English Language Proficiency as a Predictor of Academic Achievement among Primary English First Additional Language Learners in South Africa

Madoda Cekiso¹, Baba Tshotsho² and Rose Masha³

¹Tshwane University of Technology, Department of Applied Languages, South Africa
E-mail: CekisoMP@tut.ac.za

²University of Fort Hare, Faculty of Social Sciences and Humanities, South Africa
E-mail: bshotsho@ufh.ac.za

³University of Fort Hare, Faculty of Social Sciences and Humanities, South Africa
E-mail: rmasha@ufh.ac.za

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ABSTRACT The main purpose of the study was to investigate the impact of English language proficiency on learners’ academic achievement in Mathematics, Economic and Management Science and Natural Science. The learners’ performance in the four mentioned subjects was measured through their end of the year (2013) results. A purposeful sample of 215 Grade 8 learners was used in this study. The results indicated that there was no relationship between learners’ English proficiency and their academic performance in Mathematics and EMS. The only relationship the study revealed was between the English language proficiency and learners’ academic performance in Natural Science, although it was not significant. It was concluded that there was no alignment between the current structures of the English language subject offered and the language proficiency required for academic success in Mathematics and EMS.

INTRODUCTION

In terms of the new Constitution of the Republic of South Africa, the government recognises cultural diversity as a valuable national asset to promote multilingualism. Subsequently, the Constitution provides for 11 official languages: Afrikaans, English, isiNdebele, isiXhosa, isiZulu, Sepedi, Sesotho, Setswana, siSwati, Tshivenda and Xitsonga (South African Constitution). According to the South African Language-in-Education Policy which has its roots on the Constitution, the mother tongue (home language) of the learners is used as medium of instruction from Grade one to three and English is taught as a subject at this level. The policy further mentions the introduction of an additional language from Grade four as a medium of instruction. Hence this language is called First Additional Language in a South African context. To fulfil this requirement, English is chosen in many cases as it is perceived as the most optimal language choice in terms of future career prospects and serve as dominant Language of Learning and Teaching (LOLT) (Education Portfolio Committee 2006). Visagie (2010) points out that the constitutional assertion of the 11 official languages often generates the impression that all official languages in South Africa (SA) enjoy equal usage. In reality, in most formal contexts such as professional environments or sectors of commerce, the majority of languages fall into disuse, except English. Similarly, Banda (2004), Dyers (2001) and De Klerk (2000) argue that practically speaking, English still has a higher status than African languages and the value attached to these languages even by black South Africans make English their language of choice as a medium of instruction. However, Barnard (2010) argues that even if parents want home language education for their children, it is available neither in the curriculum material nor as a language to take matric examinations in. According to Barnard (2010), the non-existent of the indigenous languages as mediums of instruction after Grade three is a violation of the Constitution by the state as Section 6 (2) of the Constitution of the Republic of South Africa, the status of the African languages is supposed to be elevated. Informed by the current status of the indigenous languages already mentioned, it is the perception of the authors that high levels of proficiency in English are a critical factor in achieving academic success. Tshotsho (2013: 40) adds that English language proficiency is essential for South African students who are expected to com-
plete tasks in English and also in other subjects. Yet, there is a general consensus among scholars in S.A. that poor English language proficiency is the major cause of academic underperformance among the English First Additional learners (Jordaan 2011; Stephen et al. 2004).

A considerable number of studies have revealed that English language proficiency is a strong predictor of academic success (Arsad et al. 2014; Adibirahman et al. 2013; Sadegi et al. 2013; Fakeye 2009). Some studies have focused on the relationship between English language proficiency and academic success in certain subjects in the curriculum. For example, Aina et al. (2013) focused on the relationship between students’ English language proficiency and their academic performance in science and technical education. Another study was conducted by Jekayinfa (1991) who focused on the learners’ proficiency in the English language, which is a language of instruction, as a predictor of learners’ performance in history. The results of the above mentioned studies showed a strong correlation between language of instruction (English) and academic achievement in content subjects. However, other studies showed the relationship between LOLT (English) and learners’ academic performance to be relatively weak (Avdi 2011). Thus, there are contrasting views about the nature of the relationship between proficiency in LOLT and the learners’ academic performance. Hence the study seeks to establish the role played by English language proficiency in determining the academic success of the Grade 8 English First Additional Language learners in a selected school in South Africa.

