# Beyond English language proficiency scores: Understanding the academic performance of international undergraduate students during the first year of study

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Past research into the relationship between English proficiency test (EPT) scores and score profiles, such as the IELTS and the TOEFL, has shown that there is not always a clear relationship between those scores and students' subsequent academic achievement. Information about students' academic self-concept (ASC) may provide additional information that helps predict future academic success. Research has consistently shown a positive relationship between students' ASC and subsequent academic achievement and educational attainment in both school and higher education settings. The purpose of the current study was to examine the relationship between the academic performance of international students and their language proficiency and academic self-concept as well as other characteristics related to academic success. The study focused on first year international students in undergraduate business programs at an English-medium university in Canada. The following information was collected about the student participants: grades in degree program courses, annual GPA, and EPT scores (including subscores). In addition, students completed an academic self-concept scale. To obtain additional information about success in first-year business courses, instructors in two required courses were interviewed about the academic and language requirements in their courses and the profile of successful students. Correlations between the students' course grades, GPA, EPT scores, and ASC score were calculated. The instructor interviews were analyzed using a content analysis procedure. The findings from all data sources were triangulated and show that language ability, ASC, and other factors impact academic success

during the first year in a business program. The implications of these findings are discussed.

## Introduction

English-medium universities around the world have seen tremendous growth in the number of international students in undergraduate or graduate degree programs. International student enrolment has grown from 83,000 in 2006 to 175,000 in Canada (Universities Canada, 2017), from 174,000 in 2002 to almost 300,000 in Britain (Universities UK, 2014), and to one million in 2015-2016 in the United States (John, 2016). This represents up to 28% of the total student population in the case of Canadian graduate students (Universities Canada, 2014). Financial pressures are believed to cause this internationalization (Devos, 2003; Fischer, 2012; Marmolejo, 2010). However, there are concerns about this trend, particularly surrounding international students' language proficiency during and at the end of their studies (Benzie, 2010; Friesen & Keeney, 2013; Hobbis, 2013; Müller, 2015) and the perceived decline of academic standards (Devos, 2003). With these concerns in mind, it is worth examining how international students fare during the first year of academic study at an English-medium university and which factors contribute to their academic success.

## Language proficiency and academic success

A certain level of language proficiency is seen as a necessary requirement for academic success; therefore, institutions of higher education generally have English proficiency requirements for admission. The precise relationship between language proficiency and academic success is less clear, however.

### *TOEFL*

Research on the Test of English as a Foreign Language (TOEFL) has shown mixed results. Some research on the paper-based TOEFL has found weak or no correlations between the test scores and subsequent academic success. Hill, Storch, and Lynch (1999) found students' TOEFL scores to be weakly correlated (.287) with the students' academic achievement as measured by course grades and to have weak predictive ability ($R^2 = .082$) when they regressed the TOEFL score on Grade Point Average (GPA). Light, Xu, and Mossop (1987) reported an even lower correlation between TOEFL scores and GPA (.14). However, when examining this correlation by academic major, Light and colleagues found higher correlations between students' GPA in social science (.22), education (.30), and public affairs (.30) than for students studying science or mathematics (.04). Interestingly, they also investigated the academic success of students who were admitted to university even though their TOEFL score was below the institutional cut-off score of 550. They found that these students' GPAs were not significantly lower than those of students above the cut-score, suggesting that academic qualities other than language proficiency allowed these students with low scores to succeed despite limitations in language proficiency.

