An Examination of Factors Predicting the Academic Success of Undergraduate Second-Language Learners in the United Arab Emirates

The study examined factors contributing to the academic success of second-language learners at an English-medium public university in the United Arab Emirates in their first- through fourth-year of study. The research utilized a quantitative approach via correlational analysis. The Pearson r was employed to establish the level of correlation between and among the indicated factors and provide perspectives on the strength of the relationships. Findings suggest that relationships do exist between or among the identified variables and the cumulative grade point average. The analysis found that males tend to have lower CGPAs during all four academic years. For both genders the initial IELTS scores correlated with academic performance in the first two years, that high school track did not correlate with academic success, and that secondary academic performance had a positive correlation with academic success at the university level.

Keywords: academic success, gender, English proficiency

The acquisition of higher education has always been difficult for those studying in a non-native language. Civan and Cuskon (2013) point out that second language learners of English certainly encounter hindrances and challenges as they pursue degrees in English medium institutions scattered across the world. Academic success becomes a challenge in and of itself (Al Hebsi, Pettaway, & Waller, 2015). This study examines the relationship of factors contributing to the academic success of second-language learners at an English-medium public university in the United Arab Emirates.

Review of the Literature

Researchers around the world have identified various factors influencing academic success. Bloemer, Day, and Swan (2017) assert that academic success is measurable via assessment of acute and continuous standards. Acute academic performance includes such issues as grades and completion rates. Continuous academic performance includes such issues as student persistence and institutional retention. Camara (2013) advocates academic preparedness as a factor that influences student academic success, specifically a student’s preexisting level of preparedness upon entering postsecondary education. Preexisting measures of preparedness are typically associated with standardized college entry exam scores and secondary grade point average (GPA). First year college GPA can be predicted using a combination of high school GPA and SAT scores, as credited by Korbin, Patterson, Shaw, Mattern, and Barbuti (2008). Moreover, Burton and Ramist (2001) validate that the
predictive validity of both factors is also useful for college honors, college leadership, and earning potential after graduation.

Saunders-Scott, Braley and Stennes-Spidahl (2017) compared traditional factors such as ACT scores and secondary GPA with non-traditional factors such as the student’s perceived degree of stress tolerance and fortitude as a means of predicting students’ academic. These researchers measured academic success using the traditional definitions of college GPA and retention. After a detailed and longitudinal study of 1.5 years, they concluded that ACT scores and secondary school graduation GPA’s have a high positive correlation with the students’ final university cumulative grade point average (CGPA).

Barclay, Barclay, Mims, Sargent, and Robertson (2018) studied a group of Scholars (students with higher GPA’s, higher SAT/ACT scores) and Non-Scholars (at-risk students coming to college with low high school GPA and low SAT/ACT scores) to examine the mental mindsets of these two groups and to compare their academic performance. These researchers examined the psychological variables of 327 incoming freshman and found that the psychological variables played an important role in establishing student mindset and in impacting academic success.

A recent study (Comer, Schweiger, & Shelton, 2019) of a first year PharmD program identified the critical thinking skills, critical thinking dispositions, and personal strengths that are likely to contribute to student success and academic excellence. These researchers concluded that non-traditional factors such as critical thinking skills, open-minded critical dispositions, and the signature strengths of consistency, achievement, and learning are associated with the highest level of performance in the first year of a PharmD program. A similar study by Krol, Dobson, and Adesina (2019) examined the relationship between prerequisites and academic success at a Canadian university’s pharmacy program. These researchers assert that certain courses are required to develop higher level learning skills such as knowledge organization, skill mastery, and knowledge synthesis/application. These skills were found to be strongly correlated with the academic success of students in the Pharmacy program at University of Saskatchewan, Canada.

Hepworth, Littlepage, and Hancock (2018) identified a strong positive correlation between social integration, perceived institutional commitment to academic success, and scholastic preparedness with academic success. These researchers concluded that scholastic preparedness is a significant potential predictor of academic success of students. They concluded that academic preparedness continues to take priority when considering student admissions. They also suggested that additional support should be provided to ensure that potential students are well-prepared for university at the time of admissions.

