**Information Sources and Services in the Frame of International Students**

**Attending Higher Education in the United States of America**

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**International Students in the United States of America**

International students in the United States come from a wide range of countries and cultures. Although the growth rate shows signs of slowing, the international student population in the United States is still increasing (Burel et al., 2019). During the 2016/2017 school year, more than one million international students were attending United States colleges and universities, representing 5.3% of the student population (Institute of International Education, 2017, as cited in Oh & Butler, 2019). This sizable part of the student population is a diverse user group unto itself, and we should take caution on making too many broad generalizations that might be rooted in cultural differences. For example, demographic data from a San José State University study shows that just 121 international student participants came from 38 different countries (Jackson, 2005).

Even though this is a diverse user group, there are still some common themes that surface. Prior library experience can be quite different from what awaits international students in the United States, which can elevate library anxiety levels (Jackson, 2005). Not only is the environment unfamiliar, but evidence suggests there is a significant gap in everyday information needs between American and international students (Sin & Kim, 2018). International students place more importance on basic local information than domestic students because they tend to feel uncertain, vulnerable, and have a sense of urgency in their new country (Oh & Butler, 2019). Developing a holistic picture of the international student's information needs and experiences, both inside and outside of the academic library information ecology, can inform worthwhile initiatives to improve their academic careers in the United States. This review is an exploration of the

literature, theories, and models that reveal some of these common themes that can help shape such initiatives.

## Theories and Models in the Literature Under Review

The influence of context on information need arises in every study to some degree, exhibiting the importance of theories that explore contextual factors. Afzal (2017) summarizes that research on context and information needs show that needs vary by the context the need is within, that context enhances the information need's meaning, and that it enhances the scope of studies on information needs. In one specific example, Oh and Butler (2019) frame their study in the socio-national context of international students' local information behavior. From a different angle, Burel et al. (2019) pull context from results by examining preferences and expectations, which can help researchers understand why they are using the libraries. We see this pattern of filtering to specific contexts again and again.

Cooper and Hughes (2017) take a deep look at the context of international graduate students at the University of New Mexico to better understand their life experiences. Their study does not use a specific model or theoretical framework, but this contextual focus can be seen in the information horizons theoretical framework (Sonnenwald, 2005), the filter of user characteristics from Taylor's question-negotiation framework (Edwards, 2005), and Erdelez's information encountering (IE) (Erdelez, 2005). IE is also found in Oh et al.'s (2015) in their discussion on how international students gain geo-spatial information by wandering around their surroundings.

Although never explicitly called out as doing so, the library-use barriers Knight, et al. (2010) examine fit into the information horizons theoretical framework. An information horizon lies within a person's context, and the horizon constitutes the space in which they can act (Case, 2005). In other words, this focus on barriers can be seen as examining what restricts the international student's information horizon. Likewise, Cho and Lee (2016) acknowledge that international students' experiences tend to be restricted by their cultural background, especially when coming from a significantly different culture. Such a restriction on one's experiences due to their cultural background shrinks their information horizon, which is directly affected by their personal context.

Wilson's (1981) information-seeking model incorporates barriers into the process of moving from the common psychological observations of physiological, affective, and cognitive needs to information-seeking behavior. Information barriers are a primary focus in a study from Sin and Kim (2018). Though their list is a robust 15 types of barriers, each can be categorized into Wilson's (1981) information-seeking model's personal, interpersonal, and environmental barriers.

While developing a study on the effects of information-seeking behavior on international students' school life, Cho and Lee (2016) primarily relied on the theory of motivated information management (TMIM). An aspect of this theory is that context highly influences the selection of a mode of information behavior, which earlier studies suggest are primarily inquiring and monitoring modes of behavior (Cho & Lee, 2016).

Liao et al. (2007) break information-seeking behavior down into a three-stage process that encompasses initiating, searching, and locating. Although not explicitly

mentioned by the authors, one can see how these processes fit into Wilson's (1999, as cited in Bawden & Robinson, 2013) nested model of information behavior. This model exhibits the life world encompassing information behavior, which subsequently contains information seeking, which in turn contains information retrieval (Bawden & Robinson, 2013). In this way, Liao et al.'s (2007) initiating stage falls into behavior, searching falls into seeking, and locating falls into the retrieval stage.

## Techniques and Methods Used in the Research

To help illustrate real-life experiences of international graduate students at the University of New Mexico, Cooper and Hughes (2017) captured a broad overview of library usage through online surveys that received 61 responses, as well as in-depth follow-up interviews with five participants. Knight et al. (2010) also used multiple methods, including a survey, a focus group, and a separate interview with an international student representative. Knight et al. (2010) also reviewed approximately 20 library websites for international student specific content and sent a seven-question survey to the Information Literacy Instruction listserv to poll other libraries on what programs they offer for international students and their best practices. Oh and Butler (2019) also used a mixed-methods approach, using online surveys that had follow-up interviews.