The impact of academic discipline on the relationship between TOEFL scores and GPA was confirmed by Wait and Gressel (2009), with the TOEFL score being a better predictor of academic performance in non-engineering students than for engineering students. However, if those engineering students took courses in English, history, or social sciences, TOEFL scores were a stronger predictor for these students' performance in those courses. Turning to graduate students, overall TOEFL scores have not been shown to predict whether students complete a master's degree program (Van Nelson, Nelson, and Malone (2004). However, when the researchers split the students into two groups with either a high (above 3.5) or a low (below 3.5) GPA, TOEFL scores

could predict these two performance categories with 75 to 84% accuracy. Finally, Cho and Bridgeman (2012) found that although correlations between the TOEFL score and undergraduate and graduate students' GPA were relatively small, expectancy graphs showed that the chance of obtaining a GPA in the top 25% increased twofold if students had TOEFL iBT scores in the top 25% range. In a follow-up study, Bridgeman, Cho, and DiPietro (2015) discovered complex relationships between students' overall and subscores on the TOEFL and their GPA. When they grouped students according to certain factors, including students' major and country of origin (Chinese or non-Chinese), the correlations between students' proficiency scores and their GPA increased.

In sum, relationships between TOEFL scores and students' overall GPA tend to be weak or non-existent. The strength of that relationship increases when examined by major or type of course, among other factors.

### *IELTS*

Research into the relationship between students' academic achievement and scores on the International English Language Testing System (IELTS) has shown similarly varied results. Some studies found weak, no, or even negative correlations between IELTS test scores and measures of academic achievements, such as students' GPA (Arrigoni & Clark, 2010; Dooey & Oliver, 2002; Feast, 2002; Oliver, Vanderford, & Grote, 2012). Other studies found statistically significant relationships between IELTS test scores and students' academic performance. Hill et al. (1999) found that IELTS scores overall only had a weak predictive ability on academic success ($R^2 = .082$). When they divided students into groups based on their overall IELTS scores (6.0 / 6.5 / 7.0 / 7.5-8.5) to examine academic success for each group separately, the researchers discovered that for each group, the grade average was higher compared to the groups below. However, only

the academic achievement in the highest ability group (with overall IELTS scores between 7.5 and 8.5) was statistically significantly different from those of the three other groups.

A third group of studies found significant correlations between certain IELTS subscores and measures of academic success. Woodrow (2006) found that both the overall IELTS score (.40) and the writing (.33), speaking (.39) and listening (.35) subscores were moderately correlated with students' GPA. Especially in the first semester of study, Yen and Kuzma (2009) found moderate correlations between students' overall IELTS scores (.46) as well as the listening (.45) and reading (.41) subscores and their GPA. Cotton and Conrow (1998) found moderate correlations between the reading (.36) and writing (.34) IELTS subscores and faculty assessments and students' self-assessment, but not the students' overall GPA. Kerstjens and Nery (2000) found moderate to low correlations between academic performance and the reading (.286) and writing (.25) subscores. In the multiple linear regression, however, only the reading subscore was a statistically significant predictor of students' GPA, but language ability accounted for less than 10% of the variance in students' GPA.

### *Other measures of language ability*

In addition to research on language proficiency test scores and their relationship to students' academic success, research has also investigated the relationship between other measures of language ability and academic success. Berman and Cheng (2001) discovered that students' assessment of their perceived difficulties with English showed a statistically significant negative correlation with students' GPA. Other studies investigated the relationship between results on institutional English placements tests and students' GPA with mixed results: In Ghenghesh's (2014) study, the two were correlated, whereas this was not the case in Lee and Greene's (2007). However, like

Berman and Cheng (2001), Lee and Greene found that students' self-evaluations of their course performance were moderately correlated to their performance on the English placement test. Finally, English as a second language (ESL) status students have been found to have lower GPAs than their non-ESL counterparts although, in general, English language proficiency test scores do have the capacity to ensure students have reached a proficiency level that is sufficient to ensure their ability to study at an English medium institution (Eddey & Baumann, 2009).

In sum, based on previous research, it is difficult to discern clear trends regarding the relationship between students' language ability as evidenced by English proficiency test (EPT) scores and measures of academic performance, such as students' GPA. This seems to suggest that language proficiency is only one of the factors that contributes to students' academic success. Students' perception of their language ability was also identified as an important factor in some studies, which points to academic self-concept as a factor worth exploring.