Clifton et al. (2008) found that social support is another contributing factor to academic success. These researchers isolated students exhibiting higher levels of interactions with other students and exhibiting stronger coping strategies. The researchers found that these attributes were beneficial to promoting academic achievement. Funham (2012) also identified strong correlations between conscientiousness and academic performance. Moreover,
Gifford, Briceno, and Miazo (2006) assert that students with identified study skills achieve greater academic success than students lacking identified study skills. Pettaway, Waller, Khodr, and Waller (2015) also identified the importance of social support for engaging academic success. Gutiérrez, Sancho, Galiana, and Tomás (2018) surveyed 2,034 Angolan students and 2,302 Dominican Republic students in order to examine predictors of academic success. These researchers isolated the role of teachers’ supporting autonomy style, the students’ basic psychological needs satisfaction, and the students’ school engagement and found them to be predictive of academic success. Likewise, Suleman, Hussain, Syed, Parveen, Lodhi, and Mahmood (2019) identified an association between emotional intelligence and the academic success of students. These researchers focused on 186 students enrolled in undergraduate degree programs at Kohat University of Science and Technology (KUST), Pakistan. They assert the need for improving students’ emotional intelligence to enhance academic performance.

The literature clearly illustrates the issues faced by second language learners and the international scope of their pursuit for academic success. Multiple studies have analyzed the factors associated with this quest. Major findings in the field assert that various traditional factors such as academic preparation, entrance test scores, high school ranking, and psychological factors such as stress tolerance, tenacity, critical thinking, and emotional intelligence can have significant impact on the academic success of second-language learners as evidenced in institutions all around the world.

**Statement of Problem**

The public university selected for this study delivers an integrated, American-style undergraduate and graduate education to an extremely diverse student body. Over fifty nationalities from five continents attend the university. The university is licensed in the United Arab Emirates with all programs holding accreditation. Additionally, the university is regionally accredited in the United States. English is the medium of instruction for all programs and courses.

Civan and Cuskun (2016) indicate that second-language learners face unique challenges and obstacles in the pursuit of their studies. These researchers found that second-language learners with mediocre second-language skills often fail to master course topics not taught in their mother tongue. This study aims to analyze the factors that impact the academic success of second-language learners of English. The subject university provides a suitable data source as the institution is composed primarily of second-language learners of English (96.6%). Fourteen-point-three percent (14.3%) of the undergraduate student body were on academic probation at the time of the study.

The study examined the academic success for the identified second-language learners of English in light of gender, IETLS (International English
Language Testing System) scores at the time of admission, high-school track, and high-school rank. One-hundred percent (100%) of the subjects were second-language learners of English studying in an English medium university. The study identified the relationship of the indicated factors with the subsequent academic success of students in their first through fourth years of study. Findings of the study may guide future practice and research. Findings may also be extrapolated to similar universities in order to provide a framework for to review and improve admission policies and procedures, student retention, and student success.

Research Questions

The study examines the following two research questions. Question one is descriptive in nature while question two examines the relationships between or among identified factors and the cumulative grade point averages.

1. What are the genders, IETLS English proficiency scores, high school tracks, high school percentiles, and cumulative grade point averages for first-year, second-year, third-year, and fourth-year English second-language learners pursuing higher education at a licensed and accredited university in the United Arab Emirates?

2. Do relationships exist between or among the genders, IETLS English proficiency scores, high school tracks, and high school percentiles with the cumulative grade point averages first-year, second-year, third-year, and fourth-year English second-language learners pursuing higher education at a licensed and accredited university in the United Arab Emirates?

Research Hypotheses

The following null and alternate hypotheses were examined in support of research question two.

Ho: No relationships exist between or among the genders, IETLS English proficiency scores, high school tracks, and high school percentiles with the cumulative grade point averages for first-year, second-year, third-year, and fourth-year English second-language learners pursuing higher education at a licensed and accredited university in the United Arab Emirates.

Ha: Relationships exist between or among the genders, IETLS English proficiency scores, high school tracks, and high school percentiles with the cumulative grade point averages for first-year, second-year, third-year, and fourth-year English second-language learners pursuing higher
education at a licensed and accredited university in the United Arab Emirates.

Research Design and Method of Procedure

The study was conducted utilizing a quantitative approach. The associated descriptives of mean, number, and standard deviation were identified for all variables in response to research question one. Frequency was also presented where warranted. Research question two was examined via correlational analysis. The data were examined for normality using skewness and kurtosis to determine whether parametric or non-parametric design was warranted. Values with absolute values above 3.0 were viewed as indicating that the data sets were non-parametric (Lumadue & Waller, 2013). Since a parametric design was deemed more appropriate (Creswell & Guetterman, 2019), the study utilized the Pearson r to establish the level of correlation between and among the associated variables and provide perspectives on the strength of the relationships. Waller and Lumadue (2013) assert that the significance levels for the Pearson r are established as strong ($r^2 > .49$), moderate ($0.25 < r^2 < .49$), weak ($0.09 < r^2 < .25$ weak), and negligible ($r^2 < .09$).

