

LANGUAGE PROFICIENCY AND SCHOLASTIC ACHIEVEMENT: A STUDY OF INTERNATIONAL STUDENTS IN SINGAPORE

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Abstract

Singapore, a popular destination for international students, hosts a substantial number of non-native English speakers pursuing their education in a predominantly English medium environment. English language proficiency is a critical factor influencing the academic success of these students. This study explores the correlation between English language proficiency and academic performance among international students in Singapore. The Ministry of Education in Singapore invests significantly in scholarships and funding for international students, emphasizing the importance of student success.

Keywords: international students, English language proficiency, academic performance, higher education, Singapore

Introduction

As of June 2018, there were about 65,000 international students studying in Singapore (Department of Statistics, 2018) and the Ministry of Education, Singapore, spends SGD130 million dollars annually on scholarships and funding for international students (Yahoo News Singapore, 2019). Since almost all educational programmes in institutions of higher learning in Singapore are conducted in English, students who are enrolled need to have an adequate level of proficiency in English. Several research studies have deemed English language proficiency as an important factor to international students' academic success in institutions where the medium of instruction is in English (Cloate, 2016; Kaliyadan et al., 2015; Daller & Phelan, 2013; Almoallim, 2012). A clear correlation between

English language proficiency and academic performance has been established in previous studies (Wilson and Komba, 2012; Aina et al., 2013; Kumar, 2014). A study conducted by Fakeye (2014) on Nigerian students showed a significant correlation between English language proficiency and academic performance. Another study showed that Iranian students, majoring in English Language and Literature, who scored higher on language proficiency tests also had higher grade point average (GPA) scores (Sahragard, Baharloo, & Soozandehfar, 2011).

Studies have also reported that international students who lack proficiency in English language skills face difficulties when interacting with their teachers and peers (Li, Chen, & Duanmu, 2010; Wardlow, 1999). Some studies, however, showed that international students do better than their domestic counterparts despite English language difficulties (Isonio, 1994; Patkowski, Fox and Smodlaka, 1997; Faus-Holmes and Vaughn, 2015). A

study by Bers (1994) reported that international students do as well or better academically than their local American counterparts.

Students who enroll in overseas programmes where the medium of instruction is English demonstrate their English proficiency by scoring well in standardized English language proficiency tests such as the International English Language Testing System (IELTS) and Test of English as a Foreign Language (TOEFL). However, Murray (2010) states that although international students fulfill the English language entry criteria, many still struggle to cope with the linguistic demands of their courses due to inadequate levels of English proficiency. Several studies have also shown that there is no correlation between TOEFL scores and GPA (Stoynoff, 1997; Krausz, Schiff, Schiff, & Hise, 2005; Wongtriat, 2010; Kokhan, 2013).

Research studies have also cast doubts on any positive correlation between IELTS scores and GPA. Although Woodrow (2006) found a significantly positive but weak correlation between IELTS and GPA, Kerstijens and Nery (2000) found no statistical relationship between the both.

Findings from all these studies suggest that the role of English proficiency levels as a reliable predictor of international students' academic success is still unclear. Furthermore, Dooey (1999) recommended that each institution should make its own decision regarding the appropriate level of English language proficiency. As such, this research was conducted to investigate the relationship between self-perceived English language proficiency and academic performance of international and domestic students in an institution of higher learning in Singapore. The international students were from different Asian countries where the medium of instruction is not English. This study compared both the Asian international and domestic students in order to determine the English language related difficulties they face in their academic performance. The findings of this research can be used to assist faculty and administrators in Singapore who are involved in international education and different aspects of curriculum development to design teaching and learning for international students. Based on previous research, the following hypotheses are proposed:

1. English academic language skills are perceived to be more difficult by Asian international students than domestic students.
2. Difficulties in English academic language skills affect the academic performance of Asian international students more than domestic students.

1. Research Method

1.1 Research Design and Instrumentation

A cross-sectional, questionnaire-based approach was used in this study to examine the relationship between English language proficiency and academic performance of international and domestic students enrolled in a 3-year diploma in nursing programme in Singapore. The questionnaire, consisted of 2 major parts. The first part of the questionnaire gathered students' demographic information such as gender, nationality, age and cumulative GPA (cGPA). The second part of the questionnaire invited students' self-assessment of difficulty of a list of

language skills (39 items) on a 5-point Likert scale (adapted from Berman and Cheng (2001)). The difficulty scale ranged from 1 = 'not difficult' through 3 = 'somewhat difficult', to 5 = 'very difficult'. The 39 items in the questionnaire can be categorised into 5 main areas of language skills:

1. Carrying out academic work (items 1-9)
2. Reading (items 10-15)
3. Listening (items 16-27)
4. Speaking (items 28-33)
5. Writing (items 34-39)

Item #35 'Writing multiple choice examinations' was omitted from the questionnaire, since it does not fit well as a writing skill and there were no multiple-choice examinations in the institution where this study was done.