**Academic self-concept and academic achievement**

Academic self-concept (ASC) is related to the personal perception of the self in the academic domain and is generally measured through self-report data. Research into ASC has attempted to uncover the relationship between ASC and academic achievement. In a comprehensive meta-analysis, Huang (2011) grouped previous research on self-concept and academic achievement into four groups, each of which represents a different viewpoint of the causal relationship between the two concepts. Under the *skill-development model*, academic achievement influences a person's ASC but not vice versa (Helmke & van Aken, 1995; Skaalvik & Valås, 2001). With the *self-enhancement model*, ASC is one of several factors influencing academic achievement (Marsh, 1990; Shavelson & Bolus, 1982). In the *reciprocal-effects model*, prior ASC

influences subsequent academic achievement and vice versa (Guay, Marsh, & Boivin, 2003; Hoge, Smit, & Crist, 1995; Marsh & Yeung, 1997). Finally, some research found no relationship between the two concepts although support for this position is weak (Huang, 2011). For young children there is evidence that academic achievement is affected by children's self-concept and vice versa (Huang, 2011). ASC in primary school (Grades 3, 4, and 5) predicts how well students do and how long they stay in school (Guay, Larose, & Boivin, 2004). In Liu, Wang, and Parkins' (2005) examination of academic streaming in secondary schools in Singapore, ASC was influenced in a complex way. Low-ability streamed students initially had a more negative self-concept, which declined further after three years. High-ability students started out with a more positive self-concept than their counterparts, but their self-concept declined more over the three years of the study. Finally, several researchers have concluded that ASC is the most significant predictor of academic achievement and more powerful than interest or self-esteem (Marsh & Martin, 2011; Marsh, Trautwein, Lüdtke, Köller, & Baumert, 2005).

ASC has also been investigated in higher education contexts. Reynolds (Reynolds, 1988; Reynolds, Ramirez, Magriña, & Allen, 1980) developed an academic self-concept scale (ASCS) for this context, which has been used subsequently to examine the relationship between students' ASC and academic success. Similar to the studies conducted in the school contexts, research in first language (L1) higher education settings found ASC to be a significant predictor of academic success measured as both term grades and overall GPA (Boulter, 2002; Choi, 2005; Cokley, 2000; Cokley, Komarraju, King, Cunningham, & Muhammad, 2003; Cokley & Patel, 2007).

In brief, based on research in schools as well as higher education contexts we can conclude that ASC has a strong relationship to academic success as evidenced by students' course grades, term performance, or GPA. Most of the higher education research has examined L1 educational contexts. It is less clear, however, whether second language (L2) students' ASC has a similar influence on their academic performance and how both ASC and language proficiency relate to academic performance. In addition, instructors in academic disciplines, who interact with students and evaluate their achievement of course objectives, may have valuable insight into what course-specific language and other factors are associated with success. Research into instructor perceptions about students' academic success in computer science and mathematics reveals that certain attitudes and behaviours are seen as associated with higher student achievement (Kinnunen, McCartney, Murphy, & Thomas, 2007; Zientek, Schneider, & Onwuegbuzie, 2014) although these studies do not focus on international students. The research findings on the relationship between language proficiency and academic success point towards other, non-language-related characteristics related to the course and specific discipline (e.g., Bridgeman et al., 2015; Light et al., 1987; Wait & Gressel, 2009), on which instructors could shed light. The current study will bring two strands of previous research on EPTs and ASC together and add the perspective of a key stakeholder group, content instructors, to better understand what contributes to the academic success of international students.

**Purpose of the study**

In order to examine the relationship between proficiency scores and student achievement in higher education settings, the current study investigates the potentially mediating role of students' ASC and other student characteristics related to success in specific courses. The study was designed to investigate what factors influence the

academic success of international students at English-medium universities during the first year of their studies in academic degree programs. In particular, it investigated the following research questions:

(1) How do EPT scores and ASC relate to international students' performance during their first year of study at an English-medium university?

(2) What student characteristics do instructors of core business program courses associate with academic success?

