

Advising International Students in Engineering Programs: Academic Advisors' Perceptions of Intercultural Communication Competence

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In recent years, an increasing number of international students have enrolled in engineering programs in U.S. colleges and universities. These students often encounter challenges, and academic advisors play a significant role in international students' academic success. Using a model of intercultural communication competence, we explored attitudes toward and understanding of cultural differences among academic advisors in a college of engineering at a 4-year research university. We also investigated advisors' knowledge of and skills in conducting intercultural communication with international students. The findings shed light on advising international students in engineering programs, and we provide recommendations for academic advisors on conducting effective communication with students from diverse cultural backgrounds.

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International student enrollment in U.S. higher education has increased tremendously over the past decade. According to a 2015 report from the Institute of International Education (IIE), 974,926 international students studied at U.S. colleges and universities during the 2014-2015 academic year, a 10% increase from the previous year and a record high in international enrollments. Among the international student population, a considerable proportion enrolled in engineering programs. In 2014-2015, approximately 1 of every 5 international students studied engineering (IIE, 2015). The increase in international student enrollments, particularly in the fields of science and engineering, has greatly benefited U.S. colleges and universities. Many research institutions depend on these well-trained students to carry out teaching activities, undertake scientific research projects, and produce innovative technologies (Chellaraj, Maskus, & Mattoo, 2008). However, international engineering students, especially those from Asian

countries, often encounter challenges while adapting to their new learning environments (Chang & Chin, 1999; Chen & Kavanagh, 2013; Gorry, 2011).

Academic advising can improve the learning experiences for international engineering students. Numerous researchers have indicated that academic advising plays a pivotal role in student retention, personal development, and academic success (e.g., Hunter & White, 2004; Shelton, 2003; Young-Jones, Burt, Dixon, & Hawthorne, 2013). Advisors' skills in interpersonal relationships and intercultural communication comprise a critical component of quality advising (Cornett-DeVito & Reeves, 1999; Negroni Rodríguez, Dicks, & Morales, 2006; Zhang, 2015, 2016). These skills take on increased importance when academic advisors interact with students who come from different cultural backgrounds, speak nonnative languages, or transfer from overseas educational systems. To encourage effective assistance for students from many cultural backgrounds, Cornett-DeVito and Reeves (1999) called on academic advisors to "model competent intercultural communication by demonstrating cultural awareness and sensitivity and by having a command of communication skills that lead to successful interactions with diverse persons" (p. 35).

Despite substantial international student enrollments in engineering programs and the importance of academic advisors to these students' success in college, minimal research has been undertaken to understand either advisors' perceptions of cross-cultural communication or their preparation in guiding international students. Therefore, we conducted a qualitative, phenomenological study to obtain a rich understanding of academic advisors' lived experiences working with international engineering students in a cross-cultural context. We also sought to gain meaningful insights into academic advisors' knowledge, attitudes, and skills for conducting effective communication with their international advisees.

Review of Relevant Literature

To provide a context for this study, we organized the previous literature into three

categories. First, we explored past scholarship pertaining to the importance of academic advising for engineering students. Second, we looked at research about international students' experiences with academic advising, and finally, we synthesized empirical evidence on advisors' experiences with international students.

Academic Advising for Engineering Students

Academic advisors play a critical role in delivering accurate information on course selection and guiding engineering students to navigate their academic programs successfully (Sutton & Sankar, 2011). Typical engineering programs are based on highly structured curricula that require students to progress from fundamental to advanced courses in a strictly organized manner (Cogdell, 1995). Any mistakes made in course selection can result in greater financial burdens and delayed graduation. Therefore, engineering students rely heavily on the guidance of their advisors and often seek assistance for selecting courses, changing course schedules, learning about graduation requirements, and obtaining information on internship opportunities (Cogdell, 1995; Sutton & Sankar, 2011; Varma & Hahn, 2007). Overall, assessable appropriate academic advising contributes to the retention of engineering students (Haag, Hubele, Garcia, & McBeath, 2007; Metzner, 1989). In contrast, poor academic advising, coupled with a lack of career counseling, may contribute to student departures from engineering programs (Haag et al., 2007; Jain, Shanahan, & Roe, 2009).

