thirdly, it helps with the process of assimilation by offering information and advice on the lifestyles of the new country. Some studies suggest that both the host media and the ethnic media can facilitate individuals'

intercultural adaptation. In response to acculturative stress, individuals choose different

acculturation strategies based on two dimensions of acculturation: *cultural maintenance*,

in which individuals choose to maintain their heritage culture and identity, and *contact

and participation*, through which individuals choose to become involved in the host

country's society and with other cultural groups (Forbush & Foucult-welles, 2016). Berry

(2005) noted that "for acculturative stress, there is a clear picture that pursuit of

integration is least stressful" (p. 708). Those who pursue positive action in both

dimensions by maintaining some of their own cultural practices and identity while

simultaneously being open to involvement with members of the host society are

identified as using the integrative strategy of acculturation (Berry, 1997). Both

dimensions are key to understanding the relationships examined in this study.

Intercultural Adaptation, the Internet Access, and Social Media

Unlike traditional media, the Internet crosses the line between interpersonal and

mass communication (Ye, 2005). The Internet permits social contact across time,

distance, and personal circumstances (Kraut, 2001) and broad social access could

increase people's social involvement. It can also facilitate the formation of new

relationships, social identity and commitment among otherwise isolated persons

(McKenna & Bargh, 1998), and participation in groups and organizations by distant or

marginal members (Sproull & Kiesler, 1991). Tsai (2006) explored how the Internet

affected the adaptation of Taiwanese immigrants in the United States. Tsai's study (2006)

documents that immigrants face the challenges of language proficiency, economic

survival, loss of previous social networks, and social disconnection during resettlement

created by geographic boundaries. But, that computer technology provides immigrants

with new occupational opportunities and strategies to overcome the barriers and stress created by resettlement. This study offers support for the claim that Internet access greatly facilitates immigrants' adaptation.

How the immigrants use the Internet of their new host country is also identified as an important factor for the immigrants' sociocultural and psychological adaptation experiences despite mixed results about this in the past literature. According to Kraut (2001), whether the Internet will have positive or negative social impact on individuals may depend upon the quality of individuals' online relationships and upon what people give up, to spend time online. Melkote and Liu's (2000) research also explores the role that the Internet plays in the acculturation of Chinese immigrants in the United States. According to this study, the ethnic Chinese Internet helps sustain Chinese values yet impairs American value acculturation (Melkote & Liu, 2000). However, Ye's (2006) study offers a somewhat different explanation. It documents that perceived support from interpersonal networks in the host country and online ethnic social groups actually decreases social difficulties and facilitates intercultural adaptation.

The prevalence of the Internet lays the foundation for social media's widespread effects. According to the Pew Research Center's Internet & American Life Survey, nearly 100% of American college students accessed the Internet in 2010. College students claimed that they gain feelings of mastery, identity exploration, and peer group interaction by using social media (Hinduja, et al., 2008; Schimitt et al., 2008). Some studies show that social media usage has a positive impact on American students' psychological well-being; and that it may also help international students (Ellison, Steinfield, & Lampe, 2007; Stefanone, Kwon, & Lackaff, 2011). Social media is an

emerging topic in studies of intercultural adaptation and the Internet (Melkote & Liu, 2000; Tsai, 2006; Ye, 2005; 2006). However, studies that address the relationship between social media consumption and intercultural adaptation mainly investigate the impacts of the host social media consumption, rather than the role of ethnic social media usage. Also, researchers focus more on the social capital of using social media to build interpersonal relationships, and they barely discuss the influence of social media's informational and communicational functions on intercultural adaptation in tandem.

Compared with users of other forms of websites, social media platform users are not passive audiences; they can individually and collectively create, modify, share, and discuss content (Kietzmann et al., 2011), and thus their interpersonal communication and information retrieval are highly interactive on social media platforms. In this highly interactive environment, the majority of social media contacts' sociocultural characteristics (e.g., the language, values, and customs) can influence acculturating individuals' interpersonal communication and information retrieval. Further, individuals' cognitive, psychological, behavioral and physical conditions can be influenced by their usage of the host and the ethnic social media.

Lin, Peng, Kim, Kim and LaRose's (2012) study suggests that international students and their local peers' communication on Facebook positively impacts on these students' social adjustment and their perceived social support. According to previous research (Adelman, 1988; Church, 1982; Safdar et al., 2003; Safdar et al., 2009), social support has been considered as an important predictor of psychological adaptation during the process of intercultural adaptation. Social support may come from different sources, and there is a distinction between the social support from host nationals and the social

support from people of the acculturating individuals' country of origin (Ward et al., 2001). Online connections with host nationals could increase immigrants' cultural compatibility and create the foundation of positive attitudes toward the host country's culture (Tip et al., 2012). In turn, positive attitudes might motivate these individuals to adopt the host country's sociocultural norms, and achieve a high level of intercultural adaptation.

Kim, Yun and Yoon's (2009) study addresses how online connections with people from the same ethnic group meet international students emotional and informational needs. Besides pointing out the important role of online communication in maintaining relationships with close friends and family members, Kim, Yun, and Yoon (2009) suggested that gaining information resources is the main motivation for international students to build new connections with people who are from the same ethnic group and reside in the host country. They also argue that international students' internet consumption is not simply based on the origin of country. International students' personal interests (e.g., informational and emotional needs) are the main determinants of these students' internet consumption.

Based on existing studies, this study claims that social media could facilitate Chinese international students' intercultural adaptation by helping them build and maintain interpersonal relationships and retrieve information. In order to examine how social media influence Chinese international students' process of intercultural adaptation, this study explores the relationships between Chinese international students' frequency of using social media and their levels of intercultural adaptation. This study also claims that, in the highly interactive environment of social media, the majority of social media

contacts' sociocultural characteristics (e.g., the language, values, and customs) can influence the kinds of acculturating individuals' interpersonal communication and information retrieval, and further influence their process of intercultural adaptation. To examine how the host social media usage and the ethnic social media usage influence Chinese international students' intercultural adaptation, this study separates Chinese international students' social media usage into Facebook usage and WeChat usage. Relationships between the frequency of using Facebook and intercultural adaptation, and relationships between the frequency of using WeChat and intercultural adaptation are both explored in this study.

American Social Media: Facebook

With more than two billion monthly active users, Facebook is the most popular social media platform worldwide (Statista, 2018). In the United States, "roughly two-thirds of U.S. adults (68%) now report that they are Facebook users, and roughly three-quarters of those users access Facebook on a daily basis" (Pew Research, 2018). The features of Facebook such as the personal timeline, news feed, and like button functions (Wikipedia, 2018) enable users to easily interact with their contacts' status updates, comments, photos, videos, and shared links. Facebook has also developed an instant messaging service and software application named Messenger to fulfill users' communicational needs. As a software application separated from the main Facebook app, the number of active users of Messenger has reached 1.2 billion in April 2017 (Wikipedia, 2018).

Facebook usage has been thoroughly examined in the past few years (Ellison et al., 2007; Pempek et al., 2009; Acquisti & Gross, 2006; Valenzuela et al., 2017).

However, Facebook usage's effects on Chinese international students' intercultural adaptation are still under-studied. One of the most common research topics for Chinese international students' social media usage and intercultural adaptation was the comparison between Facebook and Renren usage (Tian, 2017; Yuan, 2017; Carey, 2017; Li & Chen, 2014). Renren has been recognized as one of the earliest social networking sites in the mainland of China, and its functions and page settings are almost identical to Facebook's. Unfortunately, Renren has continuously lost users since 2011. According to China Internet Watch (2016), the number of monthly log-in users for Renren was only 35 million in September 2016, compared to 160 million in February 2011. Only a small portion of Chinese netizens are still accessing Renren on a daily basis. Therefore, research results of comparing Chinese international students' Facebook and Renren usage may not be representative enough to reflect the latest situation. Another social media platform which is quite representative in the Chinese context however is WeChat.

Chinese Social Media: WeChat

WeChat is the most significant social media platform in the mainland of China (Kantar, 2017). According to the report from Statista (2018), the number of currently active users of WeChat has reached 980 million. The original function of WeChat was instant messaging services for intelligent terminals allowing users to send texts, images, voices, videos, and other files to their WeChat contacts (Chen & He, 2014). In addition to traditional instant messaging services, in recent years WeChat has started offering services such as the circle of friends and news subscriptions (Lin et al., 2017) to fulfill users' informational and communicational needs. The circle of friends is a function designed to create a private community for users to share photos, videos, and text

contents, which is similar to Facebook's timeline. In addition to Facebook and WeChat having similar informational and communicational functions, the level of influence of Facebook in the United States and WeChat in the mainland of China are also quite similar. Based on these similarities, Facebook and WeChat are suitable to be used for comparing Chinese international students' host (American) and ethnic (Chinese) social media usage and further analyzing how these patterns influence their intercultural adaptation process.

Research Questions and Hypotheses

According to previous research (Chen, 2010), individuals' intercultural adaptation and media consumption are continuously changing and evolving processes. This study aims to examine how Chinese international students' Facebook and WeChat usage, and their intercultural adaptation change with their residence in the United States, and to what extent their Facebook and WeChat usage affects their process of intercultural adaptation. This study posits that the American social media platform, Facebook and the Chinese social media platform, WeChat provide different information sharing experiences and social support networks for international students and influence the process of their intercultural adaptation which is reflected through their sociocultural and psychological adaptation experience. The specific hypotheses are listed below:

RQ1: Does social media usage positively influence Chinese international students' intercultural adaptation?

H1a: Facebook and WeChat usage will have positive impacts on Chinese international students' social adaptation (one factor of Sociocultural Adaptation Scale).

H1b: Facebook and WeChat usage will have positive impacts on Chinese international students' physical adaptation (one factor of Sociocultural Adaptation Scale).

H1c: Facebook and WeChat usage will have positive impacts on Chinese international students' cultural adaptation (one factor of Sociocultural Adaptation Scale).

H1d: Facebook and WeChat usage will have positive impacts on Chinese international students' psychological adaptation.

RQ2: What other factors influence Chinese international students' intercultural adaptation?

In order to test these research questions and hypotheses, the next chapter discusses in depth the study design and the quantitative method of analysis incorporated in this study.

Chapter 3. Method

Overview:

This chapter explains the study design and the quantitative method of analysis used to answer the research questions. First, this chapter describes the research participants and the strategy of data collection. Second, it explains the various measures which were applied to represent the different variables of analyses. Last but not the least, it discusses in detail the quantitative method of data analysis.

Research Participants and Data Collection Strategy:

A national data gathering effort took place during January of 2018 to reach out to a reliable and representative sample of mainland Chinese international students who were living in the United States. A sample of 241 participants was obtained through a Qualtrics online survey. Participants' ages range from 18 to 36, 54% of Chinese international students are under 24 years old (N = 131). 43% of Chinese international students' age range from 24-30 (N = 103). And there is only 3% of Chinese international students' age are above 36 years old (N = 7). Females account for 65% (N = 156), and Males account for 35% (N = 84) of the total sample. Over half (61%) of the participants' residence length in the United States are more than one year and less than five years (N = 147). The mean value of Chinese international students' intention of staying in the United States is 2.66 (SD = 1.15) on a reversely coded 5-point Likert scale (1 = *very much like to stay in the United States*, and 5 = *very much like to go back to China*). Among these 241 participants, their average frequency of using WeChat (M = 4. 55, SD = 0.94) is much

higher than the frequency of using Facebook (M = 2.14, SD = 0.98) on a scale from 1 to

5 (as shown in Table 1).

Table 1

Descriptive Statistics

Variables	Minimum	Maximum	Mean	Std. Deviation	Reliability (Cronbach Alpha)
The Host Language Proficiency (N = 241)	14	38	35.9	4.8	0.68
The Ethnic Identity (N = 241)	22	70	50.83	9.75	0.83
Social Adaptation (N = 241)	5	15	11.3	2.15	0.75
Physical Adaptation (N = 241)	3	15	12.91	2.41	0.84
Cultural Adaptation (N = 241)	4	20	14.56	3.43	0.84
Psychological Adaptation (N = 241)	15	40	28.96	4.95	0.82

Variables	Minimum	Maximum	Mean	Std. Deviation
The Frequency of Facebook Usage (N = 241)	1	5	2.14	0.98
The Frequency of WeChat Usage (N = 241)	1	5	4.55	0.94
The Intention of Staying in the U. S. (N =241)	1	5	2.66	1.15

Variables		Frequency	Percent
Gender (N = 240)	Male	84	35%
	Female	156	65%
Age (N = 241)	18-24	131	54%
	24-30	103	43%
	30-36	7	3%
The Length of Residence in the U.S. (N = 241)	Less than 1 year	32	13%
	1-5 years	147	61%
	5-10 years	54	22%
	Longer than 10 years	8	3%

The survey was conducted using snowball-like convenience samples. All the survey questions were in English. IRB approval for this study was obtained from the Marquette University Institutional Review Board (HR-3330). Before beginning the survey, participants were presented with an informed consent form (see Appendix A) which asked for their voluntary participation in the study. The informed consent form also included an optional field for participants to provide their e-mail address for receiving a $10 gift card. The informed consent form reiterated that participation was voluntary. After participants pressed the "Yes, I agree" button on the informed consent form, they were automatically redirected to the online survey instrument. During the process of answering the survey, all questions could be skipped, and participants could exit the survey at any time. All those who entered e-mail addresses were included in gift card list, regardless of whether or not they finished the survey.

Measures

Dependent Variable Measures:

This study seeks to measure Chinese international students' intercultural adaptation based on their sociocultural and psychological adaptation. Two established adaptation scales are used in this study's questionnaire: Ward and Kennedy's (1999) Sociocultural Adaptation Scale, and Gao and Gudykunst's (1990) psychological adaptation scale. In Ward and Kennedy's (1999) research, they pointed out individuals' sociocultural and psychological adaptation "though inter-related, are conceptually and empirically distinct" (p. 660). Sociocultural adaptation reflects individuals' behavioral competence (Ward, 1990; 1991; 1996; 1999), and the psychological adaptation reveals

individuals' psychological well-being and satisfaction levels toward their own transitions in the host country.

