Social media challenges and affordances for international students: bridges, boundaries and hybrid spaces

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Abstract

Many higher education institutions around the world are increasingly motivated to incorporate social media for pedagogical benefit. At the same time, many institutions are also attracting an ever-growing number of students from overseas countries. With this in mind, researching how the use of social media applications impact on international students' experiences of new cultural and pedagogical contexts in the host country is relevant. This article is a systematic review of current literature on international students in higher education and their use of social media, focusing on both the personal and educational aspects of use. This analysis reveals three central themes related to the role of social web technologies for international students, that is creating bridges, boundaries, or hybrid spaces.

Introduction

Interactive social software allows users to access digital artefacts, to create and interact with content, and join online communities (Kaplan & Haenlein, 2010). For this reason, social media applications have not only been subsumed into personal communication practices, but have also lent themselves to constructivist pedagogies used in higher education in many countries (Conole & Alevizou, 2010; Crook, 2008; Tess, 2013). In many universities, social media plays an important role in how international students negotiate new social and educational environments (Mikal, Yang, & Lewis, 2015).

This systematic review of literature begins with a brief exploration of the features of social media use from both the social and pedagogical viewpoints of international students in higher education. This is followed by a description of the method used to find relevant literature on this topic. The literature findings are then thematically presented in relation to the role social media plays in the experiences of overseas students in both personal and educational contexts. Finally, the paper concludes with a discussion of the implications of increasing use and access to social media in the education of international students, leading to suggestions for further research. In this article, the terms *overseas* or *international students* refer to students who travel to another country to undertake a course of study. International students come from many different cultures, contexts, and experiences, though all share the common characteristic of taking "the step to leave primary support networks to undertake an academic program, often in a new linguistic and cultural context" (Barker, 2012, p. 201).

Background

The term *social media* refers to "virtual spaces where people share" (Joosten, 2012, p. 6), or "a group of internet-based applications" which are "continuously modified by all users in a participatory and collaborative fashion" (Kaplan & Haenlein, 2010, p.

61). These applications include online social tools, such as blogs, wikis, discussion forums and social network sites (SNSs).

Social media provides greater potential for participation and collaboration between individuals, allowing more opportunity for interaction in online spaces (Poore, 2013). Social media can facilitate *networked publics* which are "simultaneously (1) the space constructed through networked technologies and (2) the imagined community that emerges as a result of the intersection of people, technology, and practice" (boyd, 2014, p. 8). According to boyd (2014, p. 11), these networked publics create affordances of "persistence, visibility, spreadability, and searchability". Social media is persistent because online communication is durable, thus allowing visibility by potential audiences, regardless of the constraints of time or space. The spreadability and searchability of social media further extend the possibilities of sharing and obtaining information beyond the limitations of geographical boundaries. Because of these affordances, social media can magnify potential audiences, crossing boundaries between social situations and creating the possibility for collapsed contexts where hybrid social spaces are possible (boyd, 2014).

Capitalizing on the 'social' aspect of these technologies, educators have argued for employing social media in learning as they align with constructivist practices, such as scaffolding knowledge and creating community orientations to learning (Conole & Alevizou, 2010; Kimmerle, Moskaliuk, Oeberst, & Cress, 2015). The use of applications such as SNSs in education may also create opportunities for learning to transcend the gap between classroom and personal contexts (Greenhow & Lewin, 2016). For these reasons, social media applications are seen to support successful learning outcomes, along with possibilities of engagement and motivation for students (Ng, 2015).

At the same time that universities are transitioning to new digitally mediated pedagogies, many institutions are welcoming increasing numbers of international students (Edwards, 2011). For these students, studying at an international university can bring opportunities for self-formation as "creative cosmopolitans" (Marginson, 2009). However, adjusting to a new cultural and educational environment can also be complicated by anxiety, stress, isolation and loneliness (Anderson, Carmichael, Harper, & Huang, 2010; Sawir, Marginson, Deumert, Nyland, & Ramia, 2008).

This movement across cultural spaces may be assisted by creating opportunities for social connectedness, especially with host country students (Hendrickson, Rosen, & Aune, 2011). As web-based social media technologies and platforms, or social web technologies, now play an important role both for personal communication practices and in educational contexts, there is the possibility that social media can further facilitate these connections for overseas students. However, because social media is "geographically unbounded" (boyd, 2014, p. 8), and cultural differences in networked publics may exist (Hargittai, 2007), there are important implications for how international students manage their digital social networks and connection to place. For this reason, educational uses of social media that create opportunities for extended host culture interaction may play a role in crossing the boundaries

between personal and learning contexts (Harrison & Thomas, 2009). Investigating how these two domains of social media use impact on international students' experiences has implications for enabling positive cultural adjustment and increased educational engagement, leading to the question that guided this inquiry: *In what ways do personal and educational uses of social media impact on international students' sojourn experience?*

Method

Peer-reviewed empirical studies that explored international students' use of social media while in a host country were collected using various library database platforms such as Informit, SAGE, and Proquest, in addition to Google Scholar. The search involved using the terms international student* OR foreign student*. Search terms used to identify articles referencing social media use included *social network**, *Web 2.0, digital, technolog**, and *online* to encompass the range of keywords used to denote social media (Conole & Alevizou, 2010; Tess, 2013). Some of the more popularly used individual social media keywords were also used, such as *Facebook*, *Twitter*, *Renren*, *Wechat*. The terms higher education OR universit* were also used to refine the search to studies focused on students from the higher education sector.