## Methods

### *Research context*

The study was conducted at an English-medium university in the French-speaking province of Quebec in Canada. At this institution, international students are admitted with or without ESL course requirements, depending on their EPT scores (see Table 1). If students have to take ESL courses, they take from six to fifteen credits: one or two six-credit academic reading and writing courses and/or one three-credit oral communication course. Because of Quebec language laws, local francophone or allophone (L1 is neither French nor English) students are not required to provide EPT scores if they have a Diploma of College Studies (2-year pre-university college program) from a Quebec college. For that reason, our definition of international students is based on whether proof of language proficiency had to be provided at admission rather than on visa status. In other words, international students are those who were required to take ESL based on the EPT score at admission (see Table 1) or completed the university's intensive English program; this group may include permanent residents or Canadian citizens whose L1 is not English. Non-international students are those who did not have to provide EPT scores and might include

francophone or allophone students. These students have generally been in Quebec for some time.

[Insert Table 1]

### *Participants*

Since there is evidence for a discipline-effect on the relationship between English proficiency and academic performance (e.g., Bridgeman et al., 2015), this study focused on students from only one faculty. In this research context, the highest percentage of international students in ESL courses study in the business school. Therefore, students in their first year at the business school and instructors of core business program courses were recruited as participants. One hundred and ten students (62 women and 48 men) between the ages of 17 and 45 (M = 20.6; SD = 4.6) participated in this study. The majority of the students (93/110 or 85%) were considered *international* from varied L1 backgrounds, with Chinese (44%), Arabic (17%), and French (15%) as the most common languages, and 17 were considered *non-international*. Most of the international students (62/93 or 67%) had provided IELTS scores for admission to the university. The other 28% provided other test scores or completed the university's intensive English program. In addition, seven instructors of two first-year required business courses participated in the study: four instructors of *Contemporary Business Thinking* (CBT Course) and three instructors of *Business Communication* (BC Course).

### *Procedure*

The student participants were recruited from the ESL program and the CBT and BC courses. After obtaining informed consent, students completed a background information questionnaire to obtain biographical data and the ASCS (Reynolds et al., 1980). The ASCS contains 40 items linked to constructs such as peer evaluation, self-

doubt of academic ability, and effort related to grades (Reynolds, 1988). In addition, permission was obtained to access students' EPT scores, course grades, and GPAs at the end of their first academic year using the university's database. The seven instructors were interviewed using a semi-structured interview protocol focusing on factors influencing student success in the course and the challenges faced by international students.

The student data were analysed using inferential statistical procedures to examine the relationship between students' English proficiency, their ASC, and their academic performance. In particular, correlation coefficients were obtained, and multiple linear regressions and ANOVAs were conducted. Because of differences between the two business courses, the instructor interviews were analysed by course using a content analysis procedure, which involved dividing transcripts into segments according to topic areas covered in the interview and identifying recurring themes across various participants.

## Results

### *English language proficiency, academic self-concept, and academic performance*

Table 2 shows the descriptive statistics for students' GPAs as well as ASCS and IELTS scores. The results of the statistical analysis reveal statistically significant moderate correlations between students' English proficiency scores and their GPA ($r = .257$, $p < .05$) and students' score on the ASCS and their GPA ($r = .285$, $p < .05$), but not between the IELTS and the ASCS scores. Neither the ASCS score nor the GPA was correlated to any of the IELTS subscores. The multiple linear regression, with the GPA as the outcome variable and the IELTS and ASCS scores as predictor variables, was statistically significant: $R^2 = .159$, adjusted $R^2 = .130$, $F(2,59) = 5.556$, $p = .006$, with

the following Standardized Beta coefficients: IELTS (.279; $p$ = .023) and ASCS (.305; $p$ = .013). Since the IELTS subscores were highly correlated to the overall IELTS score, they were not included in the regression model.

[Insert Table 2]

An ANOVA was conducted to examine if international student status had an impact on students' final course grade in the CBT and BC Courses. Table 3 shows the descriptive statistics. For the BC Course, the ANOVA revealed that international student status had a statistically significant impact on students' final grade, with international students obtaining lower grades: $F(1,52) = 7.294$, p = .009. For the CBT, the difference between international and non-international students was not statistically significant: $F(1,42) = .801$, p = .376. International students' GPAs after the first year of study were not statistically significantly different from their non-international counterparts: $F(1,108) = 3.410$, p = .068.