Sociocultural Adaptation Scale: Ward and Kennedy's Sociocultural Adaptation Scale (SCAS) have been widely used to measure individuals' levels of sociocultural adaptation. "Various versions of the Sociocultural Adaptation Scale have been tested in at least 16 studies on the adaptation of migrants, and it has been proved to be one of the most effective measures of sojourner cultural adaptation" (Chen, 2010, p388). The newest version contains 22 items from the behavioral domain and 7 items from the cognitive domain. A 5-point Likert scale is applied to measure responses: 1 = extremely difficulty, 2 = great difficulty, 3 = moderate difficulty, 4 = slight difficulty, and 5 = no difficulty. Average scores of these two domains can present individuals' integral sociocultural adaptation status. The higher the score, the less difficulty the individuals experience and the more socio-culturally adaptive they are. Average scores of these two domains can present individuals' integral sociocultural adaptation status (Ward & Kennedy, 1999). According to Ward and Kennedy (1999), one of the most significant advantages of the Sociocultural Adaptation Scale is that it can easily be modified according to the characteristics of the specific sample. For this research, the study adopts Sociocultural Adaptation Scale and uses appropriate items (see Appendix B) to measure the behavioral and cognitive difficulties Chinese international students need to face and the levels of Chinese international students' sociocultural adaptation.

Adopted items measure Chinese international students' behavioral and cognitive difficulties from different dimensions (e.g., social, physical, and cultural dimensions). Chen's (2010) study performed exploratory factor analysis (EFA) and identified three

factors to represent the Sociocultural Adaptation Scale. These three factors are social adaptation, physical adaptation, and cultural adaptation. To obtain a more meaningful interpretation of the data, this study references to EFA results from Chen's (2010) study and performs confirmatory factor analysis (CFA) to measure the statistical soundness of the three-factor model. Based on CFA results, this study measures Chinese international students' sociocultural adaptation levels by Sociocultural Adaptation Scale's three factors: social adaptation, physical adaptation, and cultural adaptation. The reliability of the first factor: social adaptation is found to be acceptable (Cronbach's α= 0.75). The reliability of the second factor: physical adaptation is found to be good (Cronbach's α= 0.84). The reliability of the third factor: cultural adaptation is also found to be good (Cronbach's α= 0.84) (George & Mallery, 2003).

Psychological Adaptation: For further examination of Chinese international students' psychological adaptation, this study also adopts Gao and Gudykunst's 8-item scale (1990) which is a widely applied measurement scale for psychological adaptation. This scale examines individuals' satisfaction levels toward their living experiences in the host country and their psychological well-being. Although the original study uses a 7-point Likert scale, this study changes it to a 5-point Likert scale (1= not at all, and 5= extremely), in order to compare the raw data to the data measured by Sociocultural Adaptation Scale. The 8 items in this scale are: (1) How comfortable do you feel living in the United States? (2) How satisfied are you with your academic studies in the United States? (3) How comfortable do you feel interacting with Americans? (4) How satisfied are you with your English ability in daily communication with Americans? (5) How satisfied are you with living in the American culture? (6) How much have you adapted to

the American culture? (7) How much is life in the United States an enjoyable experience? (8) How anxious are you to stay longer in the United States? (see Appendix C) The values of the final question were reversely coded. The reliability of these 8 items is found to be good (Cronbach's α= 0.82) (George & Mallery, 2003).

Independent Variable Measures

Social Media Usage: In order to measure the impacts of the host social media usage and the ethnic social media usage, Chinese international students' social media usage is divided into Facebook and WeChat usage. 5-point Likert scales are applied to measure the frequencies of Chinese international students using Facebook and WeChat (1= never, and 5= always) (see Appendix D).

Additional Variables of Interest

Host Language Proficiency: Previous research proved that the proficiency of the host country's official language has close interactive relationships with sociocultural adaptation (Masgoret & Ward, 2006) and psychological adaptation (Ataca & Berry, 2002). Host language proficiency might be essential for host cultural knowledge acquisition and could influence individuals' media consumption (Miglietta & Tartaglia, 2009). The host language proficiency of research participants is examined by 8 items assessing three aspects. Two items measure current *English proficiency*: (1) "How well would you say you understand English when someone is speaking to you?", and (2) "How well would you say you speak English?" (1= not at all, 5= very well). Three items measure current *preference to use English* in social interactions: (1) "what languages do you currently speak at home?" (2) "What languages have you spoken outside of your

home while at work in the United States in the past twelve months?" (3) "What languages have you spoken outside of your home when you are with friends?" (1= almost all in Chinese, 5= almost all in English) (Dalisay & Liu, 2015). Three items are applied to measure *English competence*: (1) "I feel comfortable speaking English," (2) "I have no difficulty in speaking and writing English for my study in the U.S.," and (3) "I am afraid of talking to American people because of my poor English" (1=strongly disagree, 5= strongly agree) (Park et al., 2014). The values of the third item are reverse coded during the data analysis (see Appendix E). The reliability of the 8 items (Cronbach's $\alpha = 0.68$) is found to be slightly below the acceptable value (Cronbach's $\alpha = 0.7$) (George & Mallery, 2003).

The Ethnic Identity scale: Ethnic identity has been defined as "a set of ideas about one's own ethnic group membership, including self-identification and knowledge about ethnic culture (traditions, customs, values, and behaviors), and feelings about belonging to a particular group" (Martin & Nakayama, 2013, p74). To assess how ethnic identity influences Chinese international students' social media usage (Facebook and WeChat) and their process of intercultural adaptation, Phinney's (1992) the Multigroup Measure of Ethnic Identity (MEIM) is applied to measure Chinese international students' ethnic identity. It consists of 14 items assessing three aspects of ethnic identity: positive ethnic attitudes and sense of belonging (5items); ethnic identity achievement, including both exploration and resolution of identity issues (7 items); and ethnic behaviors or practices (2 items). Items are rated on a 4-point scale from "strongly agree" to "strongly disagree." Values of negatively worded items are reversed. Average scores of these items can present individuals' ethnic identity status. The higher the score, the higher the

individual's ethnic identity. This study changes the 4-point scale to a 5-point Likert scale to compare the raw data to the data measured by Sociocultural Adaptation Scale and psychological adaptation scale (see Appendix F). The reliability of the ethnic identity scale is found to be good (Cronbach's α= 0.83) (George & Mallery, 2003).

The Intention of Staying in the United States: Hazen and Alberts' (2006) study suggests that a large proportion of international students adjust their intentions of staying in the United States during the process of their studies. Very few international students have intentions of staying permanently in the United States at the initial stage, but lots of them adjust their status to permanently stay in the United States (Hazen & Alberts, 2006). Chinese international students' intention of staying in the United States can be recognized as the motivation of adjusting to the host country, which can have impacts on their intercultural adaptation. In this study, Chinese international students' intentions of staying in the United States after completing their degree are measured. A 5-point Likert scale was used for this (1=very much like to stay in the U.S., 5=very much like to go back to China). The values were reverse coded during the data analysis.

Control Variables (Demographics):

The last part of the questionnaire measures the socio-demographic characteristics of the research subjects, including gender, age, and length of residence. Both efficacy and participation have been found to be correlated with these control variables and therefore need to be controlled prior to examining the relationship between the independent and dependent variables (see Appendix G).

Gender: Research on the relationship between gender and intercultural adaptation has generated inconsistent results. Some research results (Furnham & Shiekh, 1993)

show that female immigrants tend to have less involvement with the host sociocultural environment and acquire fewer host sociocultural skills. Compared to ale immigrants, female immigrants are more vulnerable to psychological problems. On the other hand, Boski's (1990, 1994) studies suggest female immigrants are more psychologically adaptive than males. The results of Chen's (2010) study also indicate that female immigrants are more socially, physically, and psychologically adaptive to the host country. Referencing these previous studies, gender is included as a control variable in this study.

Age: Beiser and colleagues' (1988) research suggests that age plays a vital role in intercultural adaptation. They argue that adolescents are more vulnerable to psychological problems. Adolescence is a time for identity formation and development which may cause additional psychological difficulties. Adolescents and young adults comprise the majority of Chinese international students in the United States. Given the characteristic of participants, age is included in this research as a control variable.

The Length of Residence in the Host Country: There are debates about the association between length of residence in the host country and intercultural adaptation. The U-Curve hypothesis is the most popular and well-known theory analyzing the relationships between the length of residence in the host country and immigrants' adaptation. This theory was originally proposed by Lysgaard (1995). Results of Lysgaard's (1995) study show that immigrants whose length of residence in the host country are between 6 to 12 months experience the highest level of adjusting difficulties, compared with either those who have only resided less than 6 months or those who have already resided more than 18 months. Lysgaard (1995, p50) stated:

"Adjustment as a process over time seems to follow a U-shaped curve: adjustment is felt to be easy and successful to begin with; then follows a "crisis" in which one feels less well-adjusted, somewhat lonely and unhappy; finally one begins to feel better adjusted again, becoming more integrated in to the foreign community."

However, the U-curve hypothesis has not been sufficiently supported due to the "inadequacy of cross-sectional designs" (Ouarasse et al., 2005, p254) to fully explain changes over time. Ward and colleagues (2001) suggested the effects of the residence length in the host country can be influenced by the type of migrating group (sojourners, immigrants, or refugees) and the dimension of adaptation (cognitive, behavioral, or affective). Ward and Kennedy (1999) suggest that acculturating individuals can rapidly improve their sociocultural adaptation during the first few months and then gradually make the enhancement through adopting "cultural-specific skills" (Ward & Kennedy, 1999, p661). For the psychological adaptation, Ward and Kennedy (1999) suggest that the psychological adaptation is more changeable over time. Although several studies' results indicate that immigrants experience the greatest psychological difficulties at "the earliest stages of cross-cultural transition" (Ward & Kennedy, 1996a, 1996b). The changeable characteristic of psychological adaptation was also mentioned in Gudykunst's (1988) research. Gudykunst (1988) suggests that the decrease of uncertainty and anxiety may not be a linear process. Some degree of uncertainty and anxiety are necessary for individuals to perceive the need for making adjustments at the initial stage. To figure out the impacts of residence length on intercultural adaptation, Chinese international

students' length of residence in the United States is included as a control variable in this study.

Data Analysis Strategy

When a sufficient number of cases were collected for the study, data were downloaded from Qualtrics and loaded into SPSS from 251 cases. In order to have the sufficient cases to ensure this study's generalizability and scientific values, this study only deleted extreme cases while dealing with the outliers (e.g., participants' self-report age which was above 80). Cases with missing data which was not at random were also deleted. After the data screening, 241 cases remained. Different cases missed one or two different items, which means these missing items were not missing in purpose. Medians were used to replace items' missing cases. Frequencies were applied to verify the total number of cases was 241 for each item after data screening. After the dataset was prepared, confirmatory factor analysis (CFA) using AMOS 22 and multiple ordinary least squares (OLS) regression analyses using STATA 13 were performed.

Confirmatory Factor Analyses:

Reference to exploratory factor analysis' results from Chen's (2010) study, confirmatory factory analysis (CFA) using AMOS 22 was applied to test how well the three identified factors (social adaptation, physical adaptation, and cultural adaptation) represent the Sociocultural Adaptation Scale (Ward & Kennedy, 1999). To specify each factor's indicators, one of the factor loadings on each construct is fixed to 1. After the initial CFA model exhibited an unacceptable goodness-of-fit and violations on construct

validity, following revisions were made in this study: first, removing items which have low-level standardized loadings. Second, adding covariance's effects between some errors which are under the same factor. Third, examining residuals to identify discrepancies between the proposed model and the estimated model Path Estimates (Hair et al., 2009). Because immigrants' behaviors have independent and intercorrelate effects on their process of adaptation, three identified factors were correlated with each other in the revised CFA model. Together with psychological adaptation, Sociocultural Adaptation Scale's three factors: social adaptation, physical adaptation, and cultural adaptation acted as dependent variables in this study.

Multiple Regression Analyses:

In order to test research questions and hypotheses, the original plan was using SPSS to conduct multiple linear regression analyses. However, when testing multiple regression analyses' assumptions, the homoskedasticity of two dependent variables (social adaptation and physical adaptation) were violated. Scatterplots of these two dependent variables (social adaptation and physical adaptation) didn't show "a random displacement of scores that take on a rectangular shape with no clustering or systematic pattern" (Pallant, 2013, p152). To deal with heteroskedasticity, this study's multiple regression analyses are conducted using STATA 13, because STATA can provide "the option to estimate standard errors that are 'robust' to certain violations" (Hoechele, 2007, p2).

Before conducting a series of multiple ordinary least squares (OLS) regression analyses in STATA 13, assumptions were examined again. Breusch-Pagan/Cook-Weisberg test was performed to examine homoskedasticity. The results revealed the existence of heteroskedasticity in one dependent variable: physical adaptation ($\chi2(1) = 3.98$, $p < 0.05$). According to Williams (2015), there are two assumptions why heteroskedasticity is a major concern in performing multiple ordinary least squares (OLS) regression analyses. First, "heteroskedasticity can cause standard errors to be biased" (Williams, 2015, p6). And second, "OLS assumes that errors are both independent and identically distributed" (Williams, 2015, p6). Robust standard errors tend to be more reliable in this situation and "relax either or both assumptions" (Williams, 2015, p6). Thus, White's heteroskedastic robust standard error is applied as the remedial measure in this study.