1.2 Participants and data collection

A convenient sample of 800 nursing students from an institute of higher learning in Singapore was recruited to participate in this study. In selecting the respondents, the following criteria were used: (1) students in a full-time course; (2) students who had completed at least 2 semesters of studies; (3) students who are enrolled in the same course. The last criteria were necessary to ensure standardisation with regards to language skills needs and academic matters. Usable questionnaires were obtained from 713 students (89% response rate). The research methodology was approved by the institutional review board and all participants provided written informed consent.

1.3 Data analysis

The collected data were analysed using version 24 of the Statistical Package for Social Sciences (SPSS) to obtain descriptive statistics on the difficulty of language skills perceived by students and to correlate students' cGPA with their perceived English language academic skills difficulties. Internal consistency reliability, assessed by Cronbach's alpha, was 0.95 for the language skills questionnaire used in this study. In the presentation of results, the statistical significance was set at $p < 0.05$ (two-tailed). Standard data entry and quality control procedures were used including double entry, range and consistency checks, and manual review of outliers.

2. Results

Of the 713 students who participated in this study, 271 were international students (38%). The mean age of the participants was 20.5 (SD = 3.37). 84% of the students were females. The Asian international students were mainly from China, Myanmar, Indonesia, Vietnam and Malaysia.

2.1 Differences in 5 main areas of language skills between domestic and international students

The mean difficulty score of all items within the 5 areas of language skills – carrying out academic work, reading, listening, speaking and writing – were calculated and analysed (Table 1). The domestic students' mean perceptions of difficulty are: carrying out academic work (2.11), listening (1.77), reading (2.05), speaking (2.0),

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and writing (2.14). As for the international students', the mean perceptions of difficulty are: carrying out academic work (2.19), listening (1.96), reading (2.20), speaking (2.27), and writing (2.23). The domestic students found writing (2.14) to be more challenging than the other skills whereas the international students found speaking (2.27) to be more difficult. However, both the domestic and international students perceived listening to be easier than either carrying out academic work, reading, or writing. Overall, domestic students perceived all five skills to be easier compared to international students.

Table 1: Students' perception of difficulty in the 5 areas of language skills

Skills	Student status	N	Mean	S.D.	Sig. (2-tailed)	
Carrying out academic work	Domestic	442	2.11	0.54	$p < 0.05$	
	International	271	2.19	0.57		
Listening	Domestic	442	1.77	0.51	$p < 0.001$	
	International	271	1.96	0.54		
Reading	Domestic	442	2.05	0.57	$p < 0.01$	
	International	271	2.20	0.54		
Speaking	Domestic	442	2.00	0.70	$p < 0.001$	
	International	271	2.27	0.76		
Writing	Domestic	442	2.14	0.67	ns	
	International	271	2.23	0.60		

ns: Not significant

2.2 Domestic versus international students' perceived difficulties and their cGPAs

Pearson correlational analyses between students' cGPAs and their perceived language skills difficulties were performed to test the second hypothesis. Results, shown in Table 2, indicated statistically significant negative correlation between students' cGPAs and carrying out academic work (i.e. the more difficult the academic work was perceived to be, the lower their cGPAs tended to be). International students' perception of all language skills difficulties (except for speaking skill) negatively correlated with their cGPAs. However, domestic students' cGPAs negatively correlated with carrying out academic work ($r = -0.112$) and speaking ($r = -0.099$).

Table 2: Bivariate correlation (r) between cGPA and language skills

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		Domestic students	International students
Language skills			
Carrying out academic work	r	-.112*	-.218**
	Sig. (2-tailed)	.018	.000
	N	442	271
Listening	r	-.078	-.259**
	Sig. (2-tailed)	.102	.000
	N	442	271
Reading	r	-.019	-.225**
	Sig. (2-tailed)	.693	.000
	N	442	271
Speaking	r	-.099*	-.094
	Sig. (2-tailed)	.038	.122
	N	442	271
Writing	r	-.038	-.155*
	Sig. (2-tailed)	.429	.010
	N	442	271

*Correlation is significant at the 0.05 level (2-tailed). **Correlation is significant at the 0.01 level (2-tailed)

Further correlational analyses between students' cGPAs and their perceived difficulties with each of the forty survey items were carried out to better understand the students' perceived language skills difficulties (Table 3). Results showed that international students' responses to 25 of the 40 survey items showed statistically significant negative correlations with their cGPAs; whereas only 7 of the domestic students' responses correlated with their cGPAs.