[Insert Table 3]

To examine the relationship between English proficiency and final grades of students who had already completed the BC (N = 32) and CBT (N = 22) courses at the end of the first year, we examined the correlation between students' overall IELTS scores and the subscores on the writing, speaking, reading, and listening sections of the test. For the BC Course, the overall test score and the speaking, reading, and listening subscores showed moderate statistically significant correlations to the students' final course grades (see Table 4). For the CBT Course, only the reading subscore was statistically significantly correlated to the students' final grade in the course (see Table 4).

[Insert Table 4]

### *Interview Data Results: Student characteristics*

In order to examine the student characteristics associated with success in core business program courses, instructors were asked during the interview about the characteristics of successful and unsuccessful students and the challenges for international students. Because the two required business courses are different in nature, results are reported by course.

According to the four CBT instructors, the course places a high demand on students' English language skills, especially in terms of reading skills and vocabulary knowledge because students have to read academic texts that explain contemporary business theories, understand these theories, and then apply them to new situations and contexts. According to the instructors, these application tasks are impossible to do if students do not have a thorough understanding of the theories as explained in the readings. In addition, students need the necessary vocabulary to understand the written texts and then explain how the theories apply to novel contexts. Furthermore, the ability to analyze and synthesize is extremely important in order to do well. The following quote from a CBT instructor illustrate this:

> the students that…excel…in [CBT] are those that are able to understand the theory [and can]…apply it to a problem. So, it's not…, simply just to regurgitate the information and to memorize it, but it's really to be able to properly make the link between what the theory's saying and what a present-day article is, like a business article (Teacher J)

The CBT instructors do not provide feedback on students' language unless it interferes with instructors' ability to comprehend the students' texts. Even when instructors decide to provide feedback, they only add general comments such as "unclear" or "lacks coherence". Teacher N stated:

> I realize that the ones [who are ESL] what they'll do is, they'll just overcompensate by putting a lot of theory and a lot of quotes and a lot of concepts [into written projects], but there's no links between them.

… [In contrast, with a good paper] I sit down and …read it one time and there's no stopping… it's coherent. I understand what you're trying to say…and the links are seamlessly done… Those that aren't able to properly express themselves—will get a lot of feedback like 'that does not make sense', 'you cannot say that in English, 'incoherent'…

In addition to language skills, the CBT instructors also point to other important characteristics that help students to succeed in this course. Although or because CBT is a required course for all business school programs, intrinsic motivation is seen as necessary or helpful by the instructors interviewed for this study. Teacher J states that "[students] have to be engaged," and Teacher F explains this further:

[Some students] see business school as a means to an end. So they want a big job, you know, in the corporate world…. They're not overly interested. … You know, for instance, because the [CBT course] is a critical thinking class where we are applying theories to concepts, to practice, and to concrete situations. And, you know, they don't see the value of that because oftentimes, you know, the questions that I'll get in class, especially in business school, is 'How is that going to make me money?' … So, those that see it as a means to an end think, they, they, you know, those are the people that struggle.

In other words, instructors see language skills as only part of the requirement for doing well in this course because motivation to learn, which is considered equally or more important, is not influenced by students' language ability. The following quote from Teacher A illustrates this:

Their language [ability] has very little do to with motivation to learn, and readiness and preparedness. … It's just about once they get in there how far you want to pursue and interact with the teacher and interact with the course and learn that way in an interactive learning environment rather than a one-way learning environment.

The BC instructors also mention language ability as a factor that influences student success. However, they also point to other reasons. Similar to the CBT instructors, the BC instructors see intrinsic motivation as important. Teacher M explained this during the interview:

It is the student that doesn't allow distractions in the day interfere with their focus and their commitment to succeed in the course…they are very much involved, in not only their own, but if you ask them to do something in the class, they will do it… because they are excited about whatever they are engaged in… they have the strength, the willingness, the desire, the tremendous motivation to do well, while other kids just seem to want to come here and get the work done fast and then leave, it is a secondary issue in their life.