In this study's multiple ordinary least squares (OLS) regression analyses, Chinese international students' social adaptation, physical adaptation, cultural adaptation (three factors of sociocultural adaptation) and psychological adaptation act as dependent variables. Their Facebook and WeChat usage are treated as independent variables. Host language proficiency (English), ethnic identity, and the intention of staying in the host country (the United States) are addressed as additional variables of interest. Demographic variables, such as gender, age, and the length of residence in the host country (the United States) are treated as control variables. Detailed results of confirmatory factor analyses (CFA) and multiple regression analyses are presented in the next chapter.

Chapter Four: Results

Confirmatory Factor Analyses

Referencing Chen's (2010) study, a preliminary confirmatory factor analysis was conducted in this study to "test how well the measured variables represent the number of construct" (Hair et al., 2009, p668). This study specified a measurement model based on the EFA results of Chen's (2010) study with three distinct factors of sociocultural adaptation (social, physical and cultural adaptation). The exploratory factor analysis in Chen's (2010) study applied principal component extraction and varimax rotation on the 20 selected items of Sociocultural Adaptation Scale (Ward & Kennedy, 1999). She utilized four general criteria utilized to construct the factors:

"(1) eigenvalues greater than 1; (2) a Kaiser-Meyer-Olkin (KMO) measure greater than 0.80; (3) the combined factors accounting for more than 45% of the variance; and (4) the indices to be included having primary loadings greater than 0.45 and no secondary loadings greater than or equal to 0.35" (Chen, 2010, p391). For Chen's (2010) study, the Kaiser-Meyer-Olkin measure was 0.89, and the Bartlett's test of sphericity was statistically significant at 3530.0, which were sufficient to continue the exploratory factor analysis. Chen (2010) identified 12 items to represent the sociocultural adaptation scale, and these 12 items can be categorized into three factors: social adaptation, physical adaptation, and cultural adaptation. After took dimensionality (Hair et al., 2009) into consideration, Chen included four items in social adaptation (making friends, understanding jokes and humor, making yourself understood, and

communicating with people from different ethnic groups), four items in physical

adaptation (using the transportation system, going shopping, finding your way around,

and adapting to local accommodation), four items in cultural adaptation (understanding

the host country's political system, seeing things from the host country's members' view,

understanding cultural differences between the host country and the ethnic country, and

understanding the host country's value system). In this study's confirmatory factor

analysis, in order to distinguish Chinese international students' interactions from those of

the Americans and international students from other ethnic groups, there were six items

in the social adaptation category. Items of physical and cultural adaptation categories

were identical with Chen's (2010) study.

This study's CFA models' goodness-of-fit indices were examined mainly based

on the five critical criteria: Chi-square difference test ($\chi 2$ statistics), comparative fit index

(CFI), Tucker-Lewis index (TLI), the maximum likelihood (ML)-based standardized root

mean squared residual (SRMR), and root mean squared error of approximation

(RMSEA). Chi-square difference test ($\chi 2$ statistics) measure the ratio of $\chi 2$ to the degree

of freedom for the measurement model. The $\chi 2$/df ratio which is equal to or smaller than

3 indicates a good-fitting model (Hair et al., 2009). One insufficiency of Chi-square

difference test is that it can be influenced by the sample size. As a goodness-of-fit

measure, researchers are looking for no differences between the hypothesized model and

the observed model. However, a large sample size can increase the difficulty of obtaining

the statistically insignificant goodness-of-fit in Chi-square difference test. For

comparative fit index (CFI), the higher value means the better model fit. CFI values

above 0.90 represent a good fit (Hair et al., 2009). For Tucker-Lewis index (TLI), the TLI

values of models with good fit are close to 1 (Hair et al., 2009). Unlike CFI and TLI, the smaller maximum likelihood (ML)-based standardized root mean squared residual (SRMR) values indicate better model fit. SRMR over 0.10 indicates a problematic model fit (Hair et al., 2009). Root mean squared error of approximation (RMSEA) is one of the most widely applied measures. RMSEA of 0.08 or less is acceptable (Hair et al., 2009). Bearing these five joint criteria in mind, the initial CFA model which was based on EFA results from Chen's (2010) study was thoroughly examined. Results ($\chi2= 263.53$, df = 74, $\chi2$/df = 3.56, p < 0.001, CFI = 0.87, TLI = 0.84, SRMR = 0.078, RMSEA = 0.10) indicated that this initial CFA model exhibited an unacceptable goodness-of-fit (as shown in Figure 1).

Figure 1

The Initial CFA Model and Its Goodness-of-Fit
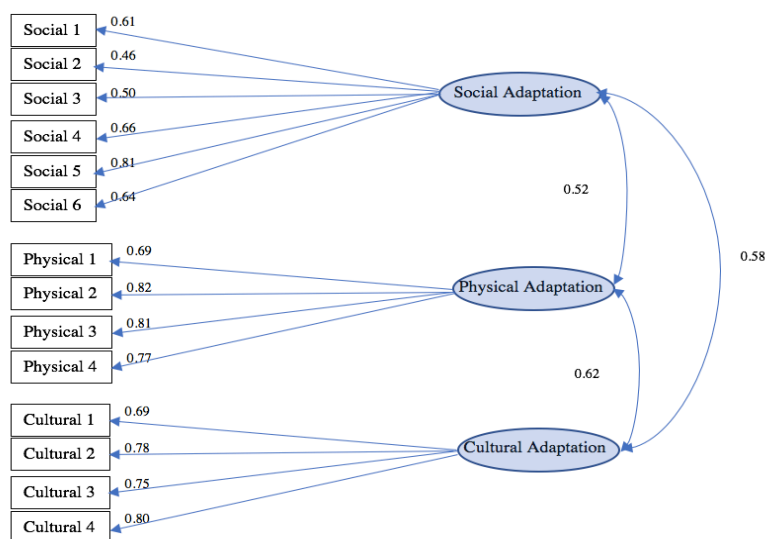
$\chi2= 263.53$, df = 74, $\chi2$/df = 3.56, p < 0.001, CFI = 0.87, TLI = 0.84, SRMR = 0.078, RMSEA = 0.10.
Notes: Criteria for Confirmatory Factor Analysis (CFA) model goodness-of-fit: standardized loading > 0.50), comparative fit index (CFI) > 0.90, Tucker-Lewis index (TLI) > 0.90, the maximum likelihood (ML)-based standardized root mean squared residual (SRMR) < 0.10, root mean squared error of approximation (RMSEA) < 0.08.

This study's CFA model's construct validity was assessed based on Hair, Black, Babin, Anderson, and Tatham's research (2009). This study's CFA model's convergent validity and discriminant validity were both examined. Convergent validity includes factor loadings, average variance extracted (AVE) and composite reliability (CR) (Hair et al., 2009). All factor loadings should be statistically significant and standardized loading estimates should be equal to or higher than 0.50. Average variance extracted (AVE) is a summarized indicator of convergence. The value of average variance extracted (AVE) which is equal to or larger than 0.50 suggests sufficient convergence. Composite reliability (CR) is also a summarized indicator of convergence. High construct reliability indicates the existence of internal consistency. The value of composite reliability (CR) which is between 0.60 to 0.70 indicates an acceptable convergence. A composite reliability (CR) which is higher than 0.7 indicates a good convergence. Discriminant validity examines the extent that the construct is distinct from other constructs (Hair et al., 2009). A construct's discriminant validity can be assessed by comparing the variance extracted estimate and the squared correlation estimate. The model's discriminant validity is sufficient if average variance extracted (AVE) is larger than average squared correlation estimate. Items of social adaptation in the initial CFA model which is based on the EFA results from Chen's study exhibited a violation of construct validity due to the low level of the average variance extracted (social adaptation's AVE = 0.39, which is lower than the cut-off value 0.50) (as shown in Table 2).

Table 2

The Initial CFA Model's Composite Reliability and Construct Validity

Latent Variable	Measurement Items	Standardized Loading Estimate (ß)	Explained Variance (R^{2})	Composite Reliability (CR)	Average Variance Extracted (AVE)	Average Shared Variance (ASV)
Social Adaptation	Making friends with Americans	0.61	0.37	0.79	**0.39**	0.30
	Making friends with International Students from other Ethnic Groups	0.46	0.21			
	Understandng jokes and humors	0.50	0.25			
	Making myself understood	0.66	0.43			
	Communicating with Americans	0.81	0.66			
	Communicating with international students from other ethnic groups	0.64	0.41			
Physical Adaptation	Using American transporttion system	0.69	0.47	0.86	0.60	0.33
	Going shopping in the U.S.	0.82	0.67			
	Finding my way around in the U.S.	0.81	0.66			
	Adapting to local accommodation in the U.S.	0.77	0.59			
Cultural Adaptation	Understanding the American political system	0.69	0.48	0.84	0.57	0.36
	Seeing things from Americans' point of view	0.78	0.61			
	Understanding cultural differences	0.75	0.57			
	Understanding Americans' value system	0.80	0.64			

Criteria for Construct validity (standardized loading estimate > .50, convergent validity: AVE > .50, discriminant validity: AVE > ASV), and composite reliability (CR > .70) (Hair et al., 2009).

In order to improve the CFA model's goodness-of-fit and construct validity, items which have low-level standardized loadings (< 0. 50). Within-construct error covariances were added. Residuals were examined to identify discrepancies between the proposed model and the estimated model Path Estimates (Hair et al., 2009). After adjustments, in the revised three-factor correlated CFA model, three items were included in *social adaptation* (making yourself understood, communicating with Americans, and communicating with international students from other ethnic groups), three items were included in *physical adaptation* (going shopping, finding your way around, and adapting to local accommodation), four items in *cultural adaptation* (understanding the host country's political system, seeing things from the host country's members' view, understanding cultural differences between the host country and the ethnic country, and understanding the host country's value system). The results of the revised three-factor correlated CFA model revealed a satisfactory goodness-of-fit (χ^2= 47.41, df = 28, χ^2/df =

1.69, $p < 0.05$ CFI = 0.98, TLI = 0.97, SRMR = 0.04, RMSEA = 0.05). The overall

goodness-of-fit was acceptable, and all relevant loadings were substantial and highly

significant (as shown in Figure 2).

Figure 2

The Revised CFA Model and Its' Goodness-of-Fit
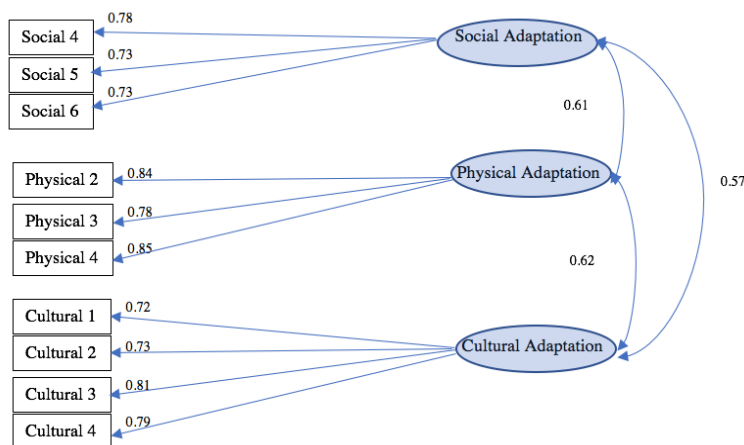
$\chi2= 47.41$, df = 28, $\chi2$/df = 1.69, p < 0.05 CFI = 0.98, TLI = 0.97, SRMR = 0.04,
RMSEA = 0.05
Notes: Criteria for Confirmatory Factor Analysis (CFA) model goodness-of-fit:
standardized loading > 0. 50), comparative fit index (CFI) > 0.90, Tucker-Lewis index
(TLI) > 0.90, the maximum likelihood (ML)-based standardized root mean squared
residual (SRMR) < 0.10, root mean squared error of approximation (RMSEA) < 0.08.

Moreover, all three factors' composite reliability (CR) values exceeded the

recommended threshold of 0.60 (Bagozzi & Yi, 1988) ranging from 0.79 to 0.86 (social

adaptation's CR = 0.79; physical adaptation's CR = 0.86; cultural adaptation's CR =

0.85). Construct validity was assessed by convergent validity (AVE > 0.50), discriminant

validity (AVE > average squared correlation estimate), and standardized loading estimate

($\beta > 0.50$) (Hair et al., 2009). The discriminant validities were assessed by comparing the

average variance extracted (AVE) values with the squared correlation between each pair

of constructs and constructing 95% confidence intervals around the inter-construct

correlations (Fornell & Larcker, 1981). All three factors' discriminant validities were

satisfied (AVE > average squared correlation estimate). In support of discriminant

validity, the AVE for each construct exceeded the squared correlation between the

construct and any other construct; in addition, the AVE for each latent construct exceeded

the 0.50 threshold, ranging from 0.56 to 0.68 (social adaptation's AVE = 0.56; physical

adaptation's AVE = 0.68; cultural adaptation's AVE = 0.58). Factors' standardized

loadings are higher than the cut-off value 0.50, range from 0.72 to 0.85. Therefore, items

of the refined model provide a satisfactory representation of the construct (Hu & Bentler,

1999) (as shown in Table 3). Based on the results of the revised three-factor correlated

CFA model, Chinese international students' sociocultural adaptation is assessed by

Sociocultural Adaptation Scale's three factors: social, physical, and cultural adaptation in

this study. These three factors together with psychological adaptation are the dependent

variables in this study.

Table 3

The Revised CFA Model's Composite Reliability and Construct Validity

Latent Variable	Measurement Items	Standardized Loading Estimate (ß)	Explained Variance (R^2)	Composite Reliability (CR)	Average Variance Extracted (AVE)	Average Shared Variance (ASV)
Social Adaptation	Making myself understood	0.78	0.61	0.79	0.56	0.56
	Communicating with Americans	0.73	0.53			
	Communicating with international students from other ethnic groups	0.73	0.54			
Physical Adaptation	Going shopping in the U.S.	0.84	0.70	0.86	0.68	0.68
	Finding my way around in the U.S.	0.78	0.61			
	Adapting to local accommodation in the U.S.	0.85	0.73			
Cultural Adaptation	Understanding the American political system	0.72	0.52	0.85	0.58	0.58
	Seeing things from Americans' point of view	0.73	0.54			
	Understanding cultural differences	0.81	0.65			
	Understanding Americans' value system	0.79	0.63			
Criteria for Construct validity (standardized loading estimate > .50, convergent validity: AVE > .50, discriminant validity: AVE > ASV), and composite reliability (CR > .70) (Hair et al., 2009).						

