

---

# Exploring How International Graduate Students in the US Seek Support

**Tamanna Motahar**

University of Massachusetts  
Amherst, USA  
tmotahar@cs.umass.edu

**Syed Ishtiaque Ahmed**

University of Toronto  
Canada  
ishtiaque@cs.toronto.edu

**Mahmood Jashim**

University of Massachusetts  
Amherst, USA  
mjasim@cs.umass.edu

**Narges Mahyar**

University of Massachusetts  
Amherst, USA  
nmahyar@cs.umass.edu

**Abstract**

International Graduate Students (IGS) are an integral part of the United States (US) higher education ecosystem. However, they face enormous challenges while transitioning to the US due to cultural shock, language barriers, and intense academic pressure. These issues can cause poor mental health, and in some cases, increased risk of self-harm. The relative ease of access and ubiquity of social technology have the potential for supporting IGS during socio-cultural transitions. However, little is known about how IGS use social technology for seeking support. To address this gap, we conducted a qualitative study with the IGS in Western Massachusetts to understand how they seek social support. Our preliminary findings indicate that our participants preferred seeking informational and network support through social technology. They expressed that they preferred to seek emotional support in-person and from their close contacts but we found a latent pattern that shows they use technology passively (e.g, following others posts, comments, etc). We also found that over time, their support-seeking preference changes from people of similar ethnicity to people with similar experiences. Finally, we identified language as the primary barrier to actively seek any kind of support through technology.

**Author Keywords**

Social Technology; Social Support; International Students.

---

Permission to make digital or hard copies of part or all of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. Copyrights for third-party components of this work must be honored. For all other uses, contact the owner/author(s).

*CHI '20 Extended Abstracts, April 25–30, 2020, Honolulu, HI, USA.*

© 2020 Copyright is held by the author/owner(s).

ACM ISBN 978-1-4503-6819-3/20/04.

<http://dx.doi.org/10.1145/10.1145/3334480.3383094>

**Social support** is the combination of *informational, instrumental, network, esteem* and *emotional* support [3, 4]. According to the definition, informational support is any kind of information or advice. Instrumental support is tangible support like offering ride share, exchanging goods, etc. Network support is the sense of belonging within a group or team. Esteem support is providing feedback. And, emotional support is providing love and empathy.

**Social technology** is the combination of social software such as social networking sites (SNS) and communication capabilities such as chat applications [17])

## CCS Concepts

•**Human-centered computing** → **Human computer interaction (HCI)**; User studies;

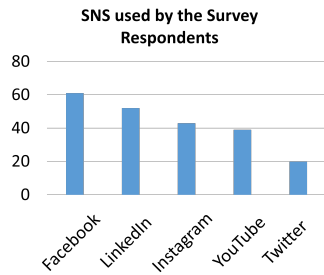
## Introduction

International graduate students (IGS) are an integral part of the US higher education because of their significant contributions, particularly in STEM (Science, Technology, Engineering, and Mathematics) education [26]. However, they face many challenges throughout the process of adjusting and adapting to the new society including ethnic discrimination, cultural shock, language barriers, and homesickness [13, 21, 26]. Previous work shows that these challenges are also prevalent in immigrants who transition to the US [7]. However, most IGS face further challenges due to their unfamiliarity with the academic environment [7] and the pressure of maintaining higher academic performance [19]. As a result, they become more vulnerable to having poor mental health and depressive symptoms compared to the other international students (e.g., undergraduate students) [8]. A study in 2017 found that one out of three (32%) graduate students have the risk of developing a psychological disorder and 2.3% of them reported contemplating suicide [9, 14].

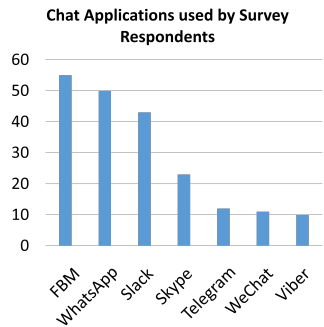
Social support is vital for individuals' adjustment and adaptation. Research shows that it has highly positive influences on reducing transitional stress [18]. According to Barbee et. al., **social support is the combination of informational, instrumental, network, esteem, and emotional** support [3, 4]. Although academic institutions in the US have the facilities and services for providing social support (e.g., information sessions, in-person counseling, etc.), IGS often face difficulties availing these resources due to social stigma, lack of awareness, and fear of their impact on academic career [9]. Research also shows that social technology, which consists of social software and communication applications to socially