At the same time, both lack of confidence and overconfidence in a student's own skills influence how well students do in class. Teacher R explained this relationship:

If you don't care about the course for whatever reasons, either you think it is so difficult that you can't succeed or your handicap is too much to overcome or you think it is too easy and therefore not worthwhile to, you know, stretch you out enough, again, you can fail.

Finally, the BC instructors also commented on students' ability to interpret instructions for assignments and how well they follow these instructions when producing their own work. This quote from Teacher A illustrates this point:

[The successful students] were able to define the purpose of the specific assignment, they were able to define the audience of this specific assignment and they were able to put what I called a story line.

In addition, how students interact and engage with the feedback on these assignments also has a great influence on their success. According to Teacher R, the students' overall attitude to the course is extremely important:

If they have the right attitude towards the course, this is a core course, it is there, designed to improve my skills, my communication skills, orally, writing, working with teams, presenting et cetera. If they take that proper attitude, they can succeed whether or not they have English as a first, second or third language. If they don't have that attitude, it is a problem. [In contrast,] …if you think you are perfect and you are not ready, willing or able to take any criticism, constructive or not, it is a problem for you as a student.

In brief, for these instructors, both language and non-language related factors are at play in determining students' ability to succeed in these required foundational business program courses. Although language skills are important, other student characteristics

that relate to attitude towards studying and engaging in university life in general are seen as more or at least equally as important as students' ability to read and communicate in English.

**Discussion and Conclusion**

The first research question asked how English proficiency and ASC relate to international students' performance during their first year of study at an English-medium university. The results from this study indicate that there is a statistically significant correlation between students' GPA and their IELTS and ASCS scores and that these scores predict about 12% of the variance in students' GPA at the end of the first academic year. In terms of the two required first year business courses, international students obtained statistically significantly lower grades in the BC course, but not in the CBT course. Overall, international students' GPA was not statistically significantly different from that of non-international students at the end of their first year of study.

The second research question asked what student characteristics instructors of core business program courses associate with academic success. As was to be expected, English language ability, in particular the ability to read and write, was seen as important. The correlations between the IELTS subscores and course grades partially confirm instructors' intuition: The IELTS reading subscore was moderately correlated to the CBT final course grade. For the BC course, the reading, listening, and speaking (but not writing) subscores were moderately correlated to the final course grade. However, other factors that the quantitative analysis was not able to identify also play an important role. As Kinnunen et al. (2007) and Zientek et al. (2014) found, instructors point to students' attitude toward and involvement in courses as key. They referred especially to how students approached these required courses: as important parts of their

education or simply a requirement to check off. Similarly, students' analytical skills above and beyond their English language skills are seen as critical to success in these courses. In particular academic abilities, such as analyzing, synthesizing, and applying information, determine also how well students do in the course.

In brief, both the quantitative data and the interview data point to the fact that language is an important basis for success, but other factors are also important. This is in line with predictive validity research on the TOEFL and IELTS, which has found only weak to moderate correlations between students' EPT scores and their GPAs (Bridgeman et al., 2015; Cho & Bridgeman, 2012; Cotton & Conrow, 1998; Hill et al., 1999; Kerstjens & Nery, 2000; Light et al., 1987; Wait & Gressel, 2009; Woodrow, 2006). The results of the current study point to one explanation why (as previous research also found) language proficiency alone is not a good predictor of future academic performance. The students' ASC also has an impact on how students perform during their first year, as both the quantitative results and the findings from the instructor interviews indicate. This has been found in first language educational contexts in primary (Guay et al., 2004; Huang, 2011), secondary (Corbière, Fraccaroli, Mbekou, & Perron, 2006; Marsh et al., 2005), and higher education L1 settings (Cokley, 2000; Cokley et al., 2003; Cokley & Patel, 2007; Reynolds, 1988). The current study is the first to confirm this relationship for L2 university students. Some course-specific student characteristics, which had not previously been examined in detail, also came to light through the qualitative data in the current study. For the CBT course, the ability to analyze and synthesize information in course materials was identified as significant by the instructors. For the BC course, on the other hand, the facility to accept criticism and feedback as well as students' ability to understand, address, and follow instructions for written assignment were seen as important by the instructors. Instructors in other