Multiple Regression Analyses

A series of multiple ordinary least squares (OLS) regression analyses in STATA 13 were applied to test this research's questions and hypotheses. This study's original plan was using SPSS to conduct multiple linear regression analyses. However, when testing multiple regression analyses' assumptions, the homoskedasticity of two dependent variables (social adaptation and physical adaptation) were violated (Pallant, 2013). Because STATA can provide "the option to estimate standard errors that are 'robust' to certain violations" (Hoechele, 2007, p2), this study's multiple regression analyses were conducted using STATA 13 to deal with the existence of heteroskedasticity. Other multiple regression analyses' assumptions were also examined in this study. Outliers were examined in SPSS by examining the Mahalanobis distance (Pallant, 2013). There are eight independent variables in this study, and thus the critical value is 26.12. There is only one case's critical value exceeds this value (27.97). To figure out whether this strange case can cause any undue influence on the results of all models, Cook's distance values were also inspected. The highest Cook's distance value for this outlier is only 0.05, which is lower than the maximum value (0.094). In order to remain enough cases to obtain generalizability, this outlier was not deleted in this study. All models' normality was inspected by the Normal Probability Plot (P-P) of the Regression Standardized Residual. Reasonably straight diagonal lines from the bottom left to top right show up in all models' Normal P-P Plot, which indicated there is no major deviations from normality (Pallant, 2013). To assess the multicollinearity, tolerance and VIF were examined in STATA 13. The tolerance value which is less than 0.10 and the VIF value which is above 10 indicate the presence of multicollinearity (Pallant, 2013), all models' tolerance values

and VIF values rejected the existence of multicollinearity. Homoskedasticity was assessed by Breusch-Pagan/Cook-Weisberg test in STATA 13. The results revealed the existence of heteroskedasticity in one dependent variable: physical adaptation ($\chi 2(1) =$ 3.98, p < 0.05). White's heteroskedastic robust standard error was applied as the remedial measure in this study.

Three factors of the revised CFA model (social adaptation, physical adaptation, and cultural adaptation) together with psychological adaptation are the dependent variables in this study. These four dependent variables can comprehensively reveal Chinese international students' process of intercultural adaptation. To assess the effects of the host and the ethnic social media, Chinese international students' social media usage is divided into Facebook and WeChat usage, with both of them introduced as independent variables in the model. Chinese international students' host language proficiency (English proficiency), ethnic identity, and their intention of staying in the United States are treated as additional variables of interest. Demographic variables, such as gender, age, and length of residence in the United States are addressed as control variables. Additional variables of interest and control variables' effects were controlled when analyzing the relationships between dependent variables and independent variables. The multiple regression equation applied to this study is: $Y^\wedge = a + b1*X1 + b2*X2 + . . . + b\ p*Xp$. Specific regression relationships are reported in the following paragraphs, and implications of these are explained in Chapter Five.

Research Questions and Related Hypotheses Testing

The first research question is, "Does social media usage influence Chinese international students' intercultural adaptation?". As mentioned earlier, intercultural

adaptation comprises of two different dimensions: sociocultural and psychological adaptation. Two hypotheses are posited in this study based on the first research question and these two dimensions. The second research question is, "What are the other factors influencing Chinese international students' intercultural adaptation?" The results of these two research questions are reported together.

Sociocultural Adaptation: Social Adaptation, Physical Adaptation, and Cultural Adaptation

The first hypothesis predicts that Facebook and WeChat usage have positive impacts on Chinese international students' sociocultural adaptation's three factors: social adaptation, physical adaptation, cultural adaptation. In other words, the more Chinese international students use Facebook and WeChat, they are more socially, physically, and cultural adaptive to the United States. This hypothesis is designed to uncover the relationship between Chinese international students' host social media usage and their process of sociocultural adaptation (social adaptation, physical adaptation, and cultural adaptation).

For the first individual factor of sociocultural adaptation: social adaptation, controlling additional variables of interest and control variables' effects, one independent variable: WeChat usage ($b = 0.28, t = 2.12, p < 0.05$) in the model accounted for a significant portion of the variance in Chinese international students' social adaptation, R^2 $= 0.28, F (8, 231) = 11.63, p < 0.001$. H1a is: Facebook and WeChat usage will have positive impacts on Chinese international students' social adaptation (one factor of sociocultural adaptation). This hypothesis is partially supported by the results. The results indicate that the more Chinese international students use WeChat, the more they are

socially adaptive to the United States. For additional variables of interest, host language

proficiency (b = 0.20, t = 7.3, p < 0.001) has a positive relationship with social

adaptation, which indicates that Chinese international students with higher host language

proficiency (English proficiency) level are more socially adaptive to the United States.

Among all three control variables, age (b = -0.09, t = -2.23, p < 0.05) has a negative

relationship with social adaptation, which indicates that Older Chinese international

students are less socially adaptive to the United States (as shown in Table 4).

Table 4

OLS Regression Analyses for the Relationship between Social Adaptation (One Factor of Sociocultural Adaptation Scale) and Social Media Usage (Facebook Usage and WeChat Usage)

Variables	b	Std. Error	t	p
Constant	5.29	1.24	4.25	***
Facebook Usage	0.13	0.13	1.03	0.30
WeChat Usage	0.28	0.13	2.12	*
Language Proficiency	0.20	0.03	7.30	***
Ethnic Identity	0.02	0.01	1.72	0.09
Intention of Staying in the U.S.	0.02	0.11	0.14	0.89
Age	-0.09	0.04	-2.23	*
Gender	-0.10	0.25	-0.39	0.70
Length of Residence	0.13	0.20	0.65	0.52
Dependent Variable: Social Adaptation				
***$p < 0.001$, **$p < 0.01$, *$p < 0.05$.				
$R^2 = 0.28$, $F_{(8, 231)} = 11.63$, $p < 0.001$. There was no multicollinearity exists in any independent variables (VIF of each variable < 10 and tolerance of each variable > 0.10) (Pallant, 2013).				

For the second individual factor of sociocultural adaptation: physical adaptation,

controlling additional variables of interest and control variables' effects, one independent

variable: WeChat usage ($b = 0.35$, $t = 2.41$, $p < 0.05$) in the model accounted for a

significant portion of the variance in Chinese international students' physical adaptation, $R^2 = 0.22$, F (8, 231) = 6.12, $p < 0.001$. **H1b** is: Facebook and WeChat usage will have positive impacts on Chinese international students' physical adaptation (one factor of sociocultural adaptation). This hypothesis is partially supported by the results. The results indicate that the more Chinese international students use WeChat, the more they are physically adaptive to the United States. For additional variables of interest, host language proficiency ($b = 0.10$, $t = 2.78$, $p < 0.01$) and ethnic identity ($b = 0.06$, $t = 3.58$, $p < 0.001$) both have positive relationships with physical adaptation, which indicates that Chinese international students with higher host language proficiency (English proficiency) level and ethnic identity level are more physically adaptive to the United States. Among all three control variables, age ($b = 0.11$, $t = 2.68$, $p < 0.01$) has a positive relationship with physical adaptation, which indicates that older Chinese international students are more physically adaptive to the United States. The length of residence in the United States ($b = - 0.45$, $t = - 1.99$, $p < 0.05$) has a negative relationship with physical adaptation, which indicate that the longer Chinese international students stay in the United States, the less physically adaptive they are (as shown in Table 5).

Table 5

OLS Regression Analyses for the Relationship between Physical Adaptation (One Factor of Sociocultural Adaptation Scale) and Social Media Usage (Facebook Usage and WeChat Usage)

Variables	*b*	Robust Std. Error	*t*	*p*
Constant	2.73	1.61	1.70	0.09
Facebook Usage	0.15	0.14	1.01	0.27
WeChat Usage	0.35	0.15	2.41	*
Language Proficiency	0.10	0.04	2.78	**
Ethnic Identity	0.06	0.02	3.58	***
Intention of Staying in the U.S.	0.25	0.14	1.89	0.06
Age	0.11	0.04	2.26	**
Gender	0.28	0.28	1.01	0.32
Length of Residence	-0.45	0.23	1.70	*
Dependent Variable: Physical Adaptation				
***p < 0.001, **p < 0.01, *p < 0.05.				
$R^2 = 0.22$, F (8, 231) = 6.12, p < 0.001. Results were based on White's heteroskedastic robust standard errors because the Breusch-Pagan/Cook-Weisberg test revealed the existence of heteroskadesticity. There was no multicollinearity exists in any independent variables (VIF of each variable < 10 and tolerance of each variable > 0.10) (Pallant, 2013).				

For the third individual factor of sociocultural adaptation: *cultural adaptation*, controlling additional variables of interest and control variables' effects, there is no statistically significant relationships between independent variables (Facebook and WeChat usage) and the dependent variable (cultural adaptation) in the model, $R^2 = 0.08$, F (8, 231) = 2.76, $p < 0.01$. **H1c** is: Facebook and WeChat usage will have positive impacts on Chinese international students' cultural adaptation (one factor of sociocultural adaptation). This hypothesis is rejected by the results. For additional variables of interest, ethnic identity ($b = 0.05$, $t = 2.17$, $p < 0.01$) has a positive relationship with cultural adaptation, which indicates that Chinese international students with higher ethnic identity

level are more culturally adaptive to the United States. For control variables, there is no

statistically significant relationship with the dependent variable (cultural adaptation) (as

shown in Table 6).

Table 6

OLS Regression Analyses for the Relationship between Cultural Adaptation (One Factor of Sociocultural Adaptation Scale) and Social Media Usage (Facebook Usage and WeChat Usage)

Variables	b	Std. Error	t	p
Constant	7.14	2.25	3.17	**
Facebook Usage	0.30	0.24	1.28	0.2
WeChat Usage	0.12	0.24	0.48	0.63
Language Proficiency	0.08	0.05	1.58	0.12
Ethnic Identity	0.05	0.02	2.17	*
Intention of Staying in the U.S.	0.09	0.20	0.44	0.66
Age	0.01	0.07	0.18	0.86
Gender	-0.16	0.46	-0.36	0.72
Length of Residence	0.52	0.36	1.46	0.15
Dependent Variable: Cultural Adaptation				
***$p < 0.001$, **$p < 0.01$, *$p < 0.05$.				
$R^2 = 0.08$, F (8, 231) = 2.76, p < 0.01. There was no multicollinearity exists in any independent variables (VIF of each variable < 10 and tolerance of each variable > 0.10) (Pallant, 2013).				

Psychological Adaptation

For psychological adaptation: controlling additional variables of interest and

control variables' effects, Facebook usage ($b = 0.84, t = 2.92, p < 0.01$) and WeChat

usage ($b = 0.87, t = 2.97, p < 0.01$) in the model accounted for significant portions of the

variance in Chinese international students' s adaptation, $R^2 = 0.33$, F (8, 231) = 14.80, p

< 0.001. **H1d** is: Facebook and WeChat usage will have positive impacts on Chinese

international students' psychological adaptation. This hypothesis is fully supported by the results. The results indicate that the more Chinese international students use Facebook and WeChat, the more they are psychologically adaptive to the United States. For additional variables of interest, host language proficiency ($b = 0.37, t = 6.08, p < 0.001$) and ethnic identity ($b = 0.09, t = 3.19, p < 0.01$) both have positive relationships with psychological adaptation, which indicates that Chinese international students with higher host language proficiency (English proficiency) level and ethnic identity level are more psychologically adaptive to the United States. For control variables, there is no statistically significant relationship with the dependent variable (psychological adaptation) (as shown in Table 7).

Table 7

OLS Regression Analyses for the Relationship between Psychological Adaptation and Social Media Usage (Facebook Usage and WeChat Usage)

Variables	b	Std. Error	t	p
Constant	6.48	2.77	2.34	0.02
Facebook Usage	0.84	0.29	2.92	**
WeChat Usage	0.87	0.29	2.97	**
Language Proficiency	0.38	0.06	6.08	***
Ethnic Identity	0.09	0.03	3.19	**
Intention of Staying in the U.S.	0.34	0.24	1.41	0.16
Age	0.04	0.09	0.41	0.68
Gender	0.16	0.56	0.29	0.77
Length of Residence	0.05	0.44	0.11	0.91
Dependent Variable: Psychological Adaptation				
***$p < 0.001$, **$p < 0.01$, *$p < 0.05$.				
$R^2 = 0.33$, F (8, 231) = 14.80, p < 0.001. There was no multicollinearity exists in any independent variables (VIF of each variable < 10 and tolerance of each variable > 0.10) (Pallant, 2013).				

For research question one, controlling additional variables of interests and control variables' effects, results indicate that **H1a** ("Facebook and WeChat usage will have positive impacts on Chinese international students' social adaptation (one factor of sociocultural adaptation))") is partially supported. **H1b** ("Facebook and WeChat usage will have positive impacts on Chinese international students' physical adaptation (one factor of sociocultural adaptation))" is partially supported. **H1c** ("Facebook and WeChat usage will have positive impacts on Chinese international students' cultural adaptation (one factor of sociocultural adaptation))" is rejected. **H1d** ("Facebook and WeChat usage will have positive impacts on Chinese international students' psychological adaptation") is fully supported.

