



Understanding US Undergraduate Students' Perceptions of International Teaching Assistants

The purpose of this mixed-method study was to better understand undergraduate students' perceptions of international teaching assistants (ITAs) at a major research institution. Data collected through surveying a sample of 436 undergraduate students from different colleges and at different class levels were analyzed both qualitatively and quantitatively. Undergraduate students' perceptions of ITAs were derived through qualitative analysis of the open-ended survey data, which resulted in themes both established in previous research (e.g., language) and original ideas. For example, one perception identified was the connection of language to pedagogic difficulties, while another perception focused on the interactive construct of communication. Further, students who indicated that they did not have problems with ITAs were less likely to articulate perceptions that were relational, whereas students who did report having a problem with ITAs articulated perceptions that involved an interaction (communication and language as a barrier interfering with pedagogic performance of ITAs).

Graduate education can be considered a major part of American higher education, with about 1.78 million students enrolled in graduate programs in universities across the US. Among them, about 26% are graduate students pursuing doctoral degrees (Council of Graduate School, 2016). Out of this number, a significant number of graduate students hold teaching assistantships to pay for their tuition and to earn a stipend. The tasks of teaching assistants vary from grading and conducting discussion classes to teaching classes as independent instructors. Whatever their tasks are, they require "broad and complex ... support" (Jennings, 1987, p. 5) from the institution in which they are studying and teaching. This support is invaluable to international teaching assistants (ITAs), particularly nonnative

English-speaking teaching assistants, who have to teach in a language that is not their native language in addition to adapting to a new classroom culture.

This challenging task of teaching in a new environment and in a second language is exacerbated by the responses to ITAs from many undergraduate (UG) students and their parents. In the 1970s and early 1980s, UGs' complaints about ITAs' inadequate language proficiency and their ignorance of US education culture came out in the national media (Smith, Byrd, Nelson, Barrett, & Constantinides, 1992). The parents of UGs, in particular, pressured legislators and university administrators to solve the "foreign TA problem" (Bailey, 1983, p. 309). The result has been the passing of laws or mandates to assess the language skills of ITAs and train them to develop language and pedagogical skills (Ernst, 2008).

Before the development of these ITA programs, research on ITAs was conducted by scholars such as Mestenhauser et al. and Bailey in the 1980s. As research in this field continues to grow, the areas most often researched are ITAs' language proficiency, followed by intercultural communication between ITAs and their students (Villarreal, 2012/2013). Inherent in these areas are UGs' evaluation or perceptions of ITAs. Researchers are increasingly finding value in involving UGs' evaluation and perception of ITAs to strengthen ITA programs (Sarwark & vom Saal, 1989; Staples, Kang, & Wittner, 2014). Yule and Hoffman (1993), for example, explored the possibility of involving UGs in the ITA screening process and demonstrated that the UG observers were overwhelmingly in agreement with ESL instructors in terms of their evaluation of the ITAs. The benefit of including the UGs in the assessment process is that it offers validation to the verdicts of ESL professionals regarding the readiness of ITAs to assume instructional duties. Moreover, it involves the inclusion of the very party whose "complaints provided the impetus for ITA programs to be created and screening procedures to be required" (Yule & Hoffman, 1993, p. 326).

Numerous researchers who have examined UGs' perceptions of ITAs have identified both linguistic and nonlinguistic factors affecting UGs' perception of ITAs (Fox, 1991; Hinofotis & Bailey, 1981; Marvasti, 2005; Plakans, 1997; Rubin & Smith, 1990; Staples et al. 2014). The present study was a continuation of these previous studies in terms of studying UGs' perceptions of ITAs. However, the primary focus of the study was to analyze the relationship between UGs' perceptions of ITAs and the colleges in which the UGs were studying, using a mixed-methods design. The rationale for combining quantitative and qualitative approaches (Creswell, 2003; Tashakkori & Teddlie, 1998) was that the quantitative data and results provided a general picture of the research problem, while the qualitative data and analysis sought to explore UGs' experience and perceptions of receiving instruction from ITAs.

Literature Review

Beginning with Bailey's landmark study on the "foreign TA problem" (Bailey, 1983, p. 309), researchers have continued to study the instructional challenges of ITAs and the implications in US higher education. Smith and her colleagues (1992) observed that most of these studies investigate the communicative competence of ITAs, showing that problems arise from both language and nonlanguage factors.