Much of the research solely relies on surveys and questionnaires. Cho and Lee (2016) conducted a survey with a special focus on inquiry and monitoring modes of information seeking behavior, receiving 119 responses. Liao et al. (2007) also conducted their study though a web-based survey, upon which they used statistical hypothesis testing techniques to investigate their results. Jackson (2005) surveyed

demographic information, home library and computer usage, library familiarity, and an open like/dislike question that received 161 responses. Sin and Kim (2018) also relied on online questionnaires, focusing on information needs and information barriers separately, receiving 1,259 responses. Shao et al. (2013) analyzed 83 responses to a survey taken by Chinese students and faculty that recently studied at a university in the United States. And lastly, Doucette's (2019) methods also entirely used survey-based research, featuring an online survey with 19 responses and exit surveys following an international student academic writing workshop pilot program.

Oh et al. (2015) employed qualitative interviews based on grounded theory techniques. Grounded theory is a collection of systematic canons and procedures that enable qualitative research and analysis to be systematically evaluated (Corbin & Strauss, 1990). The interviews also featured a questionnaire and a cognitive mapping exercise (Oh et al., 2015). Similarly, Burel et al. (2019) also used interviews in their unique mixed-methods approach, featuring a survey with 188 responses, interviews with 48 students, and a photo diary exercise with 13 students.

Curry and Copeman (2005) conducted field stimulation, which is a method of unobtrusive testing. They enlisted an international student with a heavy English accent to ask the same reference question to 11 academic library reference desks at two separate occasions each, and then record data based on the interactions (Curry & Copeman, 20005). Using a different method, but also assessing the user's needs in a synchronous fashion, Ganster (2010) used a focus-group approach to gather the impressions of international students to help tailor their web services to their needs. Li et al. (2015) employed direct, synchronous feedback as well via focus groups to assess

the effectiveness of their 11 vernacular language videos that were released in five languages on three different campuses. In addition to the focus groups, Li et al. (2015) also analyzed view counts and sent a short assessment survey to new Chinese international students for them to complete after watching a video, which had 20 responses.

**Information Needs and Behaviors of International Students in the United States**

International student populations often show a preference to passively monitor for information (Cho & Lee, 2016). Some international students report watching others use the help desk before approaching it on their own to better understand how it works, which suggests many may never move to inquire at the desk on their own (Cooper & Hughes, 2017). It is worth noting that this behavior is not unique to the library ecology. This propensity to monitor rather than inquire is seen in classroom interactions between international students and their instructors as well (Cho & Lee, 2016).

One of the reasons for this passive information gathering preference is that in effort to save face, high-power distance and low-proximity cultures tend to monitor rather than inquire when facing uncertainty (Cho & Lee, 2016). Students with these cultural backgrounds, such as those from Far East Asia, account for a sizable portion of the United States' international student population (Cho & Lee, 2016). As such, it is important to note that this is a cultural barrier and not necessarily a language barrier. In fact, communication barriers seem to be diminishing (Liao et al., 2007). However, there is evidence of library resource awareness issues (Cooper & Hughes, 2017; Knight et al., 2010; Liao et al., 2007). This lack of awareness might be a more likely impetus for the

saving-of-face behavior that leads to a trend of passive information gathering rather than engaging with the academic library.

**The International Student's Information Sources and Services in the United States**

A propensity to passively monitor does not mean it is the international student's preferred source of information. Strong in-person communication preferences do exist, but friends are the focus in such cases (Knight et al., 2010). This behavior of seeking information from friends for most kinds of information, which is more specifically shown to be co-national peers (Oh et al., 2015), may not be that much of a surprise to some. Beyond supporting a sense of community, this in-person communication preference could be explained by the principle of least effort theory (Case, 2005). With fewer barriers, it would take less effort to communicate with a fellow co-national.

This co-national community information source is important and should not be seen as something to discourage in any way. While they are settling in, friends and Internet-based resources make up the top-five sources of information for international students (Oh et al., 2015). However, with evidence of academic library resource awareness issues, there is work to be done (Cooper & Hughes, 2017; Knight et al., 2010; Liao et al., 2007). Filling these awareness gaps can broaden an international student's information horizon, which increases the chance of resources proactively supplying information based on the user's information needs (Sonnenwald, 2005).

In the specific context of the academic library, international students report wanting more sources of information in their primary language (Jackson, 2005) and about their home country (Sin & Kim, 2018). Beyond this, the need to simply have more

resources is also there. Some report having difficulty finding what they need, which creates a heavy reliance on Interlibrary Loan (ILL) services (Burel et al., 2019). ILL is a practical choice for fulfilling information needs, but this dependence on it raises concern if we consider that it is a new concept for many international students, along with live online help and librarian reference appointments (Jackson, 2005) which are both channels through which international students would likely first learn about ILL.