To answer research question two, additional variables of interest and control variables' relationships with sociocultural adaptation's three factors: social adaptation, physical adaptation, cultural adaptation, and psychological adaptation are considered in this study. For additional variables of interest, Chinese international students' host language proficiency (English proficiency) has positive relationships with sociocultural adaptation's two factors: social (see Table 4) and physical adaptation (see Table 5), and psychological adaptation (see Table 7). Chinese international students' ethnic identity has positive relationships with sociocultural adaptation's two factors: physical (see Table 5) and cultural adaptation (see Table 6), and psychological adaptation (see Table 7). For control variables, *Age*, has a negative relationship with social adaptation (see Table 4), and has a positive relationship with physical adaptation (see Table 5). Chinese international students' length of residence in the United States has a negative relationship with the specific physical adaptation (see Table 5).

Chapter Five: Conclusion

Comprehensive data analyses have been conducted in this study to investigate

Chinese international students' social media (Facebook and WeChat) usage and its

influences on their process of intercultural adaptation (sociocultural and psychological).

At the same time, additional variables of interest and control variables' impacts are also

considered in this study. The findings help better understand the phenomenon of

intercultural adaptation and offer interesting directions for future research.

Discussion

Intercultural Adaptation and Social Media Usage (Facebook and WeChat):

Intercultural adaptation is a multi-dimensional concept which can be divided into

sociocultural and psychological adaptation (Ward & Kennedy, 1999). Sociocultural

adaptation is determined by the behavioral and cognitive difficulties experienced by

immigrants who desire to adapt to the host society. Psychological adaptation focuses on

the individuals' psychological well-being and their levels of satisfaction with their own

transitions in the host country (Ward & Kennedy, 1999). In this study, the distinction

between these two dimensions of adaptation (sociocultural and psychological) is

supported by their different relationships with Chinese international students' Facebook

usage and WeChat usage.

Sociocultural Adaptation: Confirmatory factor analysis is conducted in this study

to test the Sociocultural Adaptation Scale (Ward & Kennedy, 1999). Referencing

previous research (Chen, 2010), the most representative items (social adaptation, physical

adaptation, and cultural adaptation) of the Sociocultural Adaptation Scale are identified

and examined in this study. Based on the multiple ordinary least squares (OLS) regression analyses' results, Chinese international students' WeChat usage does have positive relationships with two factors of sociocultural adaptation: social adaptation and physical adaptation. This study indicates that Chinese international students who access WeChat more frequently are more adaptive specifically in terms of social adaptation and physical adaptation.

One potential explanation for these two positive relationships is that Chinese international students in the United States adapt to the environment as a group (Lim & Pham, 2016), instead of by themselves. For social adaptation, within the group of Chinese international students, group members act as information retrieval and emotional support resources for each other. WeChat can act as a convenient and useful tool for them to exchange information, follow-up on each other's activities, and build interpersonal relationships while in the United States. For example, Chinese international students can share their experiences and tips on how to make themselves understood and how to communicate with Americans and international students from other ethnic groups. For physical adaptation, interacting with other international students on WeChat not only can help obtain useful information (e.g., how to find their way around), it can also help find companions with similar interests for daily activities, such as going shopping and finding roommates for local accommodation. Collectivism might help explain why the Chinese students likely feel comfortable in operating within groups since it is an important characteristic of Chinese culture and could potentially influence Chinese international students' behaviors, even though they live in an American sociocultural environment. Second, with the increase in the number of Chinese international students in the United

States, these students can easily find companions who are of the same ethnicity. Third, Chinese international students exchanging information and participating in activities with people from their same ethnic group while living in the United States could just be a reflection of them operating within their comfort zone, because they experience less sociocultural differences and minimal language barriers.

Psychological Adaptation: Social support received by acculturating individuals is an essential factor which can influence psychological adaptation (Ward & Kennedy, 1999). The American social media platform, Facebook and the Chinese social media platform, WeChat provide different information sharing experiences and social support networks for international students and thus might influence their psychological adaptation experiences differently. As **H1d** anticipated however, results show that Chinese international students' Facebook and WeChat usage both have positive relationships with their psychological adaptation. This study indicates that Chinese international students who access Facebook and WeChat more frequently are more psychologically adaptive.

There are four potential explanations for Facebook usage's impact on Chinese international students' psychological adaptation. First, the content on Facebook can help Chinese international students better understand American sociocultural customs and norms, which can facilitate their adaptation and ease their psychological stressors. Second, for these students, the language of content and communication on Facebook is English. So, these students could potentially improve their host language proficiency with greater Facebook usage, and their gradual improvement in English could ease their psychological stress. Third, Facebook is a convenient platform for Chinese international

students to connect and build interpersonal relationships with Americans and international students from other ethnic groups. Interpersonal networks on Facebook can increase Chinese international students' perceived social support and promote their sense of belonging to the United States. These positive attitudes toward the United States can help Chinese international students achieve a higher level of psychological adaptation. Fourth, compared to face-to-face communication, Chinese international students experience less psychological reluctance for these kinds of interactions because Facebook offers them the opportunity to think twice and correct their grammatical errors before sending a message or posting anything on Facebook.

On WeChat, the dominant language is Chinese, and majority of contacts of the Chinese international students happen to be people of the same ethnicity (Chinese). Keeping this in mind, there are two potential explanations for WeChat usage's impact on Chinese international students' psychological adaptation. First, online activities on WeChat could potentially be perceived as a means of maintaining one's connection to ethnic language and ideology, which could in turn strengthen Chinese international students' ethnic identity. Past research indicates that this could have positive effects on their psychological well-being (Chen, 2008). Second, Chinese international students could get social support from other Chinese people (Chinese in the mainland of China, and Chinese in the United States) by using WeChat, and social support has been considered a significant predictor of psychological adaptation during the process of intercultural adaptation.

Intercultural Adaptation and Other Factors (Host Language Proficiency, Ethnic Identity, Age, and The Length of Residence in the United States):

Host Language Proficiency: Consistent with extant research on the impacts of host language proficiency on facilitating acculturating individuals' intercultural adaptation (Berry et al., 2006; Yu & Shen, 2012; Zimmermann, 1995), this study indicates that Chinese international students who have higher level of host language proficiency (English proficiency) are more adaptive to the United States in terms of the specific social and physical adaptation, and psychological adaptation. The improvement of host language proficiency not only increases the effectiveness and efficiency of Chinese international students' communication in the United States, but it also eases Chinese international students' psychological stress and improves their psychological well-being and their satisfaction levels regarding their own transitions in the United States.

Ethnic Identity: Results of several studies (Ong et al., 2006; Phinney, 1989; Phinney et al., 1997; Roberts et al., 1999) indicate that an ethnic minority group member with a strong ethnic identity has a higher level of psychological well-being. This study's results are not only consistent with previous research, but also document that ethnic identity can facilitate Chinese international students' sociocultural adaptation and ease the difficulties of physical and cultural adaptation. For psychological adaptation, ethnic identity could act as a buffer in the face of the discrimination and the differentiation experienced by acculturating individuals (Tajfel & Turner, 1986). For sociocultural adaptation's two factors: specifically, physical and cultural adaptation, ethnic identity could make acculturating individuals appreciate the positive virtues of their own ethnic group (Outten et al., 2009) and help them have more confidence in dealing with cognitive and behavioral difficulties during the process of sociocultural adaptation.

Age: In this study, *Age* has a negative relationship specifically with the specific social adaptation, which indicates older Chinese international students are less socially adaptive in the United States. One potential explanation for this could be that older students are usually in a higher level of study (undergraduate, graduate, and post-graduate). Compared to graduate and post-graduate students, undergraduate Chinese international students might potentially have more opportunities (e.g., group projects, classes) to interact with Americans and international students from other ethnic groups. Daily interactions could help these Chinese international students hone their skills of making themselves understood and effectively communicating with Americans and international students from other ethnic groups. Besides the previous negative relationship with social adaptation, *Age* also has a positive relationship specifically with physical adaptation. One possible explanation for that could be that older students have more wisdom, skills and living experiences to help solve issues in their daily life.

The Length of Residence in the Host Country: Inconsistent with previous research (Ward & Kennedy, 1999; Miglietta & Tartaglia, 2009; Chen, 2010), this study's results indicate that the longer Chinese international students stay in the United States, the less physically adaptive they are. Ward and colleagues (2001) suggested the effects of the residence length in the host country can be influenced by the type of migrating group (sojourners, immigrants, or refugees) and the dimension of adaptation (cognitive, behavioral, or affective). There are two potential explanations for the negative relationship between the length of residence in the United States and Chinese international students' physical adaptation: first, the collectivistic cultural background could make Chinese international students stay within their ethnic group and hinder their

physical adaptation after the initial stage. In other words, Chinese international students might be willing to stay in their comfort zone (the ethnic group) even after having settled down in the United States. Without intentions of participating in local activities and adapting to local accommodations, Chinese international students' physical adaptation in the United States could be limited. Second, according to the U-Curve hypothesis, adaptations to the host country seems easy and successful for immigrants during the initial stage. Adjustment difficulties approach the peak after the initial stage, then decrease after this most challenging stage. During this most challenging stage, immigrants feel least adaptive to the host country. In this study, over half of the participants' length of residence in the United States is between one to five years (n=147). It is possible that these Chinese international students are still in the least physically adaptive stage and haven't experienced the turning point in their physical adaptation.

Implications

This study suggests that Facebook (the host social media) and WeChat (the ethnic social media) usage both have positive impacts on Chinese international students' successful adaptation (especially their psychological adaptation) in the United States. Consistent with previous studies, host language proficiency and ethnic identity are also critical factors that facilitate Chinese international students' intercultural adaptation. Host language proficiency (English proficiency) is not just a skill which could decrease behavioral and cognitive difficulties experienced by Chinese international students, it also has positive impacts on their psychological well-being. Likewise, ethnic identity is not only a buffer for the discrimination and the differentiation experienced by these individuals (Tajfel & Turner, 1986), it could increase Chinese international students'

confidence to deal cognitive and behavioral difficulties during the process of sociocultural adaptation. Age is a tricky factor in this study. It has a negative relationship with the specific social adaptation and has a positive relationship with the specific physical adaptation. Age's relationships with the specific social adaptation and physical adaptation suggest that immigrants' characteristics can generate impacts on their behaviors and successful adaptation. Inconsistent with previous research (Ward & Kennedy, 1999; Miglietta & Tartaglia, 2009; Chen, 2010), this study's results indicate that the longer Chinese international students stay in the United States, the less physically adaptive they are, which suggested the effects of the residence length in the host country can be influenced by the type of migrating group (sojourners, immigrants, or refugees) and the dimension of adaptation (cognitive, behavioral, or affective) (Ward et al., 2001). To meaningfully interpret immigrants' adaptation in host countries, researchers should take immigrants' characteristics and adaptation's dimensions into consideration.

Further, in this study, there are two surprising findings which deserve to be mentioned again. First, Facebook usage and WeChat usage both have positive relationships with psychological adaptation. In other words, Chinese international students' Facebook usage and WeChat usage both contribute to their psychological well-being and satisfaction levels toward their own transitions in the United States which could be understood better through the acculturation lens. Besides intercultural adaptation, acculturation is one of the most widely used theories which analyzes immigrants' cross-cultural adjustment. There are four strategies in acculturation theory: *assimilation, separation, marginalization* and *integration* (Berry et al., 1987; Berry et al., 2002; Buriel, 1993). *Integration* strategy means building interpersonal relationships and

retrieving information from the host sociocultural environment and the ethnic sociocultural environment. Kim's (2007) study suggests that immigrants who adopt the *integration* strategy experience less psychological stress. Because these immigrants are familiar with the norms and customs of the host country and the ethnic country, they can successfully grapple with the dissonance caused by cultural differences. This study's results are consistent with previous research. Facebook usage and WeChat usage both can reduce the psychological stress experienced by Chinese international students during the process of adaptation. Chinese international students can build new relationships and retrieve American sociocultural information on Facebook. New relationships can create the sense of belonging for Chinese international students. American sociocultural information can decrease the uncertainty experienced by Chinese international students. At the same time, they can use WeChat to maintain their previous relationships and retrieve Chinese sociocultural information. Previous interpersonal relationships (e.g., family members and friends in the mainland of China) can provide emotional support, and Chinese sociocultural information can enhance Chinese international students' ethnic identity which can decrease the side effects of the discriminations and differentiations experienced by Chinese international students.

Second, ethnic identity is the only variable which has a positive relationship with cultural adaptation. When facing the behavioral and cognitive difficulties during the cross-cultural adjustment process, it might be easy to think that immigrants are more adaptive when they are more similar to the host country's members. However. this study's results indicate that immigrants are more culturally adaptive to the host country when they realize the positive virtues of their own ethnic group.

This study's findings not only contribute to the literature focusing on intercultural adaptation and social media usage, it also adds to understanding of the international student experience in U.S. and offers some practical implications which could help universities and colleges better facilitate international students' successful adaptation to their new country of residence. This in turn could assist these universities and colleges to foster successful recruitment and retention of international students and improve the diversity of their student population. Further, higher education policies (informed by this research) could make Chinese international students in the U.S. feel better understood and supported which in the long-run could also improve their psychological adaptation experience.

Limitations

Despite the interesting findings and implications, this study has certain limitations. The first limitation is that it lacks generalizability. Even though this study's survey was open to Chinese international students all over the United States, since it was conducted using a snowball convenience sample, majority of this study's participants were based in specific U.S. states- Illinois, Indiana, Michigan, Ohio, and Wisconsin. The concentration of the participants geographically might influence the generalizability of this study.

The second limitation is related to survey research's reliability. One such limitation can be caused by the sequence of the survey questions. This study's survey questions' sequence is not randomized, and it is arranged based on the measurement scales. This kind of arrangement could increase the possibility that some questions could evoke reproducible or consistent answers from the participants.