Language Abilities of ITAs That Contribute to Communicative Problems—as Perceived by UGs

In the existing studies on ITAs, UGs perceive inadequate linguistic ability on the part of ITAs to be the primary reason for communication breakdown in ITA-UG interaction. For example, in a survey of UG students, Hinofotis and Bailey (1981) found that students perceive pronunciation as key in successful oral communication with ITAs. Later, when Tyler, Jefferies, and Davies (1988) examined ITAs' instruction through a discourse analytic examination of 18 Korean and Chinese teaching assistants, they found that ITAs' prosodic features such as stress, intonation, and pause, which differed from those of native English speakers, were the source of the communication gap between ITAs and UGs. More recently, Chiang (2009) documented several miscommunications in ITA-UG interactions, which stemmed from ITAs' perceived mispronunciation.

Nonlanguage Factors That Contribute to Communicative Problems—as Perceived by UGs

Ample studies suggest that the ITA "problem" could very well be a problem of UGs themselves, at least partially. Orth (1982) showed that UGs' evaluations of their ITAs' oral proficiency were only slightly related to professional evaluations of the ITAs' language ability, and that they were rather influenced by the grades the UGs anticipated receiving from those ITAs. A study by Plakans (1997) also revealed that UGs who expected a C in their courses taught by ITAs had a significantly lower ATITA (attitudes about international teaching assistants) composite score than the students who were expecting an A or B.

Other nonlanguage factors that Fox (1991), and later Plakans (1997), identified as influencing UGs' attitudes toward their ITAs are age, gender, and homogeneity factors. Females and older students (25 years and over) had significantly higher ATITA composite scores than males and young students. As regards the place of residence, size of hometown, and international travel experiences of UGs, scores on the ATITA scale revealed, not surprisingly, that UGs who had not been outside of the country or lived in small towns or rural areas in the Midwest had relatively fewer positive feelings toward ITAs in comparison with UGs who had grown up in big cities, had

taken trips abroad, or were from the Eastern or Western part of the US (Fox, 1991; Plakans, 1997).

One final nonlanguage factor that some researchers studied affecting UGs' perceptions of ITAs is the academic discipline they are pursuing. Since a disproportionate number of introductory courses in mathematics and natural sciences (which have the reputation of being the most difficult of introductory courses among UGs) are assigned to ITAs (Constantinides, 1987), some researchers found it worthwhile to explore if patterns of communication and understanding in the classroom between ITAs and UGs could differ according to academic discipline (Hoekje & Williams, 1992). For example, in Fox's (1991) study, the lowest ATITA scores were achieved by UGs from the School of Agriculture, with significant differences between their mean score and those of students from Schools of Sciences, Liberal Arts, and Engineering. ATITA scores of UGs from the School of Education were also significantly lower than those of Sciences. The comparison between the mean ATITA score for students from Liberal Arts also showed a statistically significant difference. Plakans's (1997) study, too, revealed similar trends. In this study, UGs in Agriculture had the least favorable attitude toward ITAs and UGs in the College of Liberal Arts and Sciences showed the most favorable attitude toward ITAs.

The scenario is further complicated when researchers explored the relationship between UGs' perceptions of ITAs and the number of classes that UGs took in their major area of studies taught by ITAs. On one hand, Bailey's (1982) study revealed that UGs who shared the same academic majors as their ITAs were less critical of them in comparison to ITAs who were not from the UGs' discipline. On the other hand, Fox's (1991) hypothesis that a positive relationship would exist between ATITA scores and the proportion of classes with ITAs that had been in students' major field of study was not confirmed.

Plakans (1997) also had a surprising find in terms of how many years UGs studied and their attitude toward ITAs. The study revealed that freshmen and seniors were more positive about ITAs than sophomores and juniors. Based on some classic studies regarding student development (Astin, 1977; Pascarella & Terenzini, 1991), this suggests that since freshmen tend to have high hopes when they enter college, they rate ITAs higher. However, in the second and third years, as they face some rigorous courses in large classrooms, where ITAs often teach as main instructors or teaching assistants, they are more critical of ITAs. By the final year, however, when they are about to graduate, UGs show more consideration toward ITAs. Some participating seniors in Plakans's (1997) study even remarked that once UGs get enough time to become familiar with ITAs' accents, the students do not find much difference between ITAs and domestic TAs.

Research Questions

The above discussion shows that although some research has included UGs' college and academic discipline as a variable in the study, it does not seem to be the focus of research in this area. Further, research that has examined UGs' perceptions has been predominately from an a priori model. The present study aimed to contribute in this conversation in understanding the difference that exists between UGs' perception of ITAs in terms of different colleges from their own perspectives, and in this way uniquely contribute to research on UGs' perception of ITAs.