Articles were included in the systematic review where data had been collected about international students and the use of social media for personal or educational purposes while completing studies in a host country. Furthermore, while the use of social media has become an area of interest for university marketing purposes, these studies were only included where data revealed international students' use of social web technologies (for example Reddy, 2014). As the nature of social media continues to evolve (Poore, 2013), to ensure the review included the most up to date research, the search was limited to articles published in the last ten years. In addition to the articles resulting from the above database searches, relevant citations included in the most recent articles were also reviewed. This literature search produced sixty-two articles that focused on international students' use of social media while studying at an overseas university (see Appendix 1).

In analysing these articles, studies were divided into a focus on either international students' personal or educational use of social media (see Appendix 1). The articles in these two categories were then investigated for arising themes related to international students' experience of a new culture. The resulting themes for personal use of social media included creating bridges, boundaries and hybrid spaces. For studies investigating educational use of social media, the themes of challenges and affordances were identified.

Social media use and adjustment to a new culture

Staying in contact with friends and family at home has been noted as a significant aspect of international students' digital experience (Krause, 2006; Wood, Barnes, Vivian, Scutter, & Stokes-Thompson, 2010). Social media applications, such as SNSs, can play an important role in facilitating the attachment needs of students while overseas (Özad & Uygarer, 2014), and international students may spend more time

using them than domestic students (Gray, Chang, & Kennedy, 2010; Wood et al., 2010) as the sites are primarily used to support social functions (Hossain & Veenstra, 2013). It has been recognised that social media can bridge geographical boundaries to maintain cultural connections (Sandel, 2014), and can also be used to form bridges to the host culture (Gomes, Berry, Alzougool, & Chang, 2014), both of which may positively influence academic performance (Saha & Karpinski, 2016). It was also observed that social media use can also create virtual boundaries between international students and host country networks (Mikal et al., 2015). However, it is also possible that both home and host culture may be accommodated through social media in hybrid spaces (Martin & Rizvi, 2014). The analysis of the reviewed literature revealed the following three themes: bridging spaces, creating boundaries and hybrid spaces.

Bridging spaces

One element that may facilitate adjustment to a new culture is being able to maintain a sense of cultural connection to home (Li & Gasser, 2005). Sandel's (2014) study with a small group of domestic students who had studied abroad and international students studying in the USA found that engaging in online communication with others from an international students' home culture helped to reduce acculturative stress. Similarly, Lin, Peng, Kim, Kim, and LaRose (2012) reported that the more international students built online connections with people from their home culture, the more social adjustment and college attachment they felt in their host country. Mikal and Grace (2012, p. 300) also suggested that virtual contact with home country connections facilitated acculturation because of the "continuity provided by a sense of connectedness and the consistency of online communities."

These digitally-mediated cultural connections can facilitate both psychological and practical support for international students. For example, Chinese students studying in Singapore found the exchange of informational, emotional and social support in an online co-national support group, facilitated the process of adapting to life in a new country (Chen & Yang, 2015). Similarly, Sin and Kim (2013) reported that SNSs were important to international students for everyday life information needs, such as financial information, health needs and news of home country. The importance of online tools for personal and informational support was also noted by Mikal et al. (2015). For Chinese students in America, a Chinese online community created a discussion space which assisted students in adapting to their new lives, while also maintaining a strong cultural identity (Zhu, 2012). As Park (2016, p. 26) notes, for international students, "culture can be accessed, managed, and practiced through social media".

Other researchers (Forbush & Foucault-Welles, 2016; Li & Chen, 2014; Lin et al., 2012; Park, Song, & Lee, 2014; Rui & Wang, 2015) have reported that social media use is also important for international students to establish a connection to the host country culture, which has been noted as a positive predictor of adjustment (Russell, Rosenthal, & Thomson, 2010). The use of an SNS is often an important first point of contact for new friendships at university for international and domestic students

alike (Yang, Brown, & Braun, 2014). Park, Song, and Lee's (2014) study of Korean and Chinese students in the USA compared their use of Facebook and popular home country SNSs, Cyworld and Renren. The study found that the students that used only Facebook experienced less acculturative stress than the students who used both the home country SNS and Facebook, only a home country SNS, or no use of an SNS. Li and Chen's (2014) study of Chinese students' use of Renren and Facebook for maintaining social capital while studying in the USA also indicates the benefit of using host country SNSs. This study revealed that though both SNSs were important for providing ties to extended social networks, the use of Facebook created more host country social ties. In both studies, the researchers surmised that increased use of the host culture social media, such as Facebook, can increase opportunities for cultural adjustment through interaction with host country friends. This is further demonstrated by Rui and Wang (2015, p. 409) who maintained that "SNSs are effective to cross-cultural adaptation because they can help international students connect with individuals from different cultural backgrounds and provide additional communication opportunities with local host nationals." Thus, the use of SNSs may play a role in facilitating more diversity in international students' social networks, which can lead to better social and academic adjustment (Forbush & Foucault-Welles, 2016; Lin et al., 2012).

In other studies (Qiu, 2011; Umar, 2011), social media use is claimed to also support language adjustment in the acculturation process. Qiu's (2011) three month longitudinal study of international students studying English at an American university found that digital technologies played an important role in their language adjustment, contributing to confidence in learning the host country language. Similarly, a study of Latin American students studying in the USA by Umar (2011) reported that students who used more English-language social media than their peers demonstrated greater sociocultural adaptation.