Table 3: Bivariate correlation (r) between cGPA and difficulty items

		Domestic students	International students
Comprehending lectures	r	-.109*	-.205**
	Sig. (2-tailed)	.022	.001
	N	442	271
Taking part in class discussions	r	-.044	-.061
	Sig. (2-tailed)	.356	.319

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	N	442	271
Carrying out academic discussions r		-.010	.833
outside class Sig. (2-tailed)		-.127*	.037
	N	442	271
Making oral presentations r		-.085	-.126*
Sig. (2-tailed)		.074	.039
	N	442	271
Taking notes r		-.136**	-.230**
Sig. (2-tailed)		.004	.000
	N	442	271
Doing written assignments r		.038	-.104
Sig. (2-tailed)		.427	.088
	N	442	271
Writing examinations r		-.161**	-.348**
Sig. (2-tailed)		.001	.000
	N	442	271
Using the Internet for r		-.120*	.011
academic information Sig. (2-tailed)		-.185**	.002
	N	442	271
Doing library research r		-.050	-.026
Sig. (2-tailed)		.293	.672

	N	442	271
Asking questions in class r		-.099*	.039
Sig. (2-tailed)		.037	.522
	N	442	271
Answering questions in class r		-.136**	-.149*
Sig. (2-tailed)		.004	.014
	N	442	271
Taking part in class discussions r		-.073	-.093
Sig. (2-tailed)		.123	.125

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Understanding lectures	r	-.174**	-
			.214**
	Sig. (2-tailed)	.000	.000
	N	442	271
Understanding classroomr		-.067 .157	-
interactions	Sig. (2-tailed)		.184**
			.002
	N	442	271
Understanding classmates'r		-.006 .897	-
questions in class	Sig. (2-tailed)		.164**
			.007
	N	442	271
Understanding small group		-.004 .938	-
discussions	Sig. (2-tailed)		.164**
			.007
	N	442	271
Understanding everydayr		-.083 .080	-
English outside class	Sig. (2-tailed)		.204**
			.001
	N	442	270
Understanding TV, movies andr		-.013 .782	-
news media	Sig. (2-tailed)		.282**
			.000
	N	442	271
Understanding the main points of r		-.034 .478	-
a text	Sig. (2-tailed)		.182**
			.003
	N	442	271
Understanding the details of a text r		-.030	-
			.255**
	Sig. (2-tailed)	.529	.000
	N	442	271
	N	442	271

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Understanding a writer's attitude	r	.063	-.078
and purpose	Sig. (2-tailed)	.183	.200
N		442	271
Understanding vocabulary in your		.003	-
subject area	Sig. (2-tailed)	.950	.174**
			.004
N		442	271
Understanding academic textbooks	r	-.019	-
			.245**
	Sig. (2-tailed)	.685	.000
N		442	271
Understanding journal articles	r	.036	-.150*
	Sig. (2-tailed)	.453	.013
N		442	271
Understanding research reports	r	.022	-
			.164**
	Sig. (2-tailed)	.649	.007
N		442	271
Understanding written instructions	r	-.024	-
			.270**
	Sig. (2-tailed)	.620	.000
N		442	271
Understanding university calendars	r	-.017	-.100
	Sig. (2-tailed)	.729	.099
N		442	271
Understanding course outlines	r	-.088	-.127*
	Sig. (2-tailed)	.064	.036
N		441	271
Understanding public notices	r	-.080	-.045
	Sig. (2-tailed)	.094	.462
N		442	271
Understanding magazines and	r	-.037	.433
newspapers	Sig. (2-tailed)		-.192**
			.001

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Talking in a group in class	r	-.066	-
			.184**
	Sig. (2-tailed)	.163	.002
	N	442	271
Carrying out oral presentations	r	-.078	-.130*
	Sig. (2-tailed)	.100	.033
	N	442	271
Meeting people in social settings	r	-.044	-.067
	Sig. (2-tailed)	.357	.273
	N	442	271
Writing assignments	r	-.022	-.037
	Sig. (2-tailed)	.639	.542
	N	442	271
Writing essay examinations	r	-.057	-
			.261**
	Sig. (2-tailed)	.228	.000
	N	442	271
Filling in forms	r	-.038	-
			.185**
	Sig. (2-tailed)	.429	.002
	N	442	271
Writing formal letters	r	.023	-.093
	Sig. (2-tailed)	.634	.126
	N	442	271
Writing resumes	r	.001	-.089
	Sig. (2-tailed)	.983	.143
	N	442	271
Writing e-mail	r	-.082	-.052
	Sig. (2-tailed)	.085	.397
	N	442	271

*Correlation is significant at the 0.05 level (2-tailed).