The following research questions guided the study.

Quantitative Research Questions

- What courses do UG students most frequently report as taught by ITAs?
- What differences exist among colleges in the number of courses UG students report are *instructed* by ITAs?

Qualitative Research Question

- What are UG students' perceptions of ITAs' instruction?

Mixed-Research Question

- What relationships exist between UG students' perceptions of ITAs and the colleges in which the students are from?

Methodology

A mixed-methods design (Tashakkori & Teddlie, 2003) was used for this study, which involves the collection, analysis, and mixing of both quantitative and qualitative data at various stages of the research process in order to understand a research problem more completely (Creswell, 2003).

Setting

The setting for this study was Orangetown State University (pseudonym), a Tier 1, doctoral-granting research university. According to the university's 2009-2010 Factbook (Institutional Research and Studies, 2010), its student enrollment was approximately 20,000 students, with 75% UGs and 25% graduates. The university consisted of 11 colleges, 8 of which offered UG degree programs. These colleges housed more than 50 academic departments, ranging anywhere from 2 to 15 departments per college.

Orangetown State University seemed to provide a good deal of financial support to graduate students, as 75% of full-time graduate students were awarded assistantships in Fall 2010 (2009-2010 Factbook). Interestingly, of the approximately 1,700 graduate assistants (GAs) in the university, 55% were TAs. However, these percentages varied tremendously across colleges.

For example, in Science there were about 150 GAs with 80% serving as TAs, but in Education only 37% of the 230 GAs were TAs. Unfortunately, there was no record of how many of the TAs were internationals.

Participants

The participants were selected through convenience sampling (Dillman, 2000) and included students who met the following criteria: (a) enrolled in UG programs at Orangetown State University, (b) had completed at least one semester of course work, and (c) planned to major in varied disciplines from different colleges. To access freshman students who had completed at least a semester of course work, the survey was administered in eight sections of an English core class. A section of an English honors course with 14 students was also surveyed to access students who were exempted from taking the English core class because of their high ACT scores. In addition, the survey was administered in upper-level UG classes in order to access juniors and seniors from varied disciplines and colleges who were likely to have decided on their majors. For this purpose, 11 courses with a total of 22 sections were selected as per instructors' permission from the eight colleges of Orangetown University.

Data Collection

A cross-sectional survey design was used, which implies that the data were collected at one time (McMillan, 2000). The technique for collecting both the quantitative and qualitative data was a self-developed questionnaire (finalized after two pilot trials), which consisted of 20 questions organized under two broad sections. The first section of the survey asked questions related to the demographic, background, and current educational information of the participants. The second section of the survey consisted of open-ended questions seeking to understand the participants' perceptions and experiences in course work with ITAs.

A total of 31 classes were surveyed within a span of two weeks, which enabled the researchers to collect data from 436 students.

Data Analysis

The data collected from the survey were analyzed using sequential mixed-analysis (SMA) technique (Onwuegbuzie & Teddlie, 2003; Tashakkori & Teddlie, 1998). In this analysis both the qualitative and quantitative data-analysis procedures were conducted in a sequential and iterative manner, beginning with quantitative analyses, then qualitative analyses based upon the quantitative analyses, followed by quantitative analyses of the qualitative data.

Results and Recommendations

The results of the analysis of the quantitative and qualitative data are discussed in two sections. The first section contains the SMA descriptive findings of the students surveyed. The second section focuses on the SMA exploratory findings and recommendations.

SMA Descriptive Findings

The 436 UGs surveyed provided a fairly good representation of UGs of Orangetown University. The distribution of students surveyed in terms of their college and class level is fairly close to the actual percentage of students from each college and from each class level (see Figures 1 and 2). The following findings and recommendations are thus applicable to Orangetown University in particular and perhaps to any typical Tier 1 research university.

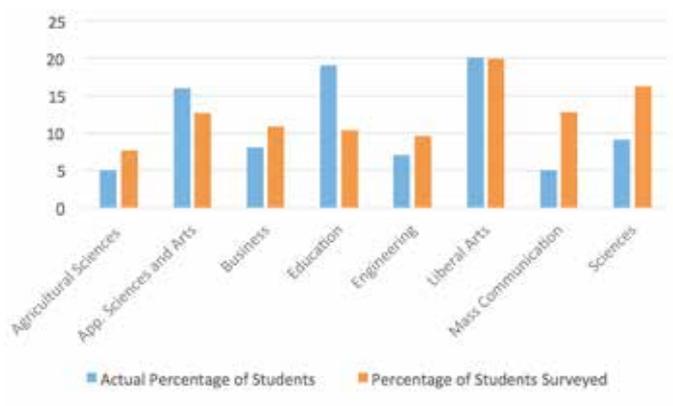


Figure 1. Colleges in which the participants indicated enrollment.