International Students' Experiences with Academic Advising

All students, including international students, benefit from academic advising. The literature indicates that international students perceive academic advising as an important benefit and believe it exerts positive influences on their adjustment and academic performance (Cadioux & Wehrly, 1986; Charles & Stewart, 1991). For instance, Ku, Lahman, Yeh, and Cheng (2008) found that international doctoral students considered support from academic advisors a key factor for their well-being and academic success. Zhai (2004) indicated that international students rate advisors as the third-most important source of support, following family and friends and the office of international education. The findings of Zhai's study demonstrated that satisfaction with academic advising significantly predicts students'

sense of belonging and intent to persist. In addition, compared to domestic students, international students were more likely to view developing a close relationship with advisors an important step toward academic success (Rose, 2005).

Advisors' Experiences with International Students

Most of the literature regarding advisors' experiences with international students focused on faculty advisors and their perceptions of students' academic performance and cultural adjustment. Most faculty advisors hold a positive attitude toward international students and view them as important contributors to research (Barber & Morgan, 1988). Faculty advisors also recognize challenges that international students often face in language learning, adjustment to American culture, and segregation from domestic students; however, they note very few differences between international and domestic students regarding their academic performances (Trice, 2003).

When examining advising professionals' experiences, Burton (2012) found that academic advisors gain limited personal or professional experiences or receive little training to be effective in cultural-enriching activities, including interacting with international students. Burton's study revealed that the "decentralized nature of the academic advising program within the institution hinders advisors' capacity to get involved in international activities" (p. 98). In a community college context, Zhang (2015, 2016) presented an early effort in understanding academic advisors' experiences with international students from an intercultural communication perspective. Zhang found that, although they recognize the unique challenges faced by international students and cultural differences between international and domestic students, academic advisors receive limited professional training in conducting effective advising with international students. Although these studies contributed to a fuller understanding of academic advisors' practice with international students, Zhang explored only the community college context and did not take into account any differences among academic disciplines. To address the limitation of the current literature, we explored experiences and perceptions of academic advisors who work closely with international engineering students at a 4-year university.

Theoretical Framework

We adopted intercultural communication competence (ICC) as explained by Chen and Starosta (1996) as the theoretical framework for the study. *Intercultural communication* refers to contact made between people from different ethnic or cultural groups (Arasaratnam & Doerfel, 2005; Gudykunst & Mody, 2002). Accordingly, ICC is defined as one's ability to interact effectively, appropriately, and meaningfully across different cultures (Chen & Starosta, 1996; Hammer, Bennett, & Wiseman, 2003; Pope & Reynolds, 1997). ICC encompasses three different perspectives: (a) *cognitive*, which refers to one's awareness and understanding of information for successful intercultural communication (Chen & Starosta, 1998-1999; Wiseman, 2002); (b) *affective*, which means one's motivation to plan participation or actually engage in intercultural communication (Wiseman, 2002); and (c) *behavioral*, which represents one's skills and abilities for conducting intercultural communication (Chen & Starosta, 1998-1999). According to the framework, individuals need to possess competence in all three dimensions to convey messages successfully from one culture to another (Wiseman, 2002).

The framework of ICC has been applied to studies of international students, but most researchers employed it to investigate international college students' adjustment and their knowledge of intercultural communication. To promote international student learning and educational attainment in U.S. higher education, we argue that the ICC of U.S. educators and practitioners in the host culture proves equally important to that of students, and we sought to understand the ways professionals' ICCs shape their relationships with international students. Therefore, we adopted the framework of ICC to explore academic advisors' ICC and the influence of it on their experiences as advisors of international students.

Methodology

We adopted a phenomenological research design to describe "the meaning for several individuals of their *lived experiences* of a concept or a phenomenon" (Creswell, 2007, p. 57). This approach can provide a better understanding of academic advisors' knowledge of and attitudes toward international advisees, and it can reveal the strategies that advisors adopt to communicate with international students.