**Correlation is significant at the 0.01 level (2-tailed)

2.3 Domestic versus international students and their academic performances

Academic performance (measured by cGPA) of domestic and international students was analysed (Table 4). Results showed that mean cGPA of international students (mean = 3.37) and domestic students (mean = 3.23) have a very small difference (0.14) despite statistical significance ($p < 0.001$). Interestingly, more international students (38.7%) achieved the highest cGPA of more than 3.5 than domestic students (30.8%). Fewer international students (3.7%) than domestic ones (8.82%) scored the lowest cGPAs.

Table 4: Percentage and mean cGPA of domestic and international nursing students

<2.5	2.51 – 3.0	3.01 – 3.5	>3.5	Mean	Sig. (2-tailed)	Domestic students	8.82%	25.8%
34.8%	30.8%	3.23	p < 0.001	International students	3.70%	17.0%	40.6%	38.7%
3.37								

3. Discussion

This study contributes to the existing literature on the role of English language proficiency in the academic performance of international and domestic students. The findings from this study show that international students perceived many language skills to be more difficult than their domestic counterparts. International students perceived speaking skill to be most difficult and yet it did not significantly correlate with their academic performance. This can be explained by the fact that the most used assessment formats were written tasks.

Research studies have shown that perceived language difficulties may have a negative impact on the academic achievement of international students (Sadeghi et al., 2013; Addow, Abubakar and Abukar, 2013; Ghenghesh, 2015). Although the international students, in this study, perceived many English language skills to be difficult, they performed academically similar to the domestic students. Overall, there is a very small significant difference in academic achievement between the domestic and international students. The findings of Fass-Holmes and Vaughn (2015) also reported that international students can succeed academically despite their challenges in English language proficiency.

How international students overcome their language difficulties to succeed academically is beyond the scope of this study. However, a few plausible explanations for this academic success despite inadequate English proficiency can be considered.

International students in Singapore are supported by government scholarships or sponsorships that are reviewed yearly and renewed based on academic performance. This motivates international students to work hard academically despite their language difficulties. Another explanation is that the faculty in the institution where this study was conducted is more aware of the English language difficulties faced by the international students and grade less strictly on English; focusing more on the understanding of concepts taught in the subjects. Faculty also personalised learning with technology for these students by posting video recording of lectures online and creating online quizzes for international students to understand the concepts. Furthermore, this institution has

historically provided a range of programs and services to support its international student population. Such programs include intensive English courses, mentoring programs, orientation programs and social and cultural events to integrate the international student population with the locals.

Apart from English language proficiency, studies have shown that academic achievement of international students may also be affected by other factors such as acculturative stress (Nasirudeen, Koh, Lau, Lim, How, 2014), learning strategies (Jayanthi, Balakrishnan, Ching, Abdul-Latiff, and Nasirudeen, 2014) and personal characteristics (Staynoff, 1997). Cross-cultural adjustment may also be a barrier for international students which in turn might affect their academic performance (Li, et al., 2010).

3.1 Limitations and recommendations

This study had some limitations. First, it was conducted in only one institution in Singapore. Future research should include more tertiary institutions to have a larger sample size. Second, this research is based on a quantitative survey. A mixed-methods approach, in future, would provide more comprehensive information on international students' perceived challenges associated with English language proficiency. Third, the correlational analysis used in this study does not prove causal relations between variables. Finally, this study relied on self-report measures and the cGPA reported were obtained via a questionnaire.

The findings of this study led to the following recommendations for future practices that could assist faculty and administrators in designing support programs for international students. For international students to succeed academically, institutions must provide support programmes such as English-language courses throughout their three years of study in the nursing course. Currently, international students are only required to attend a 3-month English language course prior to course enrolment. Peer tutoring by domestic students, and supplemental courses could also help the international students to improve their English proficiency (Andrade, 2006; Montgomery & Clifford, 2011). Faculty members could also incorporate various pedagogical strategies to help international students improve their language skills (Shapiro, Farrelly and Tomaš, 2014). Faculty who teach these international students should provide them with glossaries of relevant terms at the beginning of each academic semester (Berman and Cheng, 2001). These glossaries could assist international students in understanding the lessons and improving their language skills and academic scores. Social engagement activities that provide opportunities for international students to meet, mingle and form relationships with domestic students may help improve their language skills.

In conclusion, the findings of this study show that international students can perform academically well despite English language difficulties. Institutions should support international students with programs and services to help improve their English language skills and academic performance.

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