The third limitation is related to survey research's validity. There are two potential causes: first, all the survey questions of this study were conducted in English, and some academic terms (ethnic identity) were included in the survey questions. The survey questions might not have measured exactly what they were designed to measure especially given that all the Chinese international students participating in this study might have had differential English language skills and educational levels. Second, participants' answers for questions which measure their host language proficiency could have been influenced by participants' social desirability (Edwards, 1957). Academic success is highly valued in Chinese culture (Sue & Zane, 1985), and the high level of host language proficiency (English proficiency) is a representation of Chinese international students' academic success. Social desirability might drive Chinese international students participating in this study to report higher scores on their host language proficiency (English proficiency) questions than their real host language proficiency (English proficiency) levels.

Future Research

To extend this study and find more meaningful results, three potential directions for future research are suggested. The first direction is specifying the acculturating individuals' online behaviors and exploring how these different behaviors influence these individuals' intercultural adaptation. This study only measures Chinese international students' usage frequencies of two social media platforms. Frequencies cannot reflect how active the individuals were during their online activities. Some people might prefer to actively use social media to build interpersonal relationships (e.g., leaving comments on others' posts, online chatting), and some people might prefer to passively receive

information from social media (e.g., reading through others' posts). Different online activities might have varied influences on acculturating individuals' information retrieval and interpersonal relation, and further influence their adaptation in the host country.

The second direction is exploring acculturating individuals' uses and gratifications of social media usage. Uses-and-gratifications theory has been widely-applied to analyze individuals' "antecedents, motives, and motives of communication within interpersonal and mediated contexts" (Papacharissi & Rubin, 2000). By analyzing Chinese international students' uses and gratifications of their Facebook and WeChat usage, Facebook and WeChat usage's impacts on intercultural adaptation could be more comprehensively understood.

The third direction is measuring acculturating individuals' online activities' effects on their adaptation, after taking offline social activities' effects into consideration. As mentioned before, media consumption indeed affects the acculturating individuals' adaptation, but higher media consumption does not necessarily lead to higher adaptation. Effects of the media usage could be influenced by the usage quality and things sacrificed for the usage (Huang, 1993). If acculturating individuals are too addicted to social media, they might not be able to deal with the behavioral and cognitive difficulties in real life. Taking offline social activities' effect into consideration could help researchers better understand whether social media is a convenient tool which can expand individuals' social scope and information resources, or if it is an impediment to the acculturating individuals' adaptation process.

Besides these three directions, improvements could be made in the survey questionnaire. The survey questionnaire could be designed into two versions with the

same content. One version would be in the host language and the other would be in the ethnic language. Randomly distributing these two versions of the survey questionnaire to research participants and comparing results of the two versions could help identify if language competence was a determining factor impacting this survey research's validity.

In summary, the relationships between acculturating individuals' social media usage and intercultural adaptation could further be explored by specifying acculturating individuals' online behaviors, measuring their uses and gratifications of social media usage, and taking offline social activities' effects into consideration. Future research could provide insights for governments and institutions to facilitate acculturating individuals adapt to their host countries.

BIBLIOGRAPHY AND REFERENCES

Acquisti, A., & Gross, R. (2006). Imagined communities: Awareness, information sharing, and privacy on the Facebook. In International workshop on privacy enhancing technologies (pp. 36-58). Springer, Berlin, Heidelberg.

Adelman, M. B. (1988). Cross-cultural adjustment: A theoretical perspective on social support. *International Journal of Intercultural Relations*, 12, 183–204.

Allen, B. J. (1995). "Diversity"; and organizational communication. *Journal of Applied Communication Research*, 143-155.

Anderson, L. E. (1994). A new look at an old construct: Cross-cultural adaptation. *International Journal of Intercultural Relations*, 18(3), 293-328.

Ataca, B., & Berry, J. W. (2002). Psychological, sociocultural, and marital adaptation of Turkish immigrant couples in Canada. *International Journal of Psychology*, 37(1), 13-26.

Atkinson, D., Morten, G., & Sue, S. (1983). *Counseling American minorities: A cross-cultural approach*. Dubuque, IA: William C. Brown.

Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16(1), 74-94.

Beiser, M., Barwick, C., Berry, J. W., da Costa, G., Fantino, A., Ganesan, S., et al. (1988). *Mental health issues affecting immigrants and refugees*. Ottawa: Health and Welfare Canada.

Bennett, J. M., Bennett, M. J., & Allen, W. (2003). Developing intercultural competence in the language classroom. *Culture as the core: Perspectives on Culture in Second Language Learning*, 237-270.

Berry, J. W. (1974). Psychological aspects of cultural pluralism: unity and identity reconsidered. *Topics in Culture Learning*, 2, 17-22.

Berry, J. W. (1984). Cultural relations in plural societies: Alternatives to segregation and their sociopsychological implications. *In Groups in Contact*, 11-27.

Berry, J. W., Kim, U., Minde, T., & Mok, D. (1987). Comparative studies of acculturative stress. *International Migration Review*, 491-511.

Berry, J. W., Kim, U., Power, S., Young, M., & Bujaki, M. (1989). Acculturation attitudes in plural societies. *Applied Psychology*, 38(2), 185-206.

Berry, J. W., Berry, J. W., Poortinga, Y. H., Segall, M. H., & Dasen, P. R. (2002). *Cross-cultural psychology: Research and Applications*. Cambridge University Press.

Berry, J. (2003). Conceptual approaches to acculturation. In K. M. Chun, P. B. Organista, & G. Marin (Eds.), *Acculturation: Advances in theory, measurement, and applied research, Washington*, DC: American Psychological Association, 17–37.

Berry, J. W., Phinney, J. S., Sam, D. L., & Vedder, P. E. (2006). *Immigrant youth in cultural transition: Acculturation, identity, and adaptation across national contexts*. Lawrence Erlbaum Associates Publishers.

Bertram, D. M., Poulakis, M., Elsasser, B. S., & Kumar, E. (2014). Social support and acculturation in Chinese international students. *Journal of Multicultural Counseling and Development*, 42(2), 107-124.

Bista, K. (Ed.). (2016). Campus support services, programs, and policies for international students. IGI Global.

Black, J. S. (1988). Work role transitions: A study of American expatriate managers in Japan. *Journal of international Business Studies*, 19, 277-294.

Bohannan, J. (2016). Psychologists grow increasingly dependent on online research subjects.

Boski, P. (1990). Correlative national self-identity of Polish immigrants in Canada and the United States. In N. Bleichrodt, & P. J. D. Drenth (Eds.), *Contemporary issues in cross-cultural psychology*, 207–216.

Boski, P. (1994). Psychological acculturation via identity dynamics: Consequences for subjective well-being. In A.-M. Bouvy, F. J. R. Van de Vijver, P. Boski, & P. Schmitz (Eds.), *Journeys into Cross-cultural Psychology*, 197–216.

Bowen, W. G., Derek, B., & Burkhart, G. (1999). A report card on diversity: lessons for business from higher education. *Harvard Business Review*, 77, 139-151.

Brisset, C., Safdar, S., Lewis, J. R., & Sabatier, C. (2010). Psychological and sociocultural adaptation of university students in France: The case of Vietnamese international students. *International Journal of Intercultural Relations*, 34(4), 413-426.

Brunner, B., Boyer, L., (2007). HBCUs on the Web: What messages are they sending to prospective minority students? Paper presented at the annual meeting of the National Communication Association Conference, 15-18.

Buriel, R. (1993). Acculturation, respect for cultural differences, and biculturalism among three generations of Mexican American and Euro American school children. *The Journal of Genetic Psychology*, 154(4), 531-543.

Carey, R. (2017). The use of social media platforms to improve teaching and learning for Chinese students. *European Journal of Teacher Education*, 20017(10).

Chae, M. H., Kelly, D. B., Brown, C. F., & Bolden, M. A. (2004). Relationship of ethnic identity and spiritual development: An exploratory study. *Counseling and Values*, 49(1), 15-26.

Chang, M. J., Witt-Sandis, D., & Hakuta, K., (1999). The dynamics of race in higher education: An examination of the evidence. *Equity & Excellence in Education: The University of Massachusetts School of Educational Journal*, 32(2), 12-16.

China Internet Watch (2016). Renren monthly unique log-in users down 22% YoY in Q3 2016.

China Whisper. (2015). Top 5 Most Popular Social Media in China.

Chen, S. X., Benet-Martínez, V., & Harris Bond, M. (2008). Bicultural identity, bilingualism, and psychological adjustment in multicultural societies: immigration-based and globalization-based acculturation. *Journal of Personality*, 76(4), 803-838.

Chen, W. (2010). Internet-usage patterns of immigrants in the process of intercultural adaptation. Cyberpsychology, *Behavior, and Social Networking*, 13(4), 387-399.

Chirkov, V., Vansteenkiste, M., Tao, R., & Lynch, M. (2007). The role of self-determined motivation and goals for study abroad in the adaptation of international students. *International Journal of Intercultural Relations*, 31(2), 199-222.

Church, A. T. (1982). Sojourner adjustment. *Psychological Bulletin,* 91(3), 540–572.

Cong, Li., Wanhsiu Tsai. (2015). Social media usage and acculturation: A test with Hispanics in the U.S. *Strategic Communication*, 204-212.

Dalisay, F., & Liu, Y. I. (2015). Education and language-based knowledge gaps among new immigrants in the United States: Effects of English-and native-language newspapers and TV. *International Journal of Communication*, 9, 23.

Edwards, A. L. (1957). The social desirability variable in personality assessment and research.

Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook friends: Social capital and college students' use of online social network sites. *Journal of Computer-Mediated Communication,* 12(4), 1143-1168.

Forbush, E., Foucault-Welles, B. (2016). Social media use and adaptation among Chinese Students beginning to study in the United States. *International Journal of Intercultural Relations,* 50, 1-12.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 39-50.

Furnham, A., Bochner. S. (1986). Cultural shock: Psychological reactions to unfamiliar environments.

Furnham, A., & Shiekh, S. (1993). Gender, generational and social support correlates of mental health in Asian immigrants. *International Journal of Social Psychiatry*, 39, 22–33.

Galchenko, I., van de Vijver, F. J. R. (2007). The role of perceived cultural distance in the acculturation of exchange students in Russia. *Journal of Intercultural Relations*, 31, 181-197.

Gao. G., Gudykunst. W. B. (1990). Uncertainty, anxiety and adaptation. *International Journal of Intercultural Relations*, 14(3), 301-317.

Gudykunst, W. B., Ting-Toomey, S., & Chua, E. (1988). *Culture and interpersonal communication*. Sage Publications, Inc.

George, D., & Mallery, M. (2003). Using SPSS for Windows step by step: a simple guide and reference.

Glass, M. H., & Bieber, S. L. (1997). The effects of acculturative stress on incarcerated Alaska native and non-native men. *Cultural Diversity and Mental Health*, 3, 175-191.

Gudykunst, W. B. (1988). Uncertainty and anxiety. *Theories in intercultural communication*, 123-156.

Gudykunst, W. B., & Kim, Y. Y. (1984). *Communicating with strangers: An approach to intercultural communication*. Addison Wesley Publishing Company.

Gurin, P. (1999). New research on benefits of diversity in college and beyond: An Empirical Analysis.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2009). *Multivariate data analysis*. Upper Saddle River, NJ: Prentice hall.

Hazen, H. D., Alberts, H. C. (2007). Visitors or immigrants? International students in the United States. *Population, Space and Place*, 12(3), 201-216.

Henderson, Z. P. (1992). Educating multicultural groups. *Human Ecology Forum*, 20, 16-19.

Hinduja, S., Patchin, J.W. (2008). Personal information of adolescents on the Internet: A quantitative content analysis of MySpace. *Journal of Adolescence*, 31, 125–146.

Hoechle, D. (2007). Robust standard errors for panel regressions with cross-sectional dependence. *Stata Journal*, 7(3), 281.

Hofstede, G., & Bond, M. H. (1984). Hofstede's culture dimensions: An independent validation using Rokeach's value survey. *Journal of Cross-cultural Psychology*, 15(4), 417-433.

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: a Multidisciplinary Journal*, 6(1), 1-55.

Institute of International Education. (2017). Open doors data: International students.

Jayasuriya, L., Sang, D., & Fielding, A. (1992). Ethnicity, immigration and mental illness: A critical review of Australian research. Canberra: Bureau of Immigration Research.

Jones, L. (2000). Universities need to take a stand and defend affirmative action, *Black Issue in Higher Education*, 17, p52.

Kaplan, A. M., & Haenlein, M. (2010). User of the world, unite! The challenge and opportunities of social media. *Business Horizons*, 53, 59-68.

Kantar. (2016). The report of Chinese social media platforms' effects.

Kantar (2017). 2017 Kantar Chinese social media effect report.

Keating, E. L. (1998). *Power sharing: Language, rank, gender, and social space in Pohnpei,* Micronesia (23). Oxford University Press on Demand.

Kim, J. K. (1980). Explaining acculturation in a communication framework: An empirical test. *Communication Monographs,* 47, 155-179.

Kim, K. H., Yun, H., & Yoon, Y. (2009). The Internet as a facilitator of cultural hybridization and interpersonal relationship management for Asian international students in South Korea. *Asian Journal of Communication*, 19(2), 152-169.

Kim, Y. Y. (1977). Communication patterns of foreign immigrants in the process of acculturation. *Human Communication Research*, 4, 66-77.

Kim, Y. Y. (1995). Cross-cultural adaptation: An integrative theory. In: Wiseman RL, ed. *Intercultural Communication Theory*. Thousand Oaks, CA: Sage Publications, Inc. 170-193.

Kim, Y. Y. (2010). *Becoming Intercultural: An Integrative Theory of Communication and Cross-Cultural Adaptation*. Thousand Oaks, CA: Sage Publications, Inc.

Klopf, D. W. (1987). Intercultural encounters: The fundamental of communication.

Koziol, S., Greenberg, J., Williams, L., Niehaus, E., & Jacobson, C. (2011). Internationalizing teacher education: A systemic initiative. In International conference on education for teaching, Glasgow, Scotland.