The data set for the study was obtained via electronic access to the university’s student records after securing IRB approval. Names and student identification numbers were removed to maintain anonymity and ensure that no tracking could be done. The data set included year-level, gender, English proficiency scores, high school track of study, and high school percentage rankings. Only designations of year-one, year-two, year-three, and year-four were included in the year-level data.

Assumptions, Limitations, and Delimitations

The study operated under the following assumptions, limitations, and delimitations. The research assumed that the IETLS scores of students as presented at the time of admission are an actual measure of the students’ level of English proficiency. The study also assumed that subjects were primarily responsible for their own academic success. The study was limited due to the lack of longitudinal data. The data sets for first-year, second-year, third-year, and fourth year students were mutually independent and constituted four unique groups of subjects at different stages of their academic progress. The study was delimited to one university only. The data sets were delimited to AY 2018-2019, AY 2017-2018, AY 2016-2017, and AY 2015-2016 as first-year, second-year, third-year, and fourth-year, respectively. The literature review was also delimited to research findings completed in the last ten years.
Research Findings

The study examined two research questions. Question one was descriptive in nature and examined gender, IELTS English proficiency scores, high school tracks, high school rankings, and cumulative grade point averages for first-year, second-year, third-year, and fourth-year English second-language learners pursuing higher education at the university under consideration. The following tables provide the appropriate demographic information requisite to answering research question one.

Table 1. Gender Distributions by Year of Progress

<table>
<thead>
<tr>
<th>Year</th>
<th>Male</th>
<th>Female</th>
<th>% Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Year</td>
<td>32</td>
<td>41</td>
<td>43.8</td>
</tr>
<tr>
<td>Second Year</td>
<td>88</td>
<td>89</td>
<td>49.7</td>
</tr>
<tr>
<td>Third Year</td>
<td>57</td>
<td>51</td>
<td>52.8</td>
</tr>
<tr>
<td>Fourth Year</td>
<td>39</td>
<td>33</td>
<td>54.2</td>
</tr>
<tr>
<td>Totals (N=430)</td>
<td>216</td>
<td>214</td>
<td></td>
</tr>
</tbody>
</table>

Source: Institutional CampusVue Extraction

Table 1 provides an overview of the number and genders of students enrolled by their year of study. The Male enrollment increased from 43.8% for first year students to 54.2% for fourth year students. This is consistent with the changing enrollment demographics in the subject university which has experienced significant increases in female enrollment percentages in all programs. Since the data sets are independent by year, the review does not indicate any information regarding the academic success of females versus males.

Table 2. IELTS Score Frequencies by Year of Progress

<table>
<thead>
<tr>
<th>Score</th>
<th>First Year</th>
<th>Second Year</th>
<th>Third Year</th>
<th>Fourth Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>5.0</td>
<td>27</td>
<td>85</td>
<td>46</td>
<td>30</td>
</tr>
<tr>
<td>5.5</td>
<td>15</td>
<td>42</td>
<td>26</td>
<td>17</td>
</tr>
<tr>
<td>6.0</td>
<td>17</td>
<td>20</td>
<td>21</td>
<td>12</td>
</tr>
<tr>
<td>6.5</td>
<td>6</td>
<td>12</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>7.0</td>
<td>4</td>
<td>12</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>7.5</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Totals (N=430)</td>
<td>73</td>
<td>177</td>
<td>108</td>
<td>72</td>
</tr>
</tbody>
</table>