connect people [17]) (e.g., social networking sites (SNS), chat applications, etc.), has the potential to facilitate social support and reduce transitional stress [11]. IGS frequently use social technology to stay in contact with their family and friends back home. [25]. In a separate vein, HCI and related scholarship have also explored the general struggles of the immigrants [10, 11, 16, 23], their information-seeking behaviors [5, 6], design and practice with communication technology [1], and infrastructural politics around their access to various services [22]. However, these topics do not directly address the unique needs of the IGS in the US. Hence, we know less about how IGS navigate social support specifically through the lens of the frequently used social technology.

To address this gap and gain a better understanding of how IGS seek social support, we conducted a qualitative study consisting of 71 initial surveys with IGS all over the US and 16 semi-structured interviews with the IGS from various educational institutes in Western Massachusetts. Preliminary findings revealed that our participants preferred seeking informational and network support through social technology, but they preferred to seek emotional support in-person and from close contacts. However, despite the preference of not using technology for emotional support, they end up using social technology in passive ways by following others' posts, comments, watching videos, etc. We also found that during their first few years of transitioning to the US, they preferred to seek support from people of similar ethnicity. However, this preference shifts over time towards seeking support from people with similar experiences. Finally, we found that for non-native English speaking IGS, language was a primary barrier to actively seek any kind of support through technology. Despite the ubiquity of social technology, the language barrier precipitated the increase in time and cognitive load required to explain background context for seeking support, which impeded participants' support-seeking process.



**Figure 1:** This figure shows different SNS used by survey respondents.



**Figure 2:** Different Chat Applications used by survey respondents. We refer to Facebook Messenger as FBM in this graph.

## Methodology

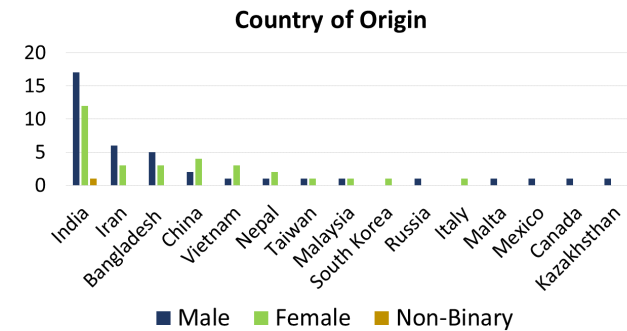
### Initial Survey

Our qualitative study started with an initial survey with 71 responses. Figure 3 shows country of origin and gender of our participants. In the survey we asked about their biggest challenges after coming to the US, their social support needs, and the types of social technology they used. The participation criteria for this survey were: (1) being at least 18 years old, (2) being an international student in the US, and (3) to be enrolled in a graduate program. We created our initial survey on Survey Monkey [20], distributed the survey link on social networking sites (e.g., Facebook, and Twitter) and general student email groups of UMass Amherst which is a large US public university. The survey was open from July 2019 to August 2019. We also wanted to find eligible participants for the semi-structured interview using this survey, so we asked whether they wanted to be contacted further for the interviews. We arranged for a raffle draw after closing the survey where three winners received \$50 Amazon gift cards.

From the initial survey, we found that Facebook (86%), and LinkedIn (73%) were their highest used SNS, and Facebook messenger(80%) and WhatsApp (70.42%) were their highest used chat applications. The detailed social technology usage information of the survey participants is presented in Figures 1, and 2. Regarding their biggest challenges, they reported transportation, housing, English fluency, loneliness, and homesickness after coming to the US (Figure 4). In response to their needs for various social support after their transition, 52% reported informational support, followed by 37% instrumental and network, 20% emotional and 7% esteem support (Table 3).

### Interviews

From the initial survey, 45 participants (25 male, 19 female, and 1 non-binary) showed interest in the interview. When



**Figure 3:** This figure depicts country and gender of Survey respondents. We had respondents from 15 different countries, where most of them were from Asia.