## Issues and Considerations to Better Serve International Students

## in the United States

A lack of awareness is a significant barrier for international students. Some do not realize that reference librarians are there to answer questions, expressing concern over bothering them with their needs (Curry & Copeman, 2005). Comments from focus-group participants in a study by Ganster (2011) include one student who was fully unaware of what a reference librarian was, another expecting the library to be impersonal, and a third expressing that libraries in their country are more like a community center with their holdings a sign of their strength. In yet another example, research help services from librarians were a top-ranked new concept learned from vernacular orientation videos (Li et al., 2016).

On top of the pure lack of awareness, studies show that non-native English speakers have higher levels of anxiety due to library staff interactions and barriers with interfaces in the library (Curry & Copeman, 2005). Granted, some rightly acknowledge this library anxiety is often present regardless of a graduate student's country of origin (Douchette, 2019). Even so, this means there is a level of universal experience among

graduate students, which creates common ground where a library's shared space can support all students in ways that create opportunities for cross-cultural engagement (Douchette, 2019). This cross-cultural engagement need is emphasized in a trend of international students wanting to meet and interact with American students (Ganster, 2011). Such opportunities can go a long way toward lowering anxiety.

Staying on this theme of anxiety-inducing issues, think on how questions arise from pre-existing cognitive structures (Morris, 1994). Because of this, questions can be misinterpreted by reference librarians, especially when they come from an unfamiliar context. An information need can be hard to articulate for anyone, as it tends to be ambiguous to those experiencing the need (Taylor, 1968, as cited in Morris, 1994). It is no wonder that research suggests individuals feel more comfortable interacting with someone like themselves (Brown, 2015). A preference to communicate with others from a similar context is indicative of approaches that might increase the international student's academic library engagement.

Some international students report using a library catalog in their primary language from a native university to help find information about resources at their host institution (Ganster, 2011). This speaks to the need for information in their own language. Even after simply watching library orientation videos in their native languages, international students self-reported a greater willingness to contact librarians (Li et al., 2016). Chinese international students value librarians that understand Chinese (Shao et al., 2013). This takes us all the way back once again to favoring co-national in-person communication (Oh et al., 2015).

But it is not just language barriers, academic libraries also need to consider the content and interactions with international students. The very first section of RUSA's (2008) *Guidelines for Behavioral Performance of Reference and Information Service Providers* is dedicated to visibility and approachability. When librarians greet an international student proactively and are willing to go with them to a computer terminal to aid their search, the interaction is perceived as more positive (Curry & Copeman, 2005). This might seem obvious but consider the aforementioned implication that some international students are shown to not even realize that the reference librarian is at that desk for the purpose of helping them (Curry & Copeman, 2005; Ganster, 2011). Special attention should be given to acknowledging the international student and engaging them to see if they need assistance.

## Conclusion: Major Takeaways and Recommendations in the Context of the Information Ecology

In conclusion, academic libraries must find ways to raise awareness of library services that work with the international student's information behavior. It is important to establish a level of comfortability and familiarity for the international student. Doing so will expand their information horizons, opening the pathway for introductions to otherwise unknown resources and services.

There are many ways to approach this endeavor. A multicultural staff will make it so international students see a representation of themselves working in the library, which could have a massive impact since people are more comfortable interacting with others from a similar context (Brown, 2015), especially in those initial interactions of uncertainty. Hiring staff that speak their language(s), as we see in RUSA's (2008)

*Guidelines for Library Services for Spanish-speaking Library Users,* could also go a long way toward removing barriers to library service awareness. Even if these options are challenging, providing orientation information in their primary languages across a variety of mediums, such as vernacular language videos in the Li et al. (2015), is shown to have an impact.

It all comes down to making a special effort to ensure that principles, such as what we see in RUSA's (2008) *Guidelines for Behavioral Performance of Reference and Information Service Providers*, are taken into full consideration for the international student. Different users need different approaches. When working with patrons from different cultural backgrounds, library staff must have the cultural competence to be sensitive to information behaviors and needs so they can effectively work with the varying styles, accents, and cultural norms of their patrons (Cooke, 2016). It is crucial for Academic libraries to meet the international student's cultural context and proclivities so that their level of engagement with library services is not inhibited.

This review paper considers just a small collection of observations and implications. Iterative research on the information behaviors and needs of international students, as well as assessments of services, must be continuous. Information professionals have a responsibility to continually build their cultural competency in order to remain current on how to best serve this unique user group. Otherwise, international students may fall through the cracks and miss important opportunities in the academic library information ecology.

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