Kraut, R., Kiesler, S., Boneva, B., Cummings, J., Helgeson, v., & Crawford, A. (2002). Internet paradox revisited. *Journal of Social Issues*, 58, 49-74.

LaFromboise, T., Coleman, H. L., & Gerton, J. (1993). Psychological impact of biculturalism: Evidence and theory. *Psychological Bulletin*, 114(3), 395.

Landry, R., & Bourhis, R. Y. (1997). Linguistic landscape and ethnolinguistic vitality: An empirical study. *Journal of Language and Social Psychology, 16*(1), 23-49.

Lee, J., Lei, A., & Sue, S. (2001). The current state of mental health research on Asian Americans. *Journal of Human Behavior in the Social Environment*, 3, 159–178.

Li, C., & Tsai, W. H. S. (2015). Social media usage and acculturation: A test with Hispanics in the US. *Computers in Human Behavior*, 45, 204-212.

Li, X., & Chen, W. (2014). Facebook or Renren? A comparative study of social networking site use and social capital among Chinese international students in the United States. *Computers in Human Behavior, 35*, 116-123.

Lim, S. S., & Pham, B. (2016). 'If you are a foreigner in a foreign country, you stick together': Technologically mediated communication and acculturation of migrant students. *New Media & Society*, 18(10), 2171-2188.

Lin, C., Fang, W., & Jin, J. (2017). You are what you post in "circle of friends" of WeChat: Self-presentation and identity production from a personality perspective. *Global Media and China*, 2(2), 138-152.

Lin, J. H., Peng, W., Kim, M., Kim, S. Y., & LaRose, R. (2012). Social networking and adjustments among international students. *New Media & Society, 14*(3), 421–440.

Make a Websitehub.com. (2015). 2015 Chinese social media statistics and trends infographic.

Martin, J. N., & Nakayama, T. K. (2013). *Intercultural communication in contexts*. New York: NY: McGraw-Hill.

Masgoret, A. M., & Ward, C. (2006). Culture learning approach to acculturation. In D. L. Sam, & J. W. Berry (Eds.), *The Cambridge handbook of acculturation psychology*, Cambridge: Cambridge University Press, 58–77.

McCoy, D. (1992). The influence of structural factors on the emergent ethnicity of immigrant groups: The Vietnamese in Sydney, *Australia*. *Ethnic Groups*, 9(4), 247-265.

McKenna, K. Y. A., & Bargh, J. A. (1998). Coming out in the age of the Internet: Identity "demarginalization" through virtual group participation. *Journal of Personality and Social Psychology*, 75(3), 681-694.

Melkote, S. R., Liu, D. J. (2000). The role of the Internet in forging a pluralistic integration: A study of Chinese intellectuals in the United States. *International Communication Gazette*, 62(6), 495-504.

Miglietta, A., Tartagila, S. (2008). The influence of the length of stay. Linguistic competence and media exposure in immigrants' adaptation. *Cross-Cultural Research*, 43(1), 46-61.

Mortenson, S. (2006). Cultural differences and similarities in seeking social support as a response to academic failure: A comparison of American and Chinese college students. *Communication Education*, 55, 127–146.

Oberg, K. (1960). Cultural shock: Adjustment to new culture environments. *Practical Anthropology*. 177-182.

Ong, A. D., Phinney, J. S., & Dennis, J. (2006). Competence under challenge: Exploring the protective influence of parental support and ethnic identity in Latino college students. *Journal of Adolescence*, 29(6), 961-979.

Ouarasse, O. A., & van de Vijver, F. J. (2005). The role of demographic variables and acculturation attitudes in predicting sociocultural and psychological adaptation in Moroccans in the Netherlands. *International Journal of Intercultural Relations*, 29(3), 251-272.

Outten, H., Schmitt, M., Garcia, D., & Branscombe, N. (2009). Coping options: Missing links between minority group identification and psychological well-being. *Applied Psychology: An International Review*, 58(1), 146-170.

Pallant, J. (2013). SPSS survival manual. McGraw-Hill Education (UK).

Park, N., Song, H., & Lee, K. M. (2014). Social networking sites and other media use, acculturation stress, and psychological well-being among East Asian college students in the United States. *Computers in Human Behavior*, 36, 138-146.

Parham, T. A., & Helms, J. E. (1985). Relation of racial identity attitudes to self-actualization and affective states of Black students. *Journal of Counseling Psychology*, 32(3), 431.

Pedersen, P. B. (1991). Counseling international students. *The Counseling Psychologist*, 19, 10–58.

Pempek, T. A., Yermolayeva, Y. A., & Calvert, S. L. (2009). College students' social networking experiences on Facebook. *Journal of applied developmental psychology*, 30(3), 227-238.

Pew Research Center. (2013). Social Networking Fact Sheet.

Pew Research Center. (2016). Social Media Update 2016.

Pew Research (2018). Social Media Use in 2018.

Philipsen, G. (1992). Speaking culturally: Explorations in social communication. SUNY Press.

Phinney, J. S. (1989). Stages of ethnic identity development in minority group adolescents. *The Journal of Early Adolescence*, 9(1-2), 34-49.

Phinney, J. S. (1990). Ethnic identity in adolescents and adults: review of research. *Psychological Bulletin*, 108(3), 499.

Phinney, J. S., Cantu, C. L., & Kurtz, D. A. (1997). Ethnic and American identity as predictors of self-esteem among African American, Latino, and White adolescents. *Journal of Youth and Adolescence*, 26(2), 165-185.

Phinney, J. S., Horenczyk, G., Liebkind, K., & Vedder, P. (2001). Ethnic identity, immigration, and well-being: An interactional perspective. *Journal of Social Issues*, 57(3), 493-510.

Phinney, J. S., Romero, I., Nava, M., & Huang, D. (2001). The role of language, parents, and peers in ethnic identity among adolescents in immigrant families. *Journal of Youth and Adolescence*, 30(2), 135-153.

Phinney, J. S. (2003). Ethic identity and acculturation.

Roberts, R. E., Phinney, J. S., Masse, L. C., Chen, Y. R., Roberts, C. R., & Romero, A. (1999). The structure of ethnic identity of young adolescents from diverse ethnocultural groups. *The Journal of Early Adolescence*, 19(3), 301-322.

Rosenthal, D. A., & Feldman, S. S. (1992). The nature and stability of ethnic identity in Chinese youth: Effects of length of residence in two cultural contexts. *Journal of Cross-Cultural Psychology*, 23(2), 214-227.

Rosser, J. M. (1990). The role of the university president in realizing the multicultural university. *American Behavior Scientist*, 34(2), 223-231.

Ruben, B. D. (1976). Assessing communication competency for intercultural adaptation. *Group & Organization Studies*, 1(3), 334-354.

Rubin, A. M., & Rubin, R. B. (1985). Interface of personal and mediated communication: A research agenda. *Critical Studies in Media Communication*, 2(1), 36-53.

Rubin, A. M. (1993). Audience activity and media use. *Communications Monographs*, 60(1), 98-105.

Rubin, A. M. (1994). Media uses and effects: A uses-and-gratifications perspective.

Rudmin, F. W. (1996). Critical review of acculturation. In XIII International Congress of the International Association for Cross-Cultural Psychology, Montreal, Quebec, Canada.

Ryu, J. S. (1976). New-socialization function of mass media working among foreign students. Paper presented at the annual meeting of the Mass Communication Association, San Francisco CA.

Safdar, S., Lay, C., & Struthers, W. (2003). The process of acculturation and basic goals: Testing a multidimensional individual difference acculturation model with Iranian immigrants in Canada. *Applied Psychology: An International Review*, 52(4), 555–579.

Safdar, S., Struthers, W., & van Oudenhoven, J. P. (2009). Acculturation of Iranians in the United States, the United Kingdom, and the Netherlands. *Journal of Cross-Cultural Psychology*, 40(3), 468–491

Sandel, T. L. (2014). "Oh, I'm Here!": Social media's impact on the cross-cultural adaptation of students studying abroad. *Journal of Intercultural Communication Research*, 43(1), 1-29.

Sandhu, D. S., & Asrabadi, B. R. (1994). Development of an acculturative stress scale for international students: Preliminary findings. *Psychological Reports,* 75, 435–448.

Searle, W., & Ward, C. (1990). The prediction of psychological and sociocultural adjustment during cross-cultural transitions. *International Journal of Intercultural Relations*, 14, 449-464.

Shah, H. (1991). Communication and cross-cultural adaptation patters among Asian Indians. *International Journal of Intercultural Relations*, 15, p311-321.

Smith, T. B., & Silva, L. (2011). Ethnic identity and personal well-being of people of color: A meta-analysis. *Journal of Counseling Psychology,* 58(1), 42.

Sproull, L., Kiesler, S. (1991). Connections: New Ways of Working in the Networked Organization.

Statista. (2016). Most popular social network websites in the United States in November 2016, Based on share of visits.

Statista. (2017). Reach of leading social media and networking sites used by teenagers and young adults in the United States as of February 2017.

Statista (2018). Most popular mobile messaging apps worldwide as of January 2018, based on number of monthly active users (in millions)

Stefanone, M. A., Kwon, K., & Lackaff, D. (2011). The value of online friends: Networked resources via social network sites. *First Monday*, 16(2).

Sue, S., & Zane, N. W. (1985). Academic achievement and socioemotional adjustment among Chinese university students. *Journal of Counseling Psychology*, 32(4), 570.

Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behavior. In S. Worchel & WG Austin (Eds.), Chicago: Nelson-Hall. *Psychology of Intergroup Relations*, 7-24.

Taneja, H., & Wu, A. X. (2014). Does the Great Firewall really isolate the Chinese? Integrating access blockage with cultural factors to explain web user behavior. *The Information Society*, 30(5), 297-309.

Taft, R. (1957). A psychological model for the study of social assimilation. *Human Relations*, 10, 141-156.

Tart, R. (1977). Coping with unfamiliar cultures. In N. Warren (Ed.). *Studies in Cross-Cultural Psychology*, 121-153.

Tian, X. (2017). Face-work on social media: The presentation of self on Renren and Facebook. *Chinese Social Media Today: Social, Cultural, and Political Implications*.

Torbiorn, I. (1982). Living abroad: Personal adjustment and personnel policy in the overseas setting. *New York: John Wiley & Sons*. 24(3), 6-7.

Tsai, J. H. C. (2006). Use of computer technology to enhance immigrant families' adaptation, *Journal of Nursing Scholarship*, 38(1), 87-93.

U.S. Pew Research Center. (2012). Pew Internet & American Life Project, College Students and Technology.

Valenzuela, S., Correa, T., & Gil de Zúñiga, H. (2017). Ties, Likes, and Tweets: Using strong and weak ties to explain differences in protest participation across Facebook and Twitter use. *Political Communication*, 1-18.

Ward, C., Bochner, S., & Furnham, A. (2001). *The psychology of culture shock* (2nd ed.). East Sussex: Routledge.

Wang, C., & Mallinckrodt, B. (2006). Acculturation, attachment, and psychosocial adjustment of Chinese/Taiwanese international students. *Journal of Counseling Psychology*, 53, 422–433.

Ward. C. (1996). *Handbook of Intercultural Training*. Thousand Oaks, CA: Sage Publications, Inc.

Ward, C., & Kennedy, A. (1993a). Psychological and sociocultural adjustment during cross-cultural transitions: A comparison of secondary students at home and abroad. *International Journal of Psychology*, 28, 129-147.

Ward, C., & Kennedy, A. (1994). Acculturation strategies, psychological adjustment and sociocultural competence during cross-cultural transitions. *International Journal of Intercultural Relations,* 18, 329-343.

Ward, C., & Kennedy, A. (1996a). Crossing cultures: The relationship between psychological and sociocultural dimensions of cross-cultural adjustment. In J. Pandey, D. Sinha & D. P. S. Bhawuk (Eds.), *Asian contributions to Cross-cultural Psychology*, 289-306.

Ward, C., & Kennedy, A. (1996b). Before and after cross-cultural transition: A study of New Zealand volunteers on ®eld assignments. In H. Grad, A. Blanco & J. Georgas (Eds.), *Key issues in cross-cultural psychology*, 138-154.

Ward. C., Kennedy. A. (1999). The measurement of sociocultural adaptation. *International Journal of Intercultural Relations*, 23(4), 659-677.

Ward, C., Okura, Y., Kennedy, A., & Kojima, T. (1998). The U-curve on trial: A longitudinal study of psychological and sociocultural adjustment during cross-cultural transition. *Journal of Intercultural Relations,* 22, 277-291.

Ward, C., & Rana-Deuba, A. (1999). Acculturation and adaptation revisited. *Journal of Cross-cultural Psychology,* 30(4), 422-442.

Ward. C., Searle. W. (1990). The prediction of psychological and sociocultural adjustment during cross-cultural transitions. *International Journal of Intercultural Relations,* 14, 449-464.

Ward. C., Searle. W. (1991). The impact of value discrepancies and cultural identity on psychological and sociocultural adjustment of Sojourners. *International Journal of Intercultural Relations,* 15, 209-225.

Wei, M., Heppner, P., Mallen, M., Ku, T., Liao, K., & Wu, T. (2007). Acculturative stress, perfectionism, years in the United States, and depression among Chinese international students. *Journal of Counseling Psychology*, 54, 385–394.

Weinreich, P. (1988). The operationalization of ethnic identity. *Ethnic psychology. Research and practice with immigrants, refugees, native peoples, ethnic groups and sojourners*, 149-168.

Williams, R. (2015). Heteroskedasticity.

Yan, K., Berliner, D. C. (2013). Chinese international students' personal and sociocultural stressors in the United States. *Journal of College Student Development*, 54(1), 62-84.

Yang, C., Wu, H., Zhu, M., Southwell, G. B. (2004). Turning in to fit in? Acculturation and media use among Chinese Students in the United States. *Asian Journal of Communication, 1*4(1), 81-94.