Research Setting

This study was conducted in a college of engineering at a 4-year research university in northern Texas during the fall of 2014. In the previous few years, the university had enrolled an increasing number of international students, a large proportion of whom chose to study in engineering programs. As of Fall 2014, more than one third (34%) of the enrollments in the college of engineering were attributed to international students.

Participants

We sent an e-mail invitation to all academic advisors ($N = 39$) in the college of engineering in the fall of 2014. Eight of the advisors, five men and three women, consented to participate in the study. These advisors worked in six different departments within the college and held various experiences in academic advising. Most self-identified as White. Six advisors had earned a PhD in an engineering field and had been working concurrently as academic advisors and faculty members in the college. Two advisors had earned undergraduate degrees, one in education and another in history, and they served as full-time professional academic advisors at the time of the interview. To protect the advisors' personal identities, we assigned a pseudonym to each participant. Table 1 presents the demographic backgrounds of the participants.

Data Collection

Adhering to Moustakas's (1994) phenomenological method, we conducted semi-structured interviews and encouraged advisors to describe their experiences from their own perspectives. The interviews with these eight advisors, each of which lasted approximately 45 minutes, focused on advisors' experiences working with international students, their own cultural awareness, their willingness to learn from other cultures, and strategies they employed to overcome challenges in advising international engineering students. The interviews were digitally recorded and transcribed verbatim. To ensure trustworthiness of the findings, we sent transcripts back to the participants for member checking and feedback (as per Lincoln & Guba, 1985). None of the participants asked for any changes in the transcript. In addition, we conducted peer briefing between each other to ensure appropriate interpretation of the qualitative data (per Lincoln & Guba, 1985).

Table 1. Demographic characteristics of the participants

Pseudonym	Department or Center	Current Advising Position	Years in Position
Andrew	Bioengineering	Undergraduate	1
Briana	Engineering Student Services Center	Undergraduate & graduate	6
Edward	Computer Science & Engineering	Undergraduate	2
Jennifer	Bioengineering	Graduate	3
Mary	Civil Engineering	Graduate	2
Michael	Aerospace Engineering	Undergraduate	2
Ryan	Electrical Engineering	Undergraduate & graduate	6
Stephen	Industrial & Manufacturing Systems Engineering	Graduate	11

Data Analysis

First, we read the interview transcripts multiple times to gain a general sense of participants' experiences of advising international engineering students. Second, using open-coding techniques (as per Esterberg, 2002), we explored similarities and differences among the interview transcripts. Third, we compared, categorized, and labeled quotes. In addition, we used axial coding (per Esterberg, 2002) to determine relationships between initial categories and to develop the emerging themes and subthemes further. For example, quotes categorized under the label of *positive experiences of advising international students* and *willing to learn more about international advisees* were merged into a category labeled *positive attitudes*. The same axial coding technique was applied to link *resources* and *events* under the category labeled *obstacles*. Initially, 12 labels were created for the transcripts, which we later reduced to three themes in accordance with the ICC theoretical framework.

Limitations

Although our study offers new knowledge about academic advisors' perceptions and lived experiences in working with international engineering students, several limitations characterize the research. First, one limitation relates to participant selection. Although we made every effort to invite all 39 advisors in the college of engineering to participate in the study, fewer than one fifth of them volunteered. Those who chose to participate may differ from the other advisors in their awareness levels of cultural differences, or they may possess particularly favorable attitudes toward international students. Therefore, interviews with these participants may not accurately reflect the

experiences and perceptions of all advisors in the college.

Second, we did not distinguish between undergraduate and graduate student advising. Although we focused on advisors' overall experiences with international engineering students, advisors of undergraduates may hold perceptions, knowledge, and skills that differ from those advising graduate students. Future studies could focus on these distinctive groups of international advisees and uncover differences in advisors' experiences.

Third, we did not differentiate between faculty advisors and those whose primary role is characterized as advising. The two groups, traditionally labeled *faculty* and *professional advisors* may possess different attitudes or understanding toward advising international students. In the future, researchers could explore experiences of different types of advisors, and thus, provide valuable insight into advisors' professional backgrounds, training, and positions in relationship to their advising practices.