Source: Institutional CampusVue Extraction

Table 2 illustrates the range of beginning IELTS Scores of students in the four academic years. The largest admission number is in second year with 177 students enrolled in the university. Initial IELTS scores are relatively stable for all four years, ranging from 4.5 to 7.5 with 5.0 and 5.5 predominating throughout. Once meeting admission requirements, the initial IELTS score is not modified as the test is not retaken through the course of study.
Students in public schools in UAE are currently exposed to two major educational streams: advanced and general. Students choose either of these streams after completing grade 9, and complete grades 10-12 in their chosen stream. The chosen track determines the route of future study open to the student. Those choosing the advanced stream are exposed to higher and more in-depth instruction in mathematics and sciences. Those choosing the general stream do not take the advanced mathematics and sciences. The stream of study may restrict a student’s entry into some fields of study. For example, students from the general track must meet strong performance in their high school rankings in order to be allowed into engineering fields of study (Stages and streams of school education, 2018). Table 3 illustrates that the number of students who pursued the advanced high school track were significantly higher for each cohort. Fewer students pursued the general track. Such would be expected as over 50% of the student enrolled in the target university population are pursuing engineering related fields of study requiring more exposure to mathematics and science.

Table 4 provides the cohort number, mean, and standard deviation for the initial IELTS scores, high school rank, and cumulative grade point averages for each of the four cohorts. The initial IELTS scores have remained relatively constant for each cohort though more deviation exists in the high school ranks and cumulative grade point averages.

The second research question of the study examined relationships between or among the genders, IELTS English proficiency scores, high school tracks, and high school percentiles with the cumulative grade point averages of first-year, second-year, third-year, and fourth-year English second-language learners.
pursuing higher education at the subject university. Normality of the data sets was established in order to determine whether a parametric or non-parametric correlation coefficient should be utilized.

Table 5. Skewness and Kurtosis by Year of Progress

<table>
<thead>
<tr>
<th>Year</th>
<th>Descriptive</th>
<th>Gender</th>
<th>IETLS</th>
<th>HS Track</th>
<th>HS Rank</th>
<th>CGPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Year</td>
<td>Skewness</td>
<td>.254</td>
<td>.921</td>
<td>1.489</td>
<td>-.370</td>
<td>-.556</td>
</tr>
<tr>
<td></td>
<td>Kurtosis</td>
<td>-1.991</td>
<td>.072</td>
<td>.221</td>
<td>.048</td>
<td>.202</td>
</tr>
<tr>
<td>Second Year</td>
<td>Skewness</td>
<td>0.11</td>
<td>1.243</td>
<td>1.402</td>
<td>-.838</td>
<td>.021</td>
</tr>
<tr>
<td></td>
<td>Kurtosis</td>
<td>-2.023</td>
<td>.610</td>
<td>-.036</td>
<td>.182</td>
<td>-1.094</td>
</tr>
<tr>
<td>Third Year</td>
<td>Skewness</td>
<td>-.113</td>
<td>1.200</td>
<td>.503</td>
<td>-.227</td>
<td>.104</td>
</tr>
<tr>
<td></td>
<td>Kurtosis</td>
<td>-2.025</td>
<td>.783</td>
<td>-1.780</td>
<td>-.605</td>
<td>-.672</td>
</tr>
<tr>
<td>Fourth Year</td>
<td>Skewness</td>
<td>-.171</td>
<td>.941</td>
<td>.862</td>
<td>.144</td>
<td>.672</td>
</tr>
<tr>
<td></td>
<td>Kurtosis</td>
<td>-2.028</td>
<td>.604</td>
<td>-1.293</td>
<td>-.710</td>
<td>-.336</td>
</tr>
</tbody>
</table>

Source: SPSS vs. 24 Analysis of Data Set

As illustrated in Table 5, Skewness and Kurtosis scores fall within the acceptable ranges, indicating that the data are approximately normally distributed. For this reason, the parametric correlation coefficient was selected. The Pearson r was utilized to examine the correlation between or among variables. Table 6 provides the Pearson correlations between and/or among the variables. As weak correlations (.09 < r² < .25) were identified, the null hypothesis is rejected in favor of the alternate hypothesis. Relationships do exist between or among the variables of gender, initial IETLS score, high school track, high school rank and the cumulative grade point average where r² > .09.