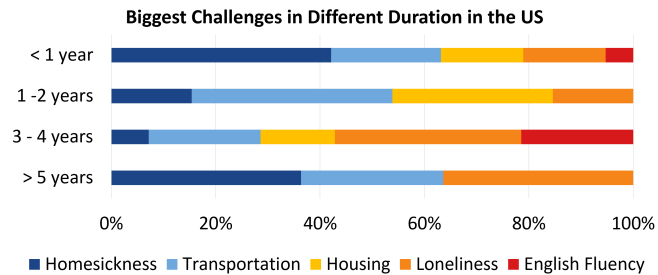
we contacted them to schedule interviews, 16 participants (9 male, 6 female, 1 non-binary, avg age = 25) responded. All 16 participants (75% Ph.Ds and 25% masters) were living in Western Massachusetts. The detailed demographic information of the interview participants is presented in Table 1. Among them, only three participants (P3, P10, and P13) were living with a partner.

### Data collection and analysis

In semi-structured interviews, we asked the participants both open-ended and focused questions. We selected the medium of the interview according to the participant's choices (e.g., phone call (3 participants), video conference (5 participants), and in-person (8 participants)). There were twelve primary questions (e.g., How was your transition to the US? What type of challenges did you have? What types of support do you seek? How do you seek support and why? What are the barriers you found while seeking support, etc.). The average interview time was 45 minutes and we offered a \$20 Amazon gift card to each participant. The study protocol and recruit-

*P	Country	Gender	*L
P1	Bangladesh	M	< 1
P2	Taiwan	F	< 1
P3	Bangladesh	M	1 - 2
P4	Bangladesh	M	1 - 2
P5	Iran	M	1 - 2
P6	Iran	M	1 - 2
P7	India	M	1 - 2
P8	Italy	F	1 - 2
P9	India	M	2 - 3
P10	Bangladesh	M	2 - 3
P11	India	NB	3 - 4
P12	China	F	3 - 4
P13	Iran	M	3 - 4
P14	Nepal	F	> 5
P15	Vietnam	F	> 5
P16	China	F	> 5

**Table 1:** This table shows the demographics of interview participants including country of origin, gender (M (Male), F(Female), NB (Non- binary), and \*L (stay length in the US), and \*P ( Participants' number).



**Figure 4:** This figures shows survey respondents' biggest challenges. Our analysis of the data showed that their self-reported biggest issues was varied according to their stay length in the US.

ment process were reviewed and approved by the University of Massachusetts Amherst IRB.

The first author and two research assistants conducted all the interviews. We described the study purpose and the contents of the consent form to each participant. The interviews were audio-recorded with participants' permissions and were manually transcribed from the recordings. We gathered a total of 700 minutes of interview recordings. For the preliminary qualitative data analysis, we transcribed the data and performed a thematic analysis on the data. Using the iterative coding method, we derived key themes gradually with iterative refinements. Furthermore, we extracted representative quotes from the participants to support the analytical claims.

## Findings

To gain an understanding of the social support-seeking of IGS, we analyzed the collected data to extract high-level themes. In this section, we present our preliminary findings with relation to these themes and corresponding participants' quotes (Table 2) to ground these themes.

### *Social technology was predominantly used for informational and network support-seeking*

Our participants primarily used social technology (e.g., Facebook, Twitter, LinkedIn, Facebook Messenger, WhatsApp, etc.) to seek informational and network support (Table 4). During the early transition phase, they mentioned the need for various academic, legal, and logistical information. This supports our survey data, where respondents reported informational support as one of their main needs. Interviewees mentioned seeking information about class schedules, course administration, research, lab culture, and norms. Although some of this information was strewn about in various institutional websites, the participants sought support via social technology to demystify and navigate through the unfamiliar academic system in the US. Furthermore, all participants wanted easily accessible information regarding student visas, part-time work opportunities, optional practical training (OPT), for which they relied on social technology. For network support, they joined several student organizations and local groups over SNS to get accustomed to the new culture and activities. However, all participants mentioned that they preferred not to seek emotional support via social technology. Particularly, they did not want to share their emotional challenges over SNS as it was time consuming and needed extra effort to explain the background context to the broader audience (see Table 2). Furthermore, when asked if anonymity can help with sharing emotional challenges over SNS, they mentioned that anonymity did not reduce the fear of being judged or getting abused for posting over the SNS platforms.