Creating boundaries

Though the research indicates that the use of social media can have a positive impact on building bridges to home (Chen & Yang, 2015; Lin et al., 2012; Mikal & Grace, 2012; Mikal et al., 2015; Park, 2016; Sandel, 2014; Sin & Kim, 2013; Zhu, 2012) or host cultures (Forbush & Foucault-Welles, 2016; Li & Chen, 2014; Lin et al., 2012; Park et al., 2014; Rui & Wang, 2015), other studies suggest that social media can also help international students erect virtual boundaries (Lee, Lee, & Jang, 2011; Lee & Ranta, 2014; Mikal et al., 2015; Olding, 2013; Rahman, 2014; Saw, Abbott, Donaghey, & McDonald, 2013; Tian, 2015). Though Facebook has cross-cultural popularity, Lee and Ranta's (2014) study of its use by international students suggests it does not necessarily correlate to contact with host country nationals. Similarly, Olding (2013) investigated how Facebook connected students to other international students studying in an Australian university. Through social network analysis, the study reported that students primarily maintained relationships with others from the same country, especially for students from China. This compares to other studies that have demonstrated that many international students primarily seek relationships with others from the same or similar cultures (Hotta & Ting-Toomey, 2013; Rienties & Nolan, 2014; Rienties & Tempelaar, 2013). However, Olding (2013)

also points out that for some students, culture can also impose barriers on social networks within nationality groupings, such as the single Saudi female in this study who was isolated from the other twelve Saudi males. In this case, social media reinforced the religion based gender boundaries of a shared culture.

The use of social media may also create boundaries where students are oriented towards home country applications to the exclusion of those in the host culture. Lee, Lee, and Jang (2011) found that for Chinese students studying in Korea, use of home country social media negatively impacted on their adjustment to the host culture. In contrast, students using host culture applications created more local social networks and therefore experienced more cultural adjustment. Chang, Alzougool, Berry, Gomes, Smith, and Reeders (2012) also suggest that students with mostly home country networks and social media may have access to fewer sources of information related to academic activities.

The orientation to home country social media is notable for the use of different SNSs. While Facebook is one of the most widely used SNS in the world (Alexa.com, 2016), it is not the only application used by international students. Hodis and Hodis's (2012) study of 168 international students in the USA showed other SNSs were also popular, such as Hi5 and Orkut (a now defunct Google SNS, once popular in India and Brazil). In Reddy's (2014) study of preferred SNSs, only half of the international student sample used Facebook. Other studies (Gomes et al., 2014; Park et al., 2014; Rahman, 2014; Saw et al., 2013; Tian, 2015) reveal that alternative home country SNSs are especially important for Chinese students. For example, in Saw et. al's (2013) study at an Australian university, though all students from China stated they had a Facebook account, 12% did not use it, whereas other popular Chinese SNSs were cited, with over 50% using Qzone (or QQ) and over 70% using Renren. This popularity of Chinese language SNSs during an educational sojourn is similarly confirmed by Gomes et al. (2014), Park et al. (2014), Rahman (2014), and Tian (2015). These studies indicate how the use of SNSs can erect barriers for social contact between some international students and host country networks.

Hybrid spaces

Various researchers (Binsahl, Chang, & Bosua, 2015; Gomes et al., 2014; Kim, Yun, & Yoon, 2009; Martin & Rizvi, 2014; Qiu, 2011) have explored how international students use social media to maintain home culture connections and to create networks in a new culture. By traversing different geographical, virtual and cultural spaces, they are presented with new modes of negotiating their identity. For example, Martin and Rizvi's (2014) study of international students from China and India studying in an Australian university, reported how these students used digital technologies, such as Facebook and Twitter, to create a hybrid space between home and host country that enabled "a feeling of ongoing connection with (home country) places and networks" (Martin & Rizvi, 2014, p. 1018). This hybridization may allow "the possibility for dialogic re-interpretation of different cultural elements without clashing" (Kim et al., 2009, p. 166). As Qiu (2011, p. 103) argued, this management of both home country and host country digital technologies need not be mutually

exclusive, with students moving between each to create opportunities to "compare and negotiate cultural differences".

For female students from Saudi Arabia in Binsahl, Chang, and Bosua's (2015) study, Facebook was a mediating tool to keep in touch with both home country and host country friends. Gomes et al. (2014) further investigated how social media interacted with identity for international students in Australia. These researchers noted that the international students in their sample formed their social networks in one of four ways: through contact with students from their home country, through forming networks with other international students from different countries, by establishing connections mainly with Australian students, or creating a network of both Australian and international students. Most international students in their study either maintained mostly home country connections, or mixed home and host country connections. A few students who identified a mix of Australian and international students as their social network, reported that they did not see the networks as integrated. Instead, these students saw themselves as "the middle person 'moving and travelling' between the social networks" (Gomes et al., 2014, p. 9).

Shao and Crook (2015) also investigated the use of blogs for cultural adjustment for Chinese students studying in the UK, where newly arrived students shared their experiences in a group blog, posting photos and personal observations. As the Chinese students adapted to life in the UK, they exhibited an increasingly hybridized use of language, combining both English and Chinese in their blog entries. Furthermore, DePew (2011), and DePew and Miller-Cochran's (2010) case studies of multilingual international students suggests that SNSs are a rich locus where students can move or 'shuttle' (Canagarajah, 2006) between languages, registers, and cultures, dependent on audience and considerations of identity presentation.