Ye, J. (2005). Acculturation stress and use of the Internet among East Asian international students in the United States. *Cyber-Psychology & Behavior,* 8(2), 154-161.

Ye, J. (2006). Traditional and online support networks in the cross-cultural adaptation of Chinese international students in the United States. *Journal of Computer-Mediated Communication,* 11(3), 863-876

Yeh, C., & Inose, M. (2003). International students reported English fluency, social support satisfaction, and social connectedness as predictors of acculturative stress. *Counseling Psychology Quarterly,* 16, 15–28.

Yu, B., & Shen, H. (2012). Predicting roles of linguistic confidence, integrative motivation and second language proficiency on cross-cultural adaptation. *International Journal of Intercultural Relations*, 36(1), 72-82.

Ziegler, D. (1983). Printing in tongues: The foreign-language press in the United States. Paper presented at the annual convention of the Association of American Geographers, Denver, CO.

Zimmermann, S. (1995). Perceptions of intercultural communication competence and international student adaptation to an American campus. *Communication Education,* 44(4), 321-335.

Zhang, N., & Dixon, D. (2003). Acculturation and attitudes of Asian international students toward seeking psychological help. *Journal of Multicultural Counseling and Development,* 31, 205–222.

Appendix A

Informed Consent Form

MARQUETTE UNIVERSITY
AGREEMENT OF CONSENT FOR RESEARCH PARTICIPANTS
***Social Media Usage Patterns of Chinese International Students in the U.S. and How It
Influences Their Process of Intercultural Adaptation.***
Yumin Yan, Dr. Sumana Chattopadhyay,
Diederich College of Communication

You have been invited to participate in this research study. Before you agree to participate, it is important that you read and understand the following information. Participation is completely voluntary. Please ask questions about anything you do not understand before deciding whether or not to participate.

PURPOSE: The purpose of this research study is to examine social media usage patterns of Chinese international students in the United States, and investigate the relationship between social media usage and intercultural adaptation. You will be one of approximately 350 participants in this research study.

PROCEDURES: You will be asked to answer a series of questions about your online activities on different social media platforms and intercultural adaptation. Your name will not be recorded.

DURATION: Your participation will consist of the time needed to complete the questionnaire, probably 20-40 minutes in duration.

RISKS: The risks associated with participation in this study are no greater than you would experience in everyday life.

BENEFITS: There are no direct benefits to you for participating in this study. This research may benefit society by understanding how international students can best use social media to adapt to American society, and this in turn, can help American universities to enhance diverse cultural awareness of the entire student population through increasing student interactions. After you have completed the survey, you will have the option to provide your name and email address so that you can receive later via email a $10 gift card as compensation for your participation.

CONFIDENTIALITY: Data collected in this study will be kept confidential. All your data will be assigned an arbitrary code number rather than using your name or other information that could identify you as an individual. When the results of the study are published, you will not be identified by name. The data will be destroyed by shredding paper documents and deleting electronic files within 3-5 years after the completion of the study. Your research records may be inspected by the Marquette University Institutional Review Board or its designees and (as allowable by law) state and federal agencies.

VOLUNTARY NATURE OF PARTICIPATION: Participating in this study is completely voluntary. Given the anonymous nature of the survey, if you decide to withdraw from the study it will not be possible to extract and remove a particular response from the data set.

ALTERNATIVES TO PARTICIPATION: There are no known alternatives other than to not participate in this study.

CONTACT INFORMATION: If you have any questions about this research project, you can contact Yumin Yan or Dr. Sumana Chattopadhyay. If you have questions or concerns about your rights as a research participant, you can contact Marquette University's Office of Research Compliance at (414) 288-7570.

● Agree

● Disagree

Appendix B

Dependent Variables: Sociocultural Adaptation

1) For me, the difficulty level of making friends with Americans is:

(extremely difficulty); 2 (great difficulty); 3 (moderate difficulty); 4 (slight difficulty); 5

(no difficulty)

2) For me, the difficulty level of making friends with other international students of

difficulty ethnic groups is:

1 (extremely difficulty); 2 (great difficulty); 3 (moderate difficulty); 4 (slight difficulty);

5 (no difficulty)

3) For me, the difficulty level of understanding jokes and human with American

cultural backgrounds is:

1 (extremely difficulty); 2 (great difficulty); 3 (moderate difficulty); 4 (slight difficulty);

5 (no difficulty)

4) For me, the difficulty level of communicating with Americans is:

1 (extremely difficulty); 2 (great difficulty); 3 (moderate difficulty); 4 (slight difficulty);

5 (no difficulty)

5) For me, the difficulty level of communicating with other international students of

different ethnic groups is:

1 (extremely difficulty); 2 (great difficulty); 3 (moderate difficulty); 4 (slight difficulty);

5 (no difficulty)

6) For me, the difficulty level of going to local social gathering/events is:

1 (extremely difficulty); 2 (great difficulty); 3 (moderate difficulty); 4 (slight difficulty);

5 (no difficulty)

7) For me, the difficulty level of making myself understood is:

1 (extremely difficulty); 2 (great difficulty); 3 (moderate difficulty); 4 (slight difficulty);

5 (no difficulty)

8) For me, the difficulty level of dealing with people in authority is:

1 (extremely difficulty); 2 (great difficulty); 3 (moderate difficulty); 4 (slight difficulty);

5 (no difficulty)

9) For me, the difficulty level of using American transportation system is:

1 (extremely difficulty); 2 (great difficulty); 3 (moderate difficulty); 4 (slight difficulty);

5 (no difficulty)

10) For me, the difficulty level of going shopping in the United States is:

1 (extremely difficulty); 2 (great difficulty); 3 (moderate difficulty); 4 (slight difficulty);

5 (no difficulty)

11) For me, the difficulty level of finding my way around in the United States is:

1 (extremely difficulty); 2 (great difficulty); 3 (moderate difficulty); 4 (slight difficulty);

5 (no difficulty)

12) For me, the difficulty level of adapting to local accommodation in the United States
    is:

1 (extremely difficulty); 2 (great difficulty); 3 (moderate difficulty); 4 (slight difficulty);

5 (no difficulty)

13) For me, the difficulty level of following American rules and regulations is:

1 (extremely difficulty); 2 (great difficulty); 3 (moderate difficulty); 4 (slight difficulty);

5 (no difficulty)

14) For me, the difficulty level of getting used to the pace of life is:

1 (extremely difficulty); 2 (great difficulty); 3 (moderate difficulty); 4 (slight difficulty);

5 (no difficulty)

15) For me, the difficulty level of dealing with climate is:

1 (extremely difficulty); 2 (great difficulty); 3 (moderate difficulty); 4 (slight difficulty);

5 (no difficulty)

16) For me, the difficulty level of getting used to American food is:

1 (extremely difficulty); 2 (great difficulty); 3 (moderate difficulty); 4 (slight difficulty);

5 (no difficulty)

17) For me, the difficulty level of understanding the American political system is:

1 (extremely difficulty); 2 (great difficulty); 3 (moderate difficulty); 4 (slight difficulty);

5 (no difficulty)

18) For me, the difficulty level of understanding Americans' value system is:

1 (extremely difficulty); 2 (great difficulty); 3 (moderate difficulty); 4 (slight difficulty);

5 (no difficulty)

19) For me, the difficulty level of understanding cultural differences between the

United States and China is:

1 (extremely difficulty); 2 (great difficulty); 3 (moderate difficulty); 4 (slight difficulty);

5 (no difficulty)

20) For me, the difficulty level of seeing things from Americans' point of view is:

1 (extremely difficulty); 2 (great difficulty); 3 (moderate difficulty); 4 (slight difficulty);

5 (no difficulty)

21) For me, the difficulty level of dealing with unsatisfactory service in the United

States is:

1 (extremely difficulty); 2 (great difficulty); 3 (moderate difficulty); 4 (slight difficulty);

5 (no difficulty)

22) For me, the difficulty level of dealing with someone who is unpleasant is:

1 (extremely difficulty); 2 (great difficulty); 3 (moderate difficulty); 4 (slight difficulty);

5 (no difficulty)

Appendix C

Dependent Variables: Psychological Adaptation

1) How comfortable do you feel living in the United States?

not at all: 1: 2: 3: 4: 5: extremely comfortable

2) How satisfied are you with your academic studies in the United States?

not at all: 1: 2: 3: 4: 5: extremely satisfied

3) How comfortable do you feel interacting with Americans?

not at all: 1: 2: 3: 4: 5: extremely comfortable

4) How satisfied are you with your English ability in daily communication with Americans?

not at all: 1: 2: 3: 4: 5: extremely satisfied

5) How satisfied are you with living in the American culture?

not at all: 1: 2: 3: 4: 5: extremely satisfied

6) How much have you adapted to the American culture?

not at all: 1: 2: 3: 4: 5: a lot

7) How much is life in the United States an enjoyable experience?

not at all: 1: 2: 3: 4: 5: extremely enjoyable

8) How anxious are you to stay longer in the United States?

not at all: 1: 2: 3: 4: 5: extremely anxious

Appendix D

Independent Variables: Facebook Usage and WeChat Usage

    1) For me, the frequency of using Facebook is:

1 (never); 2 (seldom); 3 (sometimes); 4 (often); 5 (always)

    2) For me, the frequency of using WeChat is:

1 (never); 2 (seldom); 3 (sometimes); 4 (often); 5 (always)

Appendix E

Additional Variables of Interest: Host Language Proficiency (English Proficiency)

English Proficiency (2 items):

   1) How well would you say you understand English when someone is speaking to you?

<u>1 (not at all); 2; 3; 4; 5 (very well)</u>

   2) How well would you say you speak English?

<u>1 (not at all); 2; 3; 4; 5 (very well)</u>

Preference to use English in social interaction (3 items):

   3) What languages do you currently speak at home?

   1. Chinese

   2. Both

   3. English

  998 Don't Know

  999 No Answer

   4) What languages have you spoken outside of your home while at work in the United

      States in the past twelve months?

    1. Chinese

    2. Both

    3. English

  998 Don't Know

  999 No Answer

   5) What language have you spoken outside of your home when you are with friends?

    1. Chinese

2. Both

3. English

998 Don't Know

999 No Answer

English competence

6) I feel comfortable speaking English.

1 (strongly disagree); 2 (somewhat disagree); 3 (neutral); 4 (somewhat agree); 5 (strongly agree)

7) I have no difficulty in speaking and writing English for my study in the United States.

1 (strongly disagree); 2 (somewhat disagree); 3 (neutral); 4 (somewhat agree); 5 (strongly agree)

8) I'm afraid of talking to American people because of my poor English.

1 (strongly disagree); 2 (somewhat disagree); 3 (neutral); 4 (somewhat agree); 5 (strongly agree)

Appendix F

Additional Variables of Interest: Ethnic Identity

1) I have spent time trying to find out more about my own ethnic group, such as its history, traditions, and customs.

1 (strongly disagree); 2 (somewhat disagree); 3 (neutral); 4 (somewhat agree); 5 (strongly agree)

2) I am active in organizations or social groups that include mostly members of my own ethnic group.

1 (strongly disagree); 2 (somewhat disagree); 3 (neutral); 4 (somewhat agree); 5 (strongly agree)

3) I have a clear sense of my ethnic background and what it means for me.

1 (strongly disagree); 2 (somewhat disagree); 3 (neutral); 4 (somewhat agree); 5 (strongly agree)

4) I think a lot about how my life will be affected by my ethnic group membership.

1 (strongly disagree); 2 (somewhat disagree); 3 (neutral); 4 (somewhat agree); 5 (strongly agree)

5) I am happy that I am a member of the group I belong to.

1 (strongly disagree); 2 (somewhat disagree); 3 (neutral); 4 (somewhat agree); 5 (strongly agree)

6) I am not very clear about the role of my ethnicity in my life.

1 (strongly disagree); 2 (somewhat disagree); 3 (neutral); 4 (somewhat agree); 5 (strongly agree)

7) I really have not spent much time trying to learn more about the culture and history

of my ethnic group.

1 (strongly disagree); 2 (somewhat disagree); 3 (neutral); 4 (somewhat agree); 5 (strongly agree)

8) I have a strong sense of belonging to my own ethnic group.

1 (strongly disagree); 2 (somewhat disagree); 3 (neutral); 4 (somewhat agree); 5 (strongly agree)

9) I understand pretty well that my ethnic group membership means to me, in terms of how to relate to my own group and other groups.

1 (strongly disagree); 2 (somewhat disagree); 3 (neutral); 4 (somewhat agree); 5 (strongly agree)

10) In order to learn more about my ethnic background, I have often talked to other people about my ethnic group.

1 (strongly disagree); 2 (somewhat disagree); 3 (neutral); 4 (somewhat agree); 5 (strongly agree)

11) I have a lot of pride in my ethnic group and its accomplishments.

1 (strongly disagree); 2 (somewhat disagree); 3 (neutral); 4 (somewhat agree); 5 (strongly agree)

12) I participate in cultural practices of my own group, such as special food, music, or customs.

1 (strongly disagree); 2 (somewhat disagree); 3 (neutral); 4 (somewhat agree); 5 (strongly agree)

13) I feel a strong attachment towards my own ethnic group.

1 (strongly disagree); 2 (somewhat disagree); 3 (neutral); 4 (somewhat agree); 5 (strongly agree)

14) I feel good about my culture and ethnic background.

1 (strongly disagree); 2 (somewhat disagree); 3 (neutral); 4 (somewhat agree); 5 (strongly agree)

Appendix G

Control Variables:

1) Gender (Sex)

    1. Male

    2. Female

    999 No Answer

2) What is your age?

    0-97 Actual age

    998 Don't Know

    999 No Answer

3) How long have you stayed in the United States?

    1. Less than 1 year

    2. Less than 5 years

    3. 5 to 10 years

    4. Larger than 10 years

    998 Don't Know

    999 No Answer