### *Preference for passive support-seeking through technology*

Our analysis shows that participants mentioned their reluctance to seek emotional support through social technology. However, they followed others' footsteps passively over social technology, where people had discussions towards their

Support Type	Respondents(%)
Informational	52%
Instrumental	37%
Network	37%
Emotional	20%
Esteem	7%

**Table 3:** Self-reported social support needs of the survey respondents.

Support Type	SNS (%)	Chat (%)
Informational	50	68
Instrumental	25	18.75
Network	37.5	93.7
Esteem	.06	43
Emotional	0	68.72

**Table 4:** Social support seeking by interview participants through social technology.

Support Seeking Themes	Supporting Quotes from the Interview Participants
<b>Informational and Network Support Seeking through Technology</b>	<b>P5:</b> "If I post my emotional challenges on Facebook, I just need to explain all the background and reasons, which is time consuming."
	<b>P7:</b> "I wanted some information about how to apply for a visa. So [I used] links that [has] been shared in a chat group."
	<b>P9:</b> "Social media is not like providing that [emotional support], it is definitely providing informational support."
	<b>P8:</b> "Even if I am anonymous, If I share a problem and somebody says something abusive it hurts my emotional state. So, that will do a lot worse than better."
<b>Preferring Passive Support Seeking</b>	<b>P1:</b> "In times of difficulties, it [watching YouTube videos] always helps me to feel a little bit better, along with getting information."
	<b>P9:</b> "Most of the time I can search google or search in the group to see the post. If I can google properly, I don't need to make a post myself."
	<b>P10:</b> "I follow the big names in twitter from my research fields who are publishing big papers or big journals, I try to follow them, I try to follow LinkedIn, I get information from there, that's it."
	<b>P13:</b> "Most of the time people [other students] talk about their own experience [in the student online groups] and their own way of getting things."
<b>Preferring to Connect with People with same Experiences over Ethnicity</b>	<b>P8:</b> "Having international students to talk to you about your courses is really important. But I didn't find that information from domestic students that much helpful, because the criteria are very different for them."
	<b>P10:</b> "I try to talk to people who have similar mentalities like me, and who have prior experience or prior understanding of what I'm going through. so that maybe they're a bit more sympathetic to me."
	<b>P14:</b> "As an international student, I think there's also a lot of questions regarding a lot of different policies [e.g. visa status] that apply to us, which I think becomes very crucial and important information that you can only ask another international student."

**Table 2:** In this table, we summarized corresponding quotes of the interview participants that supports main themes of social support-seeking that we cover in this paper.

struggles around their daily lives, or sensitive issues, such as, visa processing, academic pressure, to find solace. Participants mentioned that sharing their transitional and academic challenges was uncomfortable through online communication such as video calls, messages through chat applications, posts over SNS, etc. The discomfort stemmed from the fear of being judged and having negative interactions with the broader audience as well as language barriers which makes it harder to engage in back and forth online communication. Our results indicate that despite their preference towards seeking emotional support in-person, the majority of the participants (80%) passively used social technology for emotional support at times of difficulties by watching YouTube videos (entertainment and inspirational videos), cartoons, and funny memes.

#### *Support-seeking preference changes over time from people with similar ethnicity to people with similar experiences*

As the stay duration in the US increased (more than two years), the participants' preference towards seeking social support changed from people of similar ethnicity<sup>1</sup> to people with similar experiences. At the beginning of the transition, our participants sought all kinds of support from similar ethnic people whom they met for different social needs and interests (e.g., finding housing, ride, foods, religious practices). Over time, this was shifted to seeking support from other IGS who went through similar experiences regardless of their ethnicity. They met with other IGS through various academic and non-academic activities (e.g., labs, classrooms, department programs, conferences, internships, and part-time jobs). A few participants (12.5%) met with other IGS studying in

<sup>1</sup> Ethnicity is the cultural identity of a person including language, religion, nationality, ancestry, dress, and customs [15].

different universities in the US, or working on a similar research field through Facebook, LinkedIn, and Twitter. Although some participants (12.5%) found that the cultural differences and incompatible norms between ethnically diverse people were challenging to overcome, most of them found that the similar experiences of transition and academic challenges brought them closer together over time to seek all types of support from each other.