Social media use for educational purposes

The literature presented in the paper so far demonstrates how social media can create complexities for international students negotiating identity across cultures. This section provides a review of the literature that focuses on how social media use intersects with international students' adjustment to new academic contexts.

Challenges of social media in education

In educational research, the introduction of social media in learning contexts is often argued for its alignment with constructivist theories of social learning (Conole & Alevizou, 2010; Kimmerle et al., 2015; Poore, 2013; Tay & Allen, 2011). In this type of learning environment, interaction and collaboration between students is of paramount importance, because knowledge is shared and negotiated between students and teacher, rather than transferred solely from the teacher to the student. In constructivist learning situations, communication between individuals is seen to aid cognitive processes and therefore improve individual learning (DeVries, 1997). However, for international students as second language learners, using social media for learning may present challenges.

Learning with social media technologies largely relies on effective communication. Some researchers report that this is an area that poses obstacles for international students of foreign language and cultural backgrounds (Smith, Coldwell, Smith, & Murphy, 2005; Tapanes, Smith, & White, 2009). In Liu et al's (2010) study in the USA, language was reported as the biggest concern for Chinese students using online communication tools. Similarly, Thompson and Ku's (2005) interviews with Chinese learners in the USA reported that some students felt intimidated by using writing to express themselves in virtual discussion spaces, because they were not confident in their English proficiency. Other researchers (Al-Harthi, 2005; Wang & Reeves, 2007; Zhao & McDougall, 2008) point to problems interpreting meaning that may also arise due to a lack of non-verbal cues, such as facial expressions, making it difficult to understand other students' meaning. Another perceived problem with online communication for international students was a lack of host country cultural knowledge, resulting in students being unable to interpret jokes, slang or local cultural references (Chen & Bennett, 2012; Chen, Bennett, & Maton, 2008; Thompson & Ku, 2005; Zhang & Kenny, 2010). Yee (2015, p. 591) also suggests that Malaysian students in an Australian university perceived online discussion as "difficult and boring" because of a lack of experience with this type of learning environment.

A recent Scandinavian study by Habib, Johannesen, and Leikny (2014) suggests that language skills are a predominant factor in how international students participate in social web communication related to education activities. In this study, students expressed insecurities regarding their ability to use the host country's academic language, which in turn affected their participation in learning activities using writing through social media. In a similar study comparing domestic Australian and international students, Hannon and D'Netto (2007) also found that students whose first language was that of the host country held more positive perceptions of their online learning experiences.

Affordances of social media for education

While the literature reviewed has identified challenges, international students also report advantages to using social media for learning. In Al-Harthi's (2005) study, students from Arab Gulf countries described feeling more comfortable communicating through online applications than face to face, especially for women participating in mixed gender classes because the technology allowed a degree of anonymity. In Thompson and Ku's (2005) study, most Chinese students also reported feeling more confident to share opinions in online discussions than in face to face situations. Other authors discussed the benefits of asynchronous communication, allowing students with linguistic anxieties more time for composing, and understanding the communication of others (Dillon, Wang, & Tearle, 2007; Zhao & McDougall, 2008). In Habib et al.'s (2014) Scandinavian study, international students from both developed and developing countries noted the affordances of social media for alternative modes of expression, such as digital story telling. This may indicate that there is the provision for language proficiency to have less impact on learning in online contexts than it does in face to face classrooms (Erichsen & Bolliger, 2011; Hodis & Hodis, 2012; Yildiz & Bichelmeyer, 2003). Opportunities for

making connections with other students (Sadykova, 2014; Skinner, 2010), and more interaction between international and domestic students have also been noted as benefits of using social media applications in the classroom (Arkoudis et al., 2013; Gray et al., 2010).

Researchers have shown increasing interest in the educational potential of SNSs to create opportunities for learning to transcend the gap between classroom and personal contexts (Greenhow & Robelia, 2009; Lampe, Wohn, Vitak, Ellison, & Wash, 2011; Lang & Lemon, 2014; Lemon, 2013; Northey, Bucic, Chylinski, & Govind, 2015). For international students using Livemocha, a language learning SNS, participation created opportunities for online communities to "overlap and influence real lives in the minds of users" (Harrison & Thomas, 2009, p. 120). Similarly, a study of Facebook used with first year university students in Australia reported that international students found participation in learning activities presented the benefit of having the opportunity "to learn more about people in my area" (McCarthy, 2010, p. 735). This focus on connections between students has been further extended with the use of Facebook as a learning activity for cross-institutional and cross-cultural learning interactions (McCarthy, 2013; Wang, 2012).

Though Xu and Mocarski (2014) noted Chinese international students used SNSs for academic activities less than domestic American students, international students can have positive attitudes about using SNSs for learning. For example, the female Saudi students in Binsahl and Chang's (2012) study demonstrated positive feelings about using Facebook for educational activities. Using Facebook to organise group learning activities has also been reported by international students (McCarthy, 2010; Olding, 2013), a feature that has been noted of the wider university population (Henderson, Selwyn, Finger, & Aston, 2015). Students using SNSs for learning activities have also noted the benefits of engagement (Sleeman & Ryan, 2015), enhancing knowledge exchange, alleviating apprehension, and enabling socialisation and building of community (Ryan, Magro, & Sharp, 2011). However, it is worth noting that cultural elements may impact on how students use a SNS for learning. For example, students from some countries may have more concerns for privacy and trust online than others (Salmona, Melton, & Miller, 2013), which may impact on the kind of content that is shared (Binsahl & Chang, 2012; DePew & Miller-Cochran, 2010).