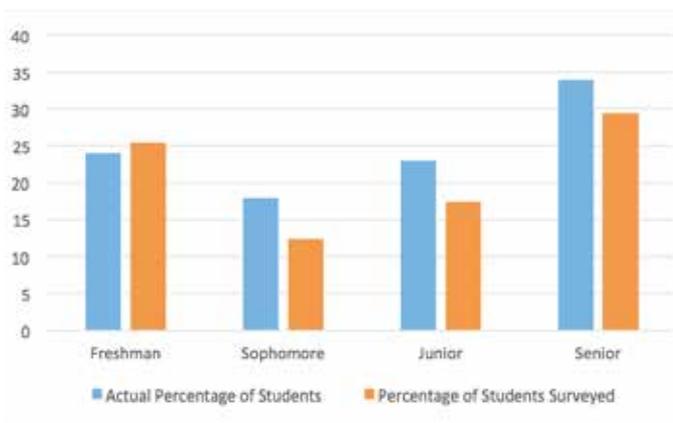


Figure 2. Participants' class level in college.

SMA Exploratory Findings and Recommendations

The qualitative data were analyzed and reduced into seven themes: (a) language, (b) pedagogy, (c) language-pedagogy, (d) communication, (e) my culture, (f) personal, and (g) learn (see Appendix A). A principal component analysis was conducted to determine the number of factors underlying six of the seven themes. The *language* theme was excluded from the analysis because a majority of the students (93.5%) reported language to be a variable in their interaction with ITAs (see Appendix A). As established in the literature review, language is a common perceived barrier in UG-ITA interaction (Bresnahan & Kim, 1993; Hinofotis & Bailey, 1981; Tyler, 1992; Tyler et al., 1988), and the focus of this study was to go more in-depth by identifying what other aspects of UG perceptions were meaningful. This analysis yielded three factors, or meta-themes: (a) perceptions as people, (b) perceptions as education, and (c) perceptions as relational (see Appendix B).

Based on the analysis of the themes and meta-themes, the following pedagogical and programmatic recommendations are made.

Focus on Developing ITAs' Linguistic Ability in Tandem With Their Communicative and Pedagogical Ability. This study not only confirms the need to focus on developing ITAs' linguistic ability and pedagogical ability to improve ITA-UG interaction (with *language* being the dominant theme at 93.5% followed by *pedagogy* at 50.4%), but it also shows the need to explicitly relate language to pedagogy in ITA education. This is evident by the theme *language-pedagogy* (42%), which encompasses the notion of students' explaining their perceptions of the pedagogic consequence of language as a barrier in ITA-taught classes (see Appendix A). For example, a student wrote the following: "In Chemistry, we would do steps wrong because we didn't understand what the ITA was saying ... the ITA couldn't explain. It would ultimately lower our grade for the experiment."

The idea is further complicated when the themes *language-pedagogy* and *communication* load together, creating the meta-theme *perceptions as relational* (see Appendices A and C). This meta-theme is characterized by interactions, meaning the UGs explicitly established an interactional connection between ITAs' linguistic abilities and their communication and teaching abilities. This notion appeared to have come up in many previous studies (Bailey, Pialorski, & Zukowski-Faust, 1984; Fox, 1991; Plakans, 1997) but this study framed it quite differently as it highlighted the UGs' perception of connecting/linking pedagogic difficulty as a consequence of linguistic limitations resulting in communication breakdown. Previous researchers seemed to have focused more on exploring UGs' inclination to take personal responsibility in facilitating communication with ITAs. The notion that communication is related to language-pedagogic issues gets at the reason behind UGs' disinterest in facilitating communication.