### **Discussion and Conclusion**

Our preliminary results surfaced several themes of how IGS in the US seek social support and the role of social technology in this support-seeking process. Our findings suggest that despite many offline facilities and resources provided by institutions, IGS prefer to seek informational support regarding academic institutes through social technology. This corroborate previous findings that addressed the same phenomenon due to lack of awareness of such resources and unfamiliarity of the US education system [9]. Aligned with previous research, we also found reservation among participants to share sensitive personal information over SNS to seek emotional support due to the fear of receiving negative reactions from the broader audience of SNS [3, 10]. We further found that our participants attributed such negative reactions to a lack of understanding and empathy for transitional and academic stress of IGS in the US. Furthermore, as most of our interviewees were non-English speakers, they found it very difficult to engage in back and forth communication about their emotional problems in online spaces. Unfortunately, due to various reasons such as lack of easy access, or knowledge about offline resources, they ended up passively seeking emotional support using social technology. While studies mentioned anonymity can be useful in sharing personal information without fear of repercussions [2], our interviewees specifically mentioned that anonymity does not help. We found that even protected by anonymity, the fear of

receiving negative or abusive remarks around a cry for emotional support was enough to deter them from seeking emotional support through social technology. Hsiao's work on new immigrants in the US shows a preference to seek support from similar ethnicity [11]. Here we extend their work by identifying how the support-seeking preference can change to people with similar experiences over time.

Our findings further point to the language barrier as the primary challenge for support seeking via SNS which demands time, and cognitive efforts. All of our participants were non-native English speakers, and reported a need for additional effort to explain the background context for seeking support over SNS. These findings corroborate with previous research [12, 24] on how non-native English speakers (i.e. international students and immigrants) face challenges in similar scenarios such as accessing online health care services. We further identified that the change in the preference of seeking support from people of similar ethnicity to people of similar experience might demand to communicate in English from non-native English speaking IGS. Therefore, the language barrier impedes not only informational support but also emotional support for IGS in the US. While we believe our findings are beneficial for understanding how IGS seek social support, we report our findings based on a relatively small sample. In the future, we intend to explore a broader sample size covering vast geographic regions and academic atmospheres to examine the dynamics of wider cultural backgrounds and practices. We believe that gaining a better understanding of their current support-seeking pattern, and preferences can pave the way to advance the design of social support systems that addresses IGS's unique challenges and needs. Considering the vulnerability of intentional graduate students, it is crucial for HCI researches to investigate technical interventions that help IGS with a smoother transition and better mental well-being.

## REFERENCES

- [1] Syed Ishtiaque Ahmed, Nusrat Jahan Mim, and Steven J Jackson. 2015. Residual mobilities: infrastructural displacement and post-colonial computing in Bangladesh. In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems*. ACM, 437–446.
- [2] Nazanin Andalibi and Andrea Forte. 2018. Announcing pregnancy loss on Facebook: A decision-making framework for stigmatized disclosures on identified social network sites. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems*. ACM, 158.
- [3] Nazanin Andalibi, Oliver L Haimson, Munmun De Choudhury, and Andrea Forte. 2018. Social support, reciprocity, and anonymity in responses to sexual abuse disclosures on social media. *ACM Transactions on Computer-Human Interaction (TOCHI)* 25, 5 (2018), 28.
- [4] Anita P Barbee and Michael R Cunningham. 1995. An experimental approach to social support communications. *Annals of the International Communication Association* 18, 1 (1995), 381–413.
- [5] Nadia Caidi, Danielle Allard, and Diane Dechief. 2008. Information practices of Immigrants to Canada—a review of the literature. *Unpublished report to Citizenship and Immigration Canada* (2008).
- [6] Nadia Caidi, Danielle Allard, and Lisa Quirke. 2010. Information practices of immigrants. *Annual review of information science and technology* 44, 1 (2010), 491–531.
- [7] Abrahao Andre de Araujo. 2011. Adjustment issues of international students enrolled in American colleges and universities: A review of the literature. *Higher education studies* 1, 1 (2011), 2–8.
- [8] Bryan Dosono and Bryan Semaan. 2019. Moderation Practices as Emotional Labor in Sustaining Online Communities: The Case of AAPI Identity Work on Reddit. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*. ACM, 142.
- [9] Amanda G Garcia-Williams, Lauren Moffitt, and Nadine J Kaslow. 2014. Mental health and suicidal behavior among graduate students. *Academic psychiatry* 38, 5 (2014), 554–560.
- [10] Tamy Guberek, Allison McDonald, Sylvia Simioni, Abraham H Mhaidli, Kentaro Toyama, and Florian Schaub. 2018. Keeping a Low Profile?: Technology, Risk and Privacy Among Undocumented Immigrants. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems*. ACM, 114.
- [11] Joey Chiao-Yin Hsiao and Tawanna R Dillahunt. 2018. Technology to Support Immigrant Access to Social Capital and Adaptation to a New Country. *Proceedings of the ACM on Human-Computer Interaction* 2, CSCW (2018), 70.
- [12] Soojung Kim and JungWon Yoon. 2012. The use of an online forum for health information by married Korean women in the United States. *Information Research* 17, 2 (2012), 1.
- [13] Sana Anwar Lashari, Amrita Kaur, and Rosna Awang-Hashim. 2018. The patent holder’s dilemma: Buy, sell, or troll? *Malaysian Journal of Learning and Instruction* 15, 2 (Jan. 2018), 33–54. <https://files.eric.ed.gov/fulltext/EJ1201660.pdf>