Findings

Guided by the ICC theoretical framework, we organized the findings of the advisors' experiences into the following three major themes:

- understanding cultural differences,
- positive attitudes toward cultural diversity, and
- strategies to improve international student advising.

Understanding Cultural Differences

The interviews revealed study participants' awareness of cultural differences between native and international engineering and the influence of such differences on advising these students.

Advisor participants acknowledged that students from other regions of the world have studied in a very different educational system, engage in conversational styles and processes unlike native speakers, and likely express different expectations of learning and living in the United States than their native peers.

Differences in academic cultures. The participating advisors understand that many international engineering students were educated in different academic cultures prior to their arrival to the United States. Furthermore, they indicated that students' unfamiliarity with U.S. postsecondary culture affected their participation in classroom activities and learning outcomes. For instance, Stephen recognized that many international students come from an educational system in which "they would have the exam at the end of the semester with nothing much in between." According to Stephen, these students place heavy emphasis on "learning things as preparing for the exams," but do not pay sufficient attention to class participation; they also experience challenges when working on projects through the semester. Mary reported similar struggles encountered by international students she advised in the engineering program:

Sometimes the students come from a system where their grade is primarily based on one final exam . . . and our classes don't work that way. The students are required to turn in homework assignments that count for part of the grade. There are some students that have some difficulty adjusting to that kind of system.

Not only did the advisors acknowledge the impact of academic culture on class assignments but they also reported a recognition of dissimilarities in grading policies. Two advisors related stories of surprise upon learning that some international students assumed their grades were negotiable. Mary reported feeling challenged when explaining to students the reasons grades could not be changed: "I can't just give you a B [from a C] because you need to stay in school." Jennifer shared a similar experience:

I am surprised at how many students come after grades have come out and ask professors to change their grade and give them a better grade. . . . [It's] really common, at least

in India, that they would talk to their professor to get a better grade.

The interviews revealed that the participating academic advisors saw gaps in the academic expectations of domestic and international advisees. These advisors also believe that mismatches in academic expectations can lead to increased challenges in advising international engineering students.

Differences in communication styles. Academic advisors reported that international students tend to communicate in different patterns than American students. Most interviewees noticed differences in tone used by international students in conversations and in ways of expressing ideas. For instance, Edward explained that some international students "shout" at him during advising sessions, "[Some international students] thought that was the way to do it." The advisors also acknowledged differences among international student subpopulations. Michael pointed out that some international students tend to be "demanding" and "a little bit pushy," although "they [did] not cross the line" to offend the advisor, whereas others "[are] very eager to please and show respect, and follow the rules." The advisor appears to be understanding, tolerant, and accepting toward both communication styles: "I don't mind that lively exchange."

Differences in expectations. In addition to differences in academic cultures and communication styles, the participating academic advisors recognized variations in expectations between international and U.S. students. The advisors shared that some international students express their gratitude by presenting gifts and expect the advisors to accept the gifts. Edward recalled situations in which international advisees had "come in and [tried] to offer gifts and things" because "that's the way they did it in their home country." However, conveying appreciation through gifts may constitute an unconventional or inappropriate practice in the U.S. academic context. Edward felt compelled to explain to advisees that advisors do not accept gifts.

In addition, some advisors noticed that international students bring different expectations about the role of academic advisors, specifically in terms of policies and rules. For instance, Edward reported that international students from certain cultures like to shop around and speak to different advisors until they receive favorable answers:

They [international students] won't like my answer. They will go to the next advisor. Cross question them. That advisor will give the same answer. They will go to a third advisor, cross-question—so, keep on trying, one person after another, because they don't like the answer. They can't believe the answer they have been given.

Although this scenario might not exclusively apply to international students, it illustrates one of the most remarkable differences that the participating advisors reported.