Discussion

The studies reviewed in this paper reveal that social media use has important implications for international students in both personal and educational contexts. Research undertaken has highlighted that social networks can play a pivotal role for international students' adjustment to university (Rienties & Tempelaar, 2013; Sherry, Thomas, & Chui, 2010; Zhou, Frey, & Bang, 2011). Because "social media alters and amplifies social situations" (Boyd, 2014, p. 13), these technologies increasingly play a role in mediating the way social connections are maintained in both home and host countries. For maintaining social contact with friends and family from home, or new contacts in the host culture, social media can be viewed as a bridge. Retaining home country affiliations has some benefit for helping overseas students maintain a sense of cultural continuity (Lin et al., 2012; Mikal & Grace, 2012; Sandel, 2014). Yet, there

may be more benefit for international students in using social media to form bridges to the host culture (Li & Chen, 2014; Park et al., 2014; Rui & Wang, 2015).

The research on international students' personal use of SNSs indicates that cultural differences may reduce the potential of SNS usage for creating connections with the host culture, instead creating boundaries (Lee et al., 2011; Mikal et al., 2015). Facebook has been noted as a social media application popularly used by international students across cultures (DeWitt, Naimie, & Siraj, 2013; Lichy, 2012; Peters, Winschiers-Theophilus, & Mennecke, 2015; Rahman, 2014; Shen & Khalifa, 2010). For this reason, its use may assist students to simultaneously manage friendships with both home and host country connections (Binsahl et al., 2015; Li & Chen, 2014; Park et al., 2014). However, studies in this review show that Facebook is not always the SNS of choice for international students from Asia, especially China (Gomes et al., 2014; Park et al., 2014; Rahman, 2014; Saw et al., 2013; Tian, 2015). Consequently, the virtual boundaries created by home country social media use may negatively impact on students' adjustment and therefore limit the potential of a positive sojourn experience.

Yet, while the use of social media can be used to create bridges or boundaries with the host culture, it can also facilitate the creation of hybrid spaces. In these spaces, students may be able to simultaneously manage both an identity in home and host culture (Martin & Rizvi, 2014). This may also include elements of language use which can be valuable to international students' language adjustment (DePew, 2011; DePew & Miller-Cochran, 2010; Shao & Crook, 2015).

Educational use of social media also presents a dichotomy of challenges and opportunities for international students. Aspects of language and culture can problematize effective online learning for international students (Chen & Bennett, 2012; Chen et al., 2008; Wang & Reeves, 2007; Zhang & Kenny, 2010; Zhao & McDougall, 2008). As universities increasingly move to digitally mediated education, the challenges that international students face in their online learning will require consideration. For example, overseas students may need further language support, particularly in regard to the use of academic language (Habib et al., 2014). Teaching staff may also need training to better understand and engage international students in online social learning activities (Chen & Bennett, 2012). It may be that not only students from overseas, but also students from different first language backgrounds will benefit from this further support (Hannon & D'Netto, 2007).

At the same time, the use of social web technologies for learning may bridge the space between the home and host culture by easing the impact of language and cultural difference on academic activities (Chen & Bennett, 2012; Habib et al., 2014; Liu et al., 2010), and furthering opportunities to interact with local students (Arkoudis et al., 2013; Gray et al., 2010). For universities, these affordances present educators of international students with avenues for designing appropriate activities which can be more engaging and inclusive, though staff may need training in "utilizing the online environment to internationalise the learning environment" (Leask, 2004, p. 345).

Furthermore, where hybrid spaces can be created through international students' personal use of social media, these could be strengthened through educational uses of social web technologies, such as SNSs. This may contribute to a more positive international study experience by creating opportunities for overseas students to make digitally mediated points of connection with the host culture (Arkoudis et al., 2013; Gray et al., 2010; McCarthy, 2010) while also maintaining their home culture. With educational uses of SNSs intersecting with personal communication spaces, there also comes the opportunity for the facilitation of hybrid learning spaces between formal and informal contexts (Greenhow & Lewin, 2016), which may lead to more opportunities to engage with academic activities and greater connections with other students.

Educational use of popular SNSs, such as Facebook, can be a useful tool for teachers of international students to create learning engagement and foster stronger classroom relationships (Ryan et al., 2011; Sleeman & Ryan, 2015). Establishing connections between students and teachers is an important part of engagement (Tinto, 1997, 2012; Zhao & Kuh, 2004), and perhaps is even more important for learners of diverse backgrounds in virtual contexts (Thomas, Herbert, & Teras, 2014). As McCarthy's (2010, 2013) studies suggest, educational uses of SNSs may contribute to the further development of relationships, which can have a significant impact on international students' personal and educational experience.

Using a SNS, such as Facebook, for learning may especially benefit international students by offering connections to host country students, which has been linked to a more positive international study experience (Hendrickson et al., 2011). As using popular SNSs of the host country does not necessarily lead to more contact with host country friends (Lee & Ranta, 2014), it is possible that educational uses of SNSs may bridge this gap by facilitating learning relationships which can develop across personal spaces. This could be especially important for students from Asian backgrounds, such as China, where popular home country SNSs create boundaries between the networked publics of home and host culture (Lee et al., 2011; Mikal et al., 2015; Tian, 2015). As Chinese students often form the largest cohort of overseas students in countries such as Australia, the UK and the US (Edwards, 2011), their social networks are more likely to consist of co-nationals (Rienties & Nolan, 2014). For this reason, Chinese students may need further opportunities in class to use host country SNSs as their home applications do not provide links to host nationals. Encouraging more use of host country social media in educational settings may also lead to other benefits, such as aiding language adjustment (DePew, 2011; Lee et al., 2011; Olding, 2013; Park et al., 2014; Qiu, 2011; Umar, 2011).