Table 6. Pearson Correlations for CGPA by Variable

<table>
<thead>
<tr>
<th>Year</th>
<th>Gender</th>
<th>IETLS</th>
<th>HS Track</th>
<th>HS Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Year</td>
<td>-.25</td>
<td>.30</td>
<td>.17</td>
<td>.35</td>
</tr>
<tr>
<td>Second Year</td>
<td>-.30</td>
<td>.37</td>
<td>.13</td>
<td>.43</td>
</tr>
<tr>
<td>Third Year</td>
<td>-.40</td>
<td>.15</td>
<td>-.07</td>
<td>.41</td>
</tr>
<tr>
<td>Fourth Year</td>
<td>-.33</td>
<td>.17</td>
<td>.14</td>
<td>.31</td>
</tr>
</tbody>
</table>

Source: SPSS vs. 24 Analysis of Data Set

A weak negative correlation was found between gender and the CGPA for the second, third, and fourth year cohorts. Of note, the first-year cohort fell just below the minimum expected value with r² = .0625. The negativity of the correlation is prefaced on the manner in which gender was coded: 1 for female and 2 for male. Accordingly, the data indicate that a weak correlation exists between gender and CGPA. Maleness appears weakly correlated to a lower CGPA. The initial IETLS score evidenced a weak positive correlation implying that the initial level of English proficiency impacted the first-year and second-year cohorts but did not correlate to the third-year and fourth-year cohorts. No correlation was found between the high school track and the CGPA. However, the high school rank was weakly correlated to CGPA for all four cohorts.
While the track of study was not found to be significant, the level of academic performance at the high school level was identified as significant.

Conclusion and Recommendations

This study examined the relationship between or among the factors that contribute to the academic success of second-language learners at an English-medium public university in the UAE. The factors under consideration were gender, IELTS Scores, High School Track, and High School Rank. In the findings section, the correlation between each factor has been exhibited and discussed throughout the four academic years. In this section, the findings of each factor will be discussed in detail.

Gender

The findings suggest that Gender and CGPA have a negative correlation that is meaningful for all four years. It indicates that males tend to have lower CGPAs during all four academic years. The finding matches the research conducted in the past where it has been proved that females do better than males in studies. Wainer and Steinberg (1992) claimed that female students receive higher grades than male students due to their hard work and attending classes more frequently. Likewise, Leonard and Jiang (1999) assert that females have better study skills which leads them to achieve higher academic success as compared to their male counterparts. Hence, it is important to engage males in academics by various means such as clubs, social and cultural events, co-curricular activities, etc. Males tend to spend more time with friends and learn implicitly from each other. If opportunities are created to engage males meaningfully and weave curriculum intricately with co-curricular activities, they are more likely to engage and study. On the basis of the findings, it is strongly suggested to improve engagement of male students at a university level to ensure their academic success.

IELTS Scores

English Proficiency of students at the time of their admissions has a positive correlation with the first two years of study at a university. The IELTS scores of students tend to help them improve their academic performance in the initial two years of their study. This indicates that students with better English proficiency score higher CGPA. Thus, measures shall be taken to provide ample remedial support to the students with low English proficiency with the help of learning centers. Supplementary support to non-native speakers of English will prove beneficial in helping them achieve academic success. At-risk students may be directed to writing center to practice writing with tutors. Moreover, learning centers for other subjects may also prove significant in working towards a better CGPA.
High School Track

The finding suggests that High School Track does not have a significant impact on the academic success of students. However, it is used to route students to certain degree programs. As per the university’s admission policy; students with Advanced High School Track opt for engineering degrees, and students with General High School Track choose other fields at the said university. Hence, the policy can be kept in place, as it does not impact students’ academic performance.

High School Rank

The study concludes that students with strong academic record in high school tend to be academically successful in their university life as well. It means that students who have been consistently achieving good results in their academic careers, are likely to continue getting good CGPA in all the years of their university career. The correlation between high school rank and CGPA of students is positively significant for all cohorts. These findings advocate the concept of self-efficacy by Bandura (1997), and highlight the importance of mastery experiences. On the basis of this conclusion, the researchers suggest that universities may provide opportunities for high-achieving students to stay focused on their goals and maintain their results. Moreover, it is also suggested that universities may conduct awareness sessions, training programs, and summer camps for high school students of nearby vicinity as their prospective students, and orient them with the programs offered and their entry level preparation. This may prove fruitful for students and universities alike.

Implications for Future Research

The study provides a platform for future research that could be carried out. A detailed study of students with similar high school track and high school rank could be carried out to study the factors predicting their academic success in terms of gender. Moreover, studies could be carried out to study a particular high school track for students such as advanced or general. Research can also be conducted to study the impact of learning centers upon academic success. A similar study could be conducted in public sector universities to examine the predictors of academic success for students of other countries.
References


Data Deposition Information

https://www.researchgate.net/publication/337825860_Academic_Success_Data_Set

Academic Success Data Set

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