Positive Attitudes Toward Cultural Diversity

Interviews revealed that the participating engineering academic advisors maintain a positive attitude toward academic advising and enjoy learning from international students despite the cultural differences they perceived. These advisors expressed a strong interest and desire to enrich their knowledge about international students and other cultures. For instance, Stephen conveyed joy when discussing intercultural events and enthusiasm for regular visits to the international student office on campus where most intercultural activities take place: "I would go there, very often, and get an opportunity to meet the students I've never met from different countries and talk to them." Likewise, Jennifer expressed great enjoyment in meeting new international students and learning about their home countries. She also actively participated in international student activities on campus and took these opportunities to build connections with international students in her department.

Mary thinks highly of the cultural diversity that international students bring to campus, explaining, "It makes my job interesting that I deal with people from a lot of different countries and cultures." She also recognizes that non-appreciation of other cultures could result in difficulties in advising international students: "The faculty member that's had some issues within our department—with international students, I think. . . part of the problem is that he's not as open to people—you know, different religions and different countries. . . ."

Overall, the advisors participating in our study understand the importance of learning about aspects of the diverse cultures that international students contribute to campus, and they conveyed a welcoming attitude toward these students. Nonetheless, like Mary, a few noticed that their

peers do not share the same attitude about nonnative enrollees. The interviews with the advisors revealed that they are willing to learn about other cultures and understand that a lack of exposure to cultural diversity can result in challenges to advising international students.

Strategies to Improve International Student Advising

Being aware of cultural differences and obstacles that international students must face and overcome, most academic advisors in our study actively seek opportunities to enhance their understanding of international students' experiences in the engineering programs. The advisors reported making efforts to adapt their advising practice to respond as positively as possible to the particular needs of international advisees, but they also report coming upon many obstacles.

Communication skills. The advisors reported that they altered their ways of communication by purposefully employing words that international students can better understand and avoiding the use of slang and analogy in explanations. Briana views communication with international students as a learning process through which she continues to advance her knowledge on ways to conduct effective advising with nonnative students. She broke down the practice as follows: "It is learning to make my language, my use of English more formal and not use the slang, and not use a colloquialism, and analogy that [doesn't] make sense to somebody."

In a manner similar to Briana, to facilitate better conversations with international advisees, Jennifer learned to be "straightforward" in advising sessions and uses many open-ended questions to explore students' experiences and backgrounds; thus, she obtains a deeper understanding of the needs of students. In addition, Edward carefully monitors ways that he expresses his sense of humor so that international students do not misunderstand him: "They don't have the same sense of humor as I do. . . . Many times I may not be funny 'cause they would not understand the joke."

The interviews with the academic advisors in engineering departments suggest that those with international experiences may be better equipped with knowledge and skills in conducting intercultural communication. Andrew, as a former international student himself, claimed that "communication is never an issue" when he interacts with international advisees, particularly those

from India, China, Vietnam, Nepal, Pakistan, and Bangladesh. He believes that his own background lends credibility to his interactions with international students. Having been a former international student and working on projects with fellow international students for many years, Andrew developed a greater understanding of cultural diversity and gained advanced skills in intercultural communication.

Self-education. Although many participants in this study did not have opportunities to gain first-hand knowledge of cultural differences, as Andrew did, these advisors relied on learning from secondary resources to improve their practice in advising international students. For instance, Briana conducted her own research on her students' home countries, their cultural backgrounds, and other information that she could utilize to interact with these students more effectively. She explained, "I actually do a lot of research on my own. I may talk to somebody from that particular country or that particular area, but a lot of time it's just figuring out something really simple, you know. . . . So there is a lot of cultural, a whole lot of cultural reading."

In addition, the academic advisors count on the cultural and language expertise of international students to conduct effective communications during advising sessions. For instance, Stephen enhanced his understanding of cultural diversity by establishing a relationship with and asking questions of international advisees. He added, "You get to know the students by talking to them. . . , and I think you can get a lot of information by just talking to the students." Similarly, Jennifer turned to her former international advisees for assistance when advising newcomers: "I know students from every country that I have a good relationship with. So, I will ask them to come in and meet with me at the same time, like, a new student that I might be having trouble communicating with. . . ; the other student will come in and speak to them in their native language."