Social media facilitates important communication, acculturation and educational processes to the lives of international students. As international students negotiate their identity in their home and host cultures, their social media practices can create important connections to either culture, or collapse contexts by straddling the two. Through the use of social media, it is possible for hybrid spaces to exist between cultures for international students (Gomes et al., 2014; Martin & Rizvi, 2014; Shao &

Crook, 2015). International education has been considered as a site of transformation, where opportunities exist for individuals to negotiate cultural identities of multiplicity and hybridity: "Globalization multiplies sojourners and journeys, encourages multiple place making as well as the one-way journeying, and renders more complex the record of cultural encounters" (Marginson, 2009, p. 218). To this mix, the virtual spaces that international students traverse can also be added by considering a more holistic view of overseas students' negotiation of the personal and educational digital spaces of social media. By doing this, educators and policy makers will have more understanding of the role that digital practices can play in creating positive study sojourns.

Conclusion

This review has identified two important areas in the literature on international students and social media use; social media practices and cultural adjustment, and challenges and affordances of social web technologies for education. Further understanding of international students' informal, as well as formal, uses of social media can assist educators in developing more inclusive learning environments.

Of the various social media applications, it is perhaps SNSs that have gained the most attention for employing personal communication practices for educational purposes, especially in higher education (Rodríguez-Hoyos, Salmón, & Fernández-Díaz, 2015). For international students, the use of SNSs for teaching and learning may have positive implications for their personal lives in relation to managing cross-cultural social networks, which can improve their study sojourn experience.

One limitation of the review of literature presented here is the selection of search criteria keywords. For example, though the terms *social media*, *Web 2.0*, *social network(ing)*, *online*, *Facebook*, *Twitter*, *Renren*, and *Wechat* were used, this may not have identified studies that used other specific keyword terminology, such as Friendster, or Instagram, or the almost inexhaustible list of SNSs that exist today (Del Giudice, Della Peruta, & Carayannis, 2013). Complicating this use of general search terms is the fact that it is difficult to define social media software (Tess, 2013). Though Poore (2013) identifies the social media 'Big Four' of blogs, wikis, podcasts, and SNSs, the types of applications that could come under this umbrella term are ever expanding, such as online gaming, social bookmarking, or content curation tools.

One area that has been little researched is the impact that changes in social media use may have on international students as they join new online communities, across multiple platforms, or integrate new communities within already used social media applications. Further research on how this transition impacts on social identity would broaden our understanding of international students' sense of belonging across social networks (Cheung, Chiu, & Lee, 2011). This is particularly significant in relation to discourses on the internationalisation of higher education as there is little consideration of the impact of educational uses of social media in host countries on students' personal practices, and how this relates to the experience of international education in another country.

Another area for further investigation is the ways in which international students use social media both formally and informally during an educational sojourn, which may shed further light on how to best engage international students for positive learning experiences (Gray et al., 2010). The studies presented here also focused predominantly on Asian learners. Further individual investigations of students from less researched backgrounds would provide more extensive knowledge of culturally diverse student populations. For example, though increasing numbers of students from South American countries, such as Brazil, come to study in Australia (Australian Government, 2015), there is little consideration of their uses of social media.

Acknowledgement is also made for future investigation, although not addressed in this paper, into how social media is used by domestic students for whom English (in the case of Australia as an example) is not their first language who may like the international student be more comfortable in other social media spaces where English is not the principle medium of communication and exchange.

Agendas for social media use in education expound the capabilities for "human potential and social opportunity" (Poore, 2011, p. 20). International students are in the unique position of simultaneously inhabiting more than one sociocultural context across virtual spaces, while at the same time participating in educational practices that shape digital practices. Further research in this area can provide insights for both the role of social media in communicative practices, and the impact of digitally mediated education.

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Appendix 1.