Programmatically, this means the ITA screening procedure should be expanded to include the pedagogic abilities of ITAs in addition to testing their speaking skills and presentation skills. According to legislation and the university policy of Orangetown University, as stated on the Graduate Catalog and International Admissions webpage, the ITAs, like all international graduate students, are required to have a certain minimum score in standardized tests such as TOEFL and IELTS to get admitted to the university. Additional testing is then conducted by the second language acquisition center if an international graduate assistant is assigned teaching responsibility. The purpose of this test is to assess the ITAs' oral proficiency. Although there is no reference to assessing the teaching ability of the ITA on the score sheet, members of the testing team often focus on teaching strategy (Ernst, 2008). Universities should integrate assessment of teaching abilities of ITAs with the assessment of their communicative and pedagogic proficiency in a systematic and consistent manner.

Focus on Developing a Universitywide ITA Program as Opposed to Departmental- or College-Level ITA Training. Some departments in Orangetown University supplemented the graduate school ITA training program with in-house training (Ernst, 2008). However, the canonical discriminant analysis (see Appendix D) that was conducted in this study to determine which of the themes predicted perceptions of ITAs by UG students from different colleges revealed that the canonical discriminant functions evaluated at group (college) means did not discriminate UGs' perceptions of ITAs among the colleges. In other words, the students' perceptions of ITAs did not yield any meaningful discrimination when it came to analyzing students' perceptions of ITAs according to students' colleges. This suggests that rather than having departmental- or college-level ITA training, a university-wide ITA development program could prove more effective.

Involve UGs in the ITA Development Activities. When a canonical correlation was conducted to determine which variables, if any, were important in understanding UGs' perceptions of ITAs, the variable *problem with ITA* demonstrated a large function and structure effect size (see Appendix C). A canonical discriminant analysis was then conducted to determine if the UGs' perception themes discriminated group membership in UGs' indicating *a problem* or *not a problem* with courses taught by ITAs. The results indicated that UGs' perceptions statistically significantly discriminated group membership, with *language-pedagogy* and *communication* being the two significant predictor themes. The cross-validated classification, further, showed that overall, 74% of the students were correctly classified (see Appendix C). What this means is that, depending on whether students had experienced problems with ITAs or not, the *perception as relational* meta-theme (encompassing the themes *language-pedagogy* and *communication*)

discriminated UG students' perceptions of ITAs. That is, if a student reported to have had problems with ITAs, the student tended to perceive that the language barrier affected pedagogy, causing communication breakdown.

In other words, having problems with ITAs inclined students to think deeply about why they were experiencing problems with ITAs and consequently connected the language barrier to pedagogy and communication. The literature review suggested that previous researchers considered UGs' having problems with ITAs as a given and conducted their studies by either providing a priori perceptions of ITAs from which UGs selected their perceptions about ITAs or by investigating the kinds of problems UGs had with ITAs, not exploring whether students indeed had or had not experienced problems with ITAs. Thus, the finding of this study suggests that UGs' perceptions of ITAs tend to be meaningful if they are on the basis of UGs' experience as opposed to any other variable, such as which college the UGs are from.

Programmatically, since the UGs who have had problems with ITAs tended to focus on communicative breakdown among UGs and ITAs, an effective step could be to involve UGs in the ITA development activities. As Staples et al. (2014) and Kang, Rubin, and Lindemann (2015) confirmed, UGs' perceptions of ITAs' speech and instructional competence could be improved through structured contact with the UGs in workshops, and in programs that pair up UGs and ITAs for casual conversation (Fox, 1991).

Information about communicating with ITAs could also be provided through brochures for UGs and through freshman orientation programs (Abraham, Plakans, Koehler, & Carley, n.d.; vom Saal, n.d.). Since UGs are the most direct stakeholders when it comes to ITAs' performance, UGs could be involved in the assessment of ITAs as well. Vom Saal (1987) suggests developing an instrument or technique for systematic assessment of ITAs by UGs a few weeks into a semester. This would enable the course supervisor to address any problematic situation early in the semester.

Explore Intercultural Issues More Widely in Foundation Courses Requisite for UGs. The themes *my culture*, *learn*, and *personal* (see Appendix B) in this study show that UGs' perceptions are often based on non-pedagogical aspects of UG-ITA interaction. These intercultural themes are potential topics around which some UG foundational courses could be developed.

The UGs perceived their *culture* as the norm and saw the need for ITAs to learn and adopt that culture to become effective teachers. This theme was captured in responses such as: "They [ITAs] don't understand how we do things here," and "Familiarize yourself with American customs."