By consulting college of engineering faculty members with more international experiences, the interviewed advisors improved international student advising. As Briana indicated, many faculty members in the college have lived, studied, or traveled overseas, and the advisors reported asking them for solutions and recommendations.

Obstacles. Although the advisors actively seek information to improve their own international student advising, the interviews suggested a lack of

institutional support that could hinder advisors' efforts in advancing the learning of international engineering students. For example, Ryan shared that lack of specific training prevented him from better understanding his international advisees: "There was no clear assignment what an advisor was supposed to do for the international students beyond making sure they stay on track to get through their requirement."

Michael added that in the college of engineering, most interactions between advisors and advisees focus on "the document listing the courses they need to take in the upcoming semester," which could prevent advisors from learning about their students on a personal level. Also, Eric explained that the compartmentalized nature of engineering departments makes for sparse opportunities for consultations with student affairs professionals, who may possess knowledge about cultural diversity that make them particularly well equipped to interact with international students.

Finally, when asked if the college of engineering conducts any activities to promote cultural awareness, all of the advisors interviewed answered "no." Stephen elaborated: "We've never [gotten] deeply involved in cultural activities." Conversations with the advisors led to the finding that, at the college level, little commitment was made for improving international student advising despite advisors' demonstrated desire to foster personal connections with international students.

Discussion and Implications

In this study, we focused on academic advisors in a college of engineering at a large, public research university in northern Texas. We explored the advisors' experiences of working with international students through the lens of ICC. The findings shed light on advising international students in engineering programs. We used the results to provide recommendations for academic advisors and others in higher education institutions for conducting productive communications with students from diverse cultural backgrounds.

Cognitive Perspective

The cognitive perspective in the ICC framework refers to a person's awareness and understanding of information for successful intercultural communication (Chen & Starosta, 1998-1999; Wiseman, 2002). The findings of the study suggest that the interviewed academic advisors in the college of engineering generally understand

that many international advisees show unfamiliarity with American academic culture, possess interaction styles unlike their native counterparts, and hold uninformed expectations for advisors. The findings suggest that an advisor, prior to guiding the student's academic work, should seek to understand the student's situation and unique challenges in navigating engineering programs. For instance, to understand international advisees better, academic advisors could spend more time in their initial meetings establishing rapport with these students and developing holistic views of each. This approach can help form and strengthen a trusting relationship especially for advisors and advisees who do not share similar cultural backgrounds (Cornett-DeVito & Reeves, 1999).

We found that several advisors face challenges in assisting international students who struggled to understand the American higher education system and grading policies. This finding indicates that academic advisors need to familiarize themselves with international students' academic and cultural backgrounds. For example, academic advisors could provide an overview of U.S. higher education to their incoming international advisees and discuss with them the differences and similarities between policies and practices at home and in the United States. More specifically, advisors might explicitly explain the way the final grade is calculated and the reasons it cannot be changed; thus, they encourage students to consult faculty and advisors early and often. Advisors might also highlight academic regulations and expectations of the college of engineering, such as the definitive order of certain class sequences, purpose of collaborative assignments, and importance of participation in class discussions. Such efforts committed by academic advisors could greatly benefit international students' academic pursuit in engineering programs.

Although the advisors expressed awareness of students' differences, none discussed their own communication styles, cultural backgrounds, or influences of their own personal perspectives on advising practices. The ICC framework stipulates that "the implementation of conversationally competent behaviors in interaction requires self-awareness" (Chen & Starosta, 1996, p. 365), which allows individuals to adjust to cultures different from their own. Accordingly, examinations to understand their own communication styles might enable academic advisors to realize their personal strengths and weaknesses in communicating with others, especially in a

cross-cultural context. Such self-reflection may also help advisors understand their own cultural heritage, worldview, and buried bias, if any, about other cultures or countries. As a result of introspection, academic advisors could more effectively assist international students who are adjusting to the U.S. culture and a new learning environment (Brislin, 1981; Gudykunst, 1993; Triandis, 1977).