Appendix 1.		Γ_		
Study	Location	Focus	Sample	Methodology
Al II- #h: 2005	LICA	experience of distance	6 Postgraduate Arab	i m k m m d m
Al-Harthi 2005	USA	courses	Gulf States	interviews
			5 Postgraduate Saudi	
Binsahl & Chang 2012	Australia	use of Facebook	females	interviews
		use of SNSs and	5 Postgraduate Saudi	
Binsahl et al. 2015	Australia	presentation of identity	females	interviews
		SNSs and information	39 mixed	
Changetal. 2012	Australia	seeking	nationalities	focus groups
			16 Postgraduate/	
		online learning	Undergraduate	
Chen & Bennet 2012	Australia	experiences	Chinese	interviews
		online learning	2 Postgraduate	
Chen et al. 2008	Australia	experiences	Chinese female	mixed methods
		·	21 Postgraduate/	
			Undergraduate	
Chen & Yang 2015	Singapore	intercultural a daption	Chinese	mixed methods
De Pew & Miller-	0 1	SNSs and literacy		
Cochran 2010	USA	strategies	3 mixed nationalities	mixed methods
	0071	SNSs and literacy	o mixed nationalities	, , , , , , , , , , , , , , , , , , ,
De Pew 2011	USA	strategies	3 mixed nationalities	mixed methods
DCTCW 2011	03/4	differences in learning	5 mixed flationalities	mixed methods
		behaviours and online	23 Postgraduate	
D: II am at al 2007	1117	communication		mixed methods
Dillon et al. 2007	UK		mixed nationality	mixea methods
		perceptions of academic		
Erichsen & Bolliger		and social isolation in	54 Postgraduate	
2010	USA	on line environments	mixed nationalities	mixed methods
			120 Postgraduate/	
Forbush & Foucault-			Undergraduate	
Welles 2016	USA	SNSs and social capital	Chinese	survey
			35 Postgraduate/	
		use of SNSs to maintain	Undergraduate	
Gomes et al. 2014	Aus tra lia	socialnetworks	mixed nationalities	focus groups
		comparative study of	461 students- mixed	
		international and	nationalities/8	
	AX	domestic students use of	Undergraduate	
Grayetal.2010	Australia	s o ci al te chnologies	Singaporean	mixed methods
		use of social media in	40 mixed	
Habib et al. 2014	Norway	educationalcontext	nationalities	interviews
			125 Postgraduate/	
Hannon & D'Netto		online learning	Undergraduate	
2007	Australia	experiences	mixed nationalities	survey
Harrison & Thomas		SNSs for foreign language	6 Postgraduate	,
209	Japan	learning	mixed nationalities	mixed methods
	20 2011		168 Postgraduate/	ca medioas
		use of social media for	Undergraduate	
Hodis & Hodis 2012	USA	social capital	mixed nationalities	survey
Hossain & Veenstra	00/1	3 Scharca pital	61 Postgraduate/	Julycy
	115 A	us o of SNSs	Undergraduate/	CHENON
2013	USA	use of SNSs		survey
Kima a ka 1 2044	LICA /V-	cultural differences in use	Undergraduate 349	
Kim et al. 2011	USA/Korea	of SNSs	USA/ 240 Korean	survey
		motivations for use of		
Lee et al. 2011	Korea	socialmedia	166 Chinese	survey
		ESL students use of	125 mixed	
	Canada	Fa ce book	nationalities	survey
Lee & Ranta. 2014	Callaua			
Lee & Ranta. 2014	Callaua		212 Postgraduate/	
Lee & Ranta. 2014	Callaua		212 Postgraduate/ Undergraduate	
Li & Chen 2014	USA	use of SNSs	_	survey