- [14] Katia Levecque, Frederik Anseel, Alain De Beuckelaer, Johan Van der Heyden, and Lydia Gisle. 2017. Work organization and mental health problems in PhD students. *Research Policy* 46, 4 (2017), 868–879.
- [15] Amber Pariona. THE IMPORTANCE OF INTERNATIONAL STUDENTS TO AMERICAN SCIENCE AND ENGINEERING. (????). Retrieved June 25, 2019 from <https://www.worldatlas.com/articles/what-is-the-difference-between-race-and-ethnicity.html>
- [16] Dina Sabie and Syed Ishtiaque Ahmed. 2019. Moving into a technology land: exploring the challenges for the refugees in Canada in accessing its computerized infrastructures. In *Proceedings of the Conference on Computing & Sustainable Societies*. ACM, 218–233.
- [17] Aelita Skarzauskiene, Ruta Tamosiūnaitė, and Inga Zaleniene. 2013. Defining Social Technologies: evaluation of social collaboration tools and technologies. *Electronic Journal of Information Systems Evaluation* 16, 3 (2013), 232.
- [18] Mojca Filipič Sterle, Tine Vervoort, and Lesley L Verhofstadt. 2018. Social support, adjustment, and psychological distress of help-seeking expatriates. *Psychologica Belgica* 58, 1 (2018), 297.
- [19] Christopher Sullivan and Susan Kashubeck-West. 2015. The interplay of international students' acculturative stress, social support, and acculturation modes. *Journal of International Students* 5, 1 (2015), 1–11.
- [20] SurveyMonkey 2019. SurveyMonkey: SurveyMonkey. (2019). <https://www.surveymonkey.com/>.
- [21] Agnes Szabo, Colleen Ward, and Paul E Jose. 2016. Uprooting stress, coping, and anxiety: A longitudinal study of international students. *International Journal of stress management* 23, 2 (2016), 190.
- [22] Reem Talhouk, Sandra Mesmar, Anja Thieme, Madeline Balaam, Patrick Olivier, Chaza Akik, and Hala Ghattas. 2016. Syrian refugees and digital health in Lebanon: Opportunities for improving antenatal health. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems*. ACM, 331–342.
- [23] Reem Talhouk, Vasillis Vlachokyriakos, Anne Weibert, Konstantin Aal, Syed Ishtiaque Ahmed, Karen Fisher, and Volker Wulf. 2017. Refugees & HCI Workshop: The role of HCI in responding to the refugee crisis. In *Proceedings of the 2017 CHI Conference Extended Abstracts on Human Factors in Computing Systems*. ACM, 558–565.
- [24] Charlotte Tang, Xinning Gui, Yunan Chen, and Mohamed Magueramane. 2018. New to a Country: Barriers for International Students to Access Health Services and Opportunities for Design. In *Proceedings of the 12th EAI International Conference on Pervasive Computing Technologies for Healthcare*. ACM, 45–54.
- [25] Haijing Tu. 2018. English Versus Native Language on Social Media: International Students' Cultural Adaptation in the US. *Journal of International Students* 8, 4 (2018), 1709–1721.
- [26] Hsiao-ping Wu, Esther Garza, and Norma Guzman. 2015. International student's challenge and adjustment to college. *Education Research International* 2015 (2015).