Affective Perspective

Affective perspective emphasizes personal emotions or changes in feelings that result from exposure to particular situations, people, or environments (Triandis, 1977). Academic advisors in this study expressed positive feelings and attitudes toward students from other countries, and they showed interest in learning about other cultures. The findings contribute to the existing literature (Zhang, 2015, 2016) that suggested that academic advisors appreciate the opportunity to become acquainted with the cultures of international advisees. The findings also suggest that advisors with a more accepting attitude toward international students tend to be relatively comfortable in communicating with students who adopt communicational styles unlike their own. Although important for international engineering students to adjust to the new social and academic cultures, advisors share an equal portion of the responsibility to remain open to different cultures and communication styles. Without willingness to connect with them, advisors cannot fully understand struggles that international students encounter in their transition and will fail to provide adequate support for students.

Only two advisors indicated that they participated in campus activities to enhance their understanding of international student experiences. This finding may suggest that academic advisors need to take additional steps to engage in culture-enriching activities. Thirty years ago, Cooper, Beare, and Thorman (1990) pointed to personal practice as an important way to gain a deeper understanding of cultural diversity. Advisors might translate experiences into intercultural appreciation and thus eliminate any discomfort caused by the lack of cultural competence when interacting with international students. Despite the benefit of cultural enhancement activities, advisors' lack of participation in them may be attributed to their job description. Several participants in the study described minimal emphasis

on academic advisors' cultural awareness and intercultural understanding.

Behavioral Perspective

Through this study, we discovered that engineering academic advisors not only recognize the cultural diversity contributed by international students but they also demonstrate "the ability to adapt appropriately to situational or environmental variations" (Bochner & Kelly, 1974, p. 288), or behavioral flexibility, in advising these students. For instance, to overcome language barriers, the academic advisors we interviewed explained that they limit use of slang and jargon, ask open-ended questions, and use measured humor when interacting with international students. Our interviews with academic advisors also revealed lack of institutional support in engineering advisors' cultural awareness and appreciation. To overcome this obstacle at the institution, academic advisors in our study reportedly deepened their own cross-cultural understanding by accessing various resources, such as the Internet, current and former international students, and other faculty members with extensive international experiences.

On the basis of these findings, we recommend that colleges of engineering incorporate training on cultural understanding in advisors' job requirements and provide resources to promote advisors' exposure to diversity. For instance, college leadership could encourage advisors' participation in cultural and intercultural activities by calculating the necessary time commitments when assigning workloads. In addition, the college of engineering administration should promote collaboration and interaction between academic advisors and other units on campus, particularly those with professionals who work closely with international students and possess particular expertise about diverse cultures and issues. Academic affairs offices and student affairs units, such as the international office and multicultural division, can provide training, support, and assistance for advisors. This type of cross-campus collaboration might empower advisors in helping international students transition smoothly through their educational journey in the United States. It can also provide advisors with opportunities to share challenges that they have encountered in advising international students and obtain advice from culturally experienced colleagues. Finally, with a large representation of international students in colleges of

engineering, each institution should take advantage of the unique contributions of international students, faculty, and staff to organize events and activities that celebrate cultural diversity in the classroom and campus.

Summary

In the current study, we utilized the theory of intercultural communication competence, or ICC, to explore academic advisors' experiences of advising international students in a college of engineering at a large research university in northern Texas. The findings revealed that academic advisors hold positive attitudes toward international students and are willing to gain a deeper understanding of other cultures. They also suggested that these same academic advisors actively adopt a variety of strategies in practice with international engineering students. However, the findings also uncovered a general lack of support at the institutional level for international student advising. The advisors in this study primarily depended on their own initiative to seek information regarding cultural differences and intercultural understanding. None of the participants reported that they had received training from the institution or the college about intercultural communications, cultural diversity, or strategies for working with international students.

As the number of international students continues to increase in engineering programs in U.S. higher education, academic advisors should be better equipped with knowledge and skills in conducting effective communication with these students. The role of academic advising in international engineering students' transitions and successes warrants more attention in future research. We encourage researchers to make additional empirical efforts that might improve advising practices for this important and growing student population.

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