	ī	T		
Ì			Undergraduate	
			mixed nationalities	
			17 Postgraduate	
Liu et al. 2010	USA	online learning styles	mixed nationalities	mixed methods
l		use of social media and		
Martin & Rizvi 2014	Australia	experience of place	15 Chinese / ? Indian	interviews
Ì		use of Facebook for online	27 Undergraduate	
McCarthy 2010	Aus tra lia	learning	mixed nationalities	mixed methods
		Facebook as learning	52 Undergraduate	
McCarthy 2013	Australia	environment	Singaporean	survey
		use of internet during	181 undetermined	
Mikal & Grace 2012	USA	studyabroad	nationalities	mixed methods
		•	18 Postgraduate/	
		use of internet during	Undergraduate	
Mikal et al. 2015	USA	studyabroad	Chinese	interviews
Wirkar C Cai. 2015	03/1	use of Facebook for social	52 Undergraduate	merviews
Olding 2013	Australia	connections	mixed nationalities	mixed methods
	Australia	Connections		illixed illetilous
Ozad & Uygayer	To all and	CNC- and and a side and tall	100 Undergraduate	
2014	Turkey	SNSs and social capital	mixed nationalities	survey
			8 Postgraduate/	
5 1 00:5		6.44 51	Undergraduate	J
Park 2016	USA	use of WeChat	Chinese	mixed methods
		influence of SNSs use on	189 Korean/94	
Park et al. 2014	USA	psychological wellbeing	Chinese	survey
		role of digital technologies	81 ESL mixed	
Qiu 2011	USA	in language confidence	n a ti onalities	survey
		• . 7	316 Postgraduate/	
			Undergraduate	
Rahman 2014	NZ	use of SNSs	mixed nationalities	survey
			167 Postgraduate/	,
		4 13	Undergraduate	
Reddy 2014	Australia	use of SNSs	mixed nationalities	survey
Neddy 2014	7 ta 3 ti a iia	Face book for cultural	13 Postgraduate	narrative
Ryan et al. 2011	USA	adaptation	mixed nationalities	autobiographies
Nyairetai. 2011	USA	adaptation		autobiographies
		C - J	156	
		and a figure and a development	Postgra duate/Under	
		use of SNSs and cultural	graduate mixed	
Rui & Wang 2015	USA	a da ptation	nationalities	survey
		online learning	12 Postgraduate	
Sa dykova 2013	USA	experiences	mixed nationalities	mixed methods
. 1			362 Postgraduate/	
Saha & Karpinski		influence of social media	Undergraduate	
2016	USA	use on life satisfaction	mixed nationalities	survey
	Australia/		No sample data-	
Salmona et al. 2013	USA	use of SNSs	mixed nationalities	mixed methods
			23 Postgraduate/	
	I	1		
Sandel 2014		use of social media and	Undergraduate	
7	USA	cultural adaptation	mixed nationalities	interviews
	USA		_	interviews
Saw et al. 2012		cultural adaptation SNSs and information	mixed nationalities	
Saw et al. 2012	USA Australia	cultural adaptation	mixed nationalities 179 mixed nationalities	survey
Saw et al. 2012		cultural a daptation SNSs and information seeking	mixed nationalities 179 mixed nationalities 12 Postgraduate/	
	Australia	cultural a daptation SNSs and information seeking blogs and cultural	mixed nationalities 179 mixed nationalities 12 Postgraduate/ Undergraduate	survey
Shao & Crook 2015		cultural a daptation SNSs and information seeking	mixed nationalities 179 mixed nationalities 12 Postgraduate/ Undergraduate Chinese	
	Australia	cultural a daptation SNSs and information seeking blogs and cultural a daptation	mixed nationalities 179 mixed nationalities 12 Postgraduate/ Undergraduate Chinese 180 Postgraduate/	survey
Shao & Crook 2015	Australia UK	cultural adaptation SNSs and information seeking blogs and cultural adaptation SNSs and information	mixed nationalities 179 mixed nationalities 12 Postgraduate/ Undergraduate Chinese 180 Postgraduate/ Undergraduate/ Undergraduate/	survey mixed methods
	Australia	cultural adaptation SNSs and information seeking blogs and cultural adaptation SNSs and information seeking	mixed nationalities 179 mixed nationalities 12 Postgraduate/ Undergraduate Chinese 180 Postgraduate/ Undergraduate mixed nationalities	survey
Shao & Crook 2015 Sin & Kim 2013	Australia UK USA	cultural a daptation SNSs and information seeking blogs and cultural a daptation SNSs and information seeking online communication	mixed nationalities 179 mixed nationalities 12 Postgraduate/ Undergraduate Chinese 180 Postgraduate/ Undergraduate mixed nationalities 55 mixed	survey mixed methods survey
Shao & Crook 2015	Australia UK	cultural adaptation SNSs and information seeking blogs and cultural adaptation SNSs and information seeking	mixed nationalities 179 mixed nationalities 12 Postgraduate/ Undergraduate Chinese 180 Postgraduate/ Undergraduate mixed nationalities 55 mixed nationalities	survey mixed methods
Shao & Crook 2015 Sin & Kim 2013	Australia UK USA	cultural adaptation SNSs and information seeking blogs and cultural adaptation SNSs and information seeking online communication and adjustment	mixed nationalities 179 mixed nationalities 12 Postgraduate/ Undergraduate Chinese 180 Postgraduate/ Undergraduate mixed nationalities 55 mixed nationalities 58 Postgraduate/	survey mixed methods survey
Shao & Crook 2015 Sin & Kim 2013 Skinner 2010	Australia UK USA	cultural adaptation SNSs and information seeking blogs and cultural adaptation SNSs and information seeking online communication and adjustment Facebook as learning	mixed nationalities 179 mixed nationalities 12 Postgraduate/ Undergraduate Chinese 180 Postgraduate/ Undergraduate mixed nationalities 55 mixed nationalities 58 Postgraduate/ Undergraduate/ Undergraduate/ Undergraduate/ Undergraduate/	survey mixed methods survey mixed methods
Shao & Crook 2015 Sin & Kim 2013	Australia UK USA	cultural adaptation SNSs and information seeking blogs and cultural adaptation SNSs and information seeking online communication and adjustment	mixed nationalities 179 mixed nationalities 12 Postgraduate/ Undergraduate Chinese 180 Postgraduate/ Undergraduate mixed nationalities 55 mixed nationalities 58 Postgraduate/	survey mixed methods survey

			Chinese	
			Postgra duate/Under	
		influence of culture on	gra duate mixed	
Tapanes et al. 2009	USA	online learning	nationalities	survey
<u>'</u>			7 Postgraduate/	,
		online learning	Undergraduate	
Thompson & Ku 2005	USA	experiences	Chinese	mixed methods
Thompson & Ku 2005	USA	experiences	45 Undergraduate	mixed methods
Tian 2015	Hong Kong	SNS use and social capital	Chinese	interviews
11411 2015	Hong Kong	3N3 use and social capital	83 Postgraduate/	Titterviews
		CNC a and law area		
H 2011	116.4	SNS use and language	Undergraduate Latin	
Umar 2011	USA	learning	American	survey
	USA/	Facebook and cross-	80 Undergraduate	
Wang 2012	Taiwan	cultural communication	Taiwanese	mixed methods
		online learning	5 Postgraduate	
Wang & Reeves 2007	USA	experiences	Taiwanese	mixed methods
			104 mixed	
Wood et al. 2010	Au stra lia	use of technology	nationalities	survey
			71 Postgraduate/	
			Undergraduate	
Xu & Mocarski 2014	USA	use of social media	Chinese	Survoy
	USA	use of social filedia		survey
V	LICA	CNC - and - and - in the state of the state	12 Undergraduate	
Yang et al. 2014	USA	SNSs and social capital	As i an countries	focus groups
		onlinelearning	41 Undergraduate	
Yee 2015	Au stra lia	experiences	Malaysian	survey
		online learning •	12 Postgraduate	
Zhang & Kenny 2010	Canada	experiences	mixed nationalities	mixed methods
Zhao & McDougall		online learning	6 Postgraduate	
2008	Canada	experiences	female Chinese	interviews
		online communication	112 online posts by	
Zhu 2013	USA	and identity	Chinese students	dis course a nalys
	O.	55		
	Y			

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