However, as represented by the theme *learn*, more than half of the students (60%) perceived that being taught by ITAs was an opportunity to learn

about new cultures and languages. Some comments reflective of this theme are: “They [ITAs] offer a different perspective and share information about their home country,” and “[ITAs offer] different perspective on cultures; new ideas that may not be American.” A serendipitous finding within this theme was the idea that students can get used to and get practice in understanding foreign accents of English through time, and that being exposed to foreign-accented English can actually be beneficial for the future. This idea was reflected in comments such as: “It helps me to understand accents that I will probably be exposed to for the rest of my life” and “You are trained in your listening and comprehension skills.”

UGs’ perceptions also focused on *personal* characteristics of ITAs both positive (e.g., some indicated that ITAs were “smart,” “knowledgeable,” and “nice”) and negative (e.g., some indicated that ITAs were “rude” and “sexist”).

In other words, many UGs voiced their positive perceptions of ITAs and openness and willingness to learn about other cultures and acknowledged the scholarship and learning opportunities in being taught by ITAs. So, by providing UGs the opportunity to learn about and address and share their views on intercultural issues in these foundation courses, UGs could become better prepared to attend and make full use of classes taught by ITAs, which they are more than likely to attend in their college lives.

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Appendix A

Themes Developed From the Categories

| <i>Themes</i> | <i>Frequency (%)</i> | <i>Categories</i> | <i>Descriptions</i> |
|-------------------|----------------------|---|---|
| Language | 93.5 | Language-General Don't Understand Me—Language Problem—Language TA-ITA—Language Advice—Speaking | Perceptions about the role of language in ITA-taught classes. |
| Pedagogy | 50.4 | Pedagogical Difficulty—General Pedagogical Characteristics Problem—Pedagogy TA—ITA—Pedagogy Advice—Pedagogy | Perceptions about pedagogy in ITA-taught classes. |
| Language-pedagogy | 42 | Language-Pedagogy Problem—Language—Pedagogy | Perceptions about the connection between language and pedagogy in ITA-taught classes. |
| Communication | 41.8 | Problem—Communication TA-ITA—Class Climate, Relatable, Culture Advice—Learn to Understand Students Advice—Make Sure Students Understand You Advice—Understand Students May Have Difficulty With ITA | Perceptions about communication in ITA-taught classes. |
| My culture | 12.8 | Don't Understand Me—Culture Advice—Learn Culture | Perceptions about students' own culture in ITA-taught classes. |
| Personal | 43 | Personal Characteristics Problem—Personal TA-ITA—Personal Advice—Personal | Perceptions about ITAs' personal attributes. |
| Learn | 57.9 | Learn Culture—Language Learn Accent | Perceptions about learn about ITAs in ITA-taught classes. |

Appendix B
Summary of Themes and Factor Pattern/Structure Coefficients From
Principal Component Analysis (Varimax): Three-Factor Solution

| <i>Theme</i> | <i>Factor coefficients</i> | | |
|----------------------|----------------------------|----------|----------|
| | <i>1</i> | <i>2</i> | <i>3</i> |
| Personal | .825 | -.163 | -.180 |
| My culture | .481 | .172 | .182 |
| Pedagogy | -.353 | -.779 | .018 |
| Learn | -.419 | .768 | .100 |
| Communication | .183 | .111 | .736 |
| Language-pedagogy | -.159 | -.043 | .727 |
| % variance explained | 21.17 | 21.10 | 19.10 |

Appendix C
Discriminant Analysis: Standardized Canonical Discriminant Function
and Structure Matrix of Themes Predicting Perceptions of ITAs by
Undergraduate Students Who Had or Had Not Encountered Problems
With ITAs

| | <i>Standardized canonical discriminant function coefficients</i> | <i>Structure matrix</i> |
|--|--|-------------------------|
| <i>Perception Theme</i> | | |
| Language-pedagogy | .89* | .91* |
| Communication | .33* | .39* |
| Learn | .23 | .19 |
| My culture | .11 | .12 |
| Pedagogy | .18 | .03 |
| Personal | .16 | -.01 |
| <i>Canonical discriminant function (Group centroids)</i> | | |
| No problem with ITA | -.74 | |
| Problem with ITA | .54 | |

Appendix D
Function 1 at Group Centroids: Perceptions of ITAs by UG Students
from Different Colleges

| <i>College</i> | <i>Function 1</i> |
|---------------------------|-------------------|
| Agriculture | .058 |
| Applied Sciences and Arts | .359* |
| Business | -.209 |
| Education | .036 |
| Engineering | .212 |
| Liberal Arts | -.108 |
| Mass Communication | .203 |
| Science | -.093 |
| Pre-Major | -.923* |

Note. *Coefficients with effect sizes larger than .3 (Lambert & Durand, 1975).