disciplines also see a positive relationship between certain student attitudes and behaviours and academic achievement (Kinnunen et al., 2007; Zientek et al., 2014)

The findings have important implications for the admissions process of international students. English proficiency alone is not sufficient to determine the likely success of these students. As Banerjee (2003) found in her study, admission counsellors also look at the applicants' previous academic record, information provided by referees and the language ability evident in the applicants' statement of purpose. This helps them determine applicants' academic ability and background in the program for which they have chosen to apply to assess the likelihood that students would do well in that program. In brief, these counsellors look for evidence beyond proficiency scores. This approach is appropriate based on the findings of the study. Language ability is certainly important, but other factors such as ASC, academic abilities (e.g., analyzing and synthesizing information), and general attitudes towards academic study are also very important.

This study has important implications for institutional support of international students. As the findings from the interviews indicate, instructors recommend and encourage international students to take advantage of the writing support that is offered by the institution where the study took place. The instructors do not focus on providing particular language related feedback, and in fact, only indicate to students when language support is needed. This finding is similar to what has been found elsewhere (Knoch, Rouhshad, Oon, & Storch, 2015). At the same time, however, the quantitative results indicate that certain course grades are dependent on students' language ability, and writing was highlighted as an important skill for success by the instructors. It is, therefore, important that institutions offer and encourage international students to take advantage of English language and academic writing support in particular.

We need to acknowledge one limitation of this study. Based on the course titles, course descriptions, and the instructor interviews, both required business courses are language-focused with emphasis on reading and writing about course content. Students in business degree programs also have to take required mathematics courses. At the end of the first year, however, only a small number of students in this study had taken these mathematics courses. We plan to follow these students throughout their academic degrees at this university to see whether the relationship between English language proficiency as evidenced by test scores and GPA changes as students progress in their programs and take more mathematics and less language-focused courses.

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Table 1. English Proficiency Admissions Requirements

| Test | Admission without ESL | Admission with ESL |
|---|---|---|
| TOEFL iBT | 90 | 75-89 with combined speaking and writing score of 34 or higher |
| IELTS | 7 or higher | 6.5 or 6 with no component score under 5.5 |

Table 2. Mean and Standard Deviation for GPA and ASCS Scores for Students with IELTS Scores

| | **N** | ***M*** | ***SD*** |
|---|---|---|---|
| GPA | 62 | 2.81 | 0.64 |
| ACSC Score | 62 | 108.41 | 11.7 |
| IELTS Score | 62 | 6.15 | 0.49 |

Table 3. Final grade for BC and CBT Courses and GPA by student status

| | BC Course | | | CBT Course | | | GPA | | |
|---|---|---|---|---|---|---|---|---|---|
| | **N** | ***M*** | ***SD*** | **N** | ***M*** | ***SD*** | **N** | ***M*** | ***SD*** |
| International | 38 | 2.21 | 0.71 | 27 | 2.76 | 0.76 | 93 | 2.75 | 0.72 |
| Non-international | 16 | 2.76 | 0.6 | 17 | 3.0 | 0.95 | 17 | 3.1 | 0.73 |

Table 4. Correlations between IELTS scores and course grades

| | IELTS Score | IELTS Writing | IELTS Speaking | IELTS Reading | IELTS Listening |
|---|---|---|---|---|---|
| BC Course (N = 32) | .500** | .320 | .388* | .540** | .394** |
| CBT Course (N = 22) | .215 | .623 | -.029 | .452* | .306 |

* $p < .05$; ** $p < .01$