**English Language Proficiency and Academic Achievement**

The relationship between students’ overall academic achievement in the content areas and their language (English) proficiency is well documented (Aina et al. 2013; Fakeye 2009; Essien and Setati 2007; Avdi 2011; Arsad et al. 2014). According to Bachman (1990), language proficiency is the language ability or ability in language use. Blagovevich et al. (2004) defines language proficiency as learners’ communication of information, ideas and concepts necessary for academic success in the content area of social studies. In this paper language proficiency refers to the learners’ ability to read, write, speak and comprehend English within academic class-

room settings. The research on the relationship between language proficiency and academic achievement has shown that having difficulties in grasping fully the contents and concepts of the various subjects of the curriculum taught in the target language (English language) seems to be one of the most serious problems that ESL learners face in various subjects (Maleki and Zangani 2007). To add, Addow et al. (2013) point out that the knowledge of the contents of school subjects is transferred to the learners via English language medium. Therefore, Feast (2002) argues that when students are deficient in the language of instruction, it follows that they would not perform well in the various school subjects taught in the target language. Jekayinfa (1991) relates the problem to the Nigerian context when she states that many learners are greatly handicapped in their performance in many school subjects because of their knowledge of English that is greatly inadequate. In addition, Arsd et al. (2014) state that learners who have poor English language proficiency will have difficulty understanding the teacher and reading reference books and doing assignments in English.

Studies that deal with the relationship between English language performance and academic performance have focused on the relationship between these variable with regard to different subjects. For example, Arsd et al. (2014) conducted a study of students’ English language proficiency and its impact on the overall performance of a bachelor level engineering programme at a university in Malaysia. The findings showed that there appeared to be a direct correlation between students’ results for fundamental subjects and the overall academic performance of graduating students. A similar study was conducted by Sadeghi et al. (2013) on the English language proficiency as a predictor of academic achievement among medical students in Iran. Specifically the study sought to determine the correlation between English language proficiency and the achievement medical students in their national comprehensive basic science examination. The results indicated that proficiency in English could significantly influence academic achievement of medical students. Some studies have focused on the relationship of a single variable with English language proficiency. This is witnessed by a study conducted by Anthony and Setati (2007) on the relationship between Mathematics and English language.
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proficiency. In their study, Anthony and Setati stressed the importance of improving the English language proficiency in order to meet the academic demands of Mathematics. They further point out that language proficiency is used as a vehicle to learn Mathematics. Thus, language serves as a medium through which mathematical ideas are expressed and shared. Another study was conducted by Wilson and Komba (2012) on the link between English language proficiency and academic performance. The results revealed that the relationship was significant in English and insignificant in other subjects which were investigated. Wilson and Komba further argue that academic success is a function of several variables and not only proficiency in the LOLT. In a similar study conducted by Avdi (2011) the results revealed a relatively weak relationship between English language proficiency and academic performance of the learners. Avdi further argues that non-linguistic factors such as age, level of motivation and commitment, and the educational and cultural background of the students may also be important factors influencing academic performance. Based on the above mentioned studies it is clear that the findings on the relationship between English language proficiency and learners’ academic achievement are mixed. Therefore, the current study seeks to investigate whether a learner’s English language proficiency is likely to have an impact on the overall academic performance of the learners.

The Role of English in South Africa

The multilingual nature of S.A. has positioned English as generally understood across the country, being the language of business, politics and the media, and is regarded as the country’s lingua franca. Despite the South African Language-in-Education policy stipulating the use of home language as LOLT, the majority of South Africans opted for English and not for their home language as LOLT after the first four years of schooling (Webb 1999). However, the choice of English language as LOLT is seen by some researchers as problematic not only for the learners but also for the teachers. Rossow (1999) observed that educators in traditional black schools in South Africa often lack the English proficiency that is necessary for effective teaching.

The choice of English as LOLT in S.A. is supported by various reasons. Visagie (2010) points out that English is seen by many black South Africans as the dominant language of trade and industry. Therefore, knowledge of English is perceived to be essential for economic empowerment. In addition, Webb (1992) argues that upward mobility is impossible without proficiency in English. Another reason for the choice of English as LOLT in many black schools is the fact that the education system has not delivered on the constitutional imperatives of promoting multilingualism. In support of this idea, de Wet (2002) states that in S.A. there are no African language textbooks and material for the language needs of the second language learners, hence many black South Africans prefer English as LOLT. Viewed against the backdrop sketched above, the role of schools in S.A. should be evident. It is the obligatory role of the schools to produce learners that have sufficient command of English language proficiency (Visagie 2010). Therefore, the current study seeks to establish the impact of English language proficiency of the selected learners on their academic performance in the content subjects in the curriculum. Specifically, the following research questions will guide the study:

- Is there any significant relationship between English language proficiency and the academic achievement of the selected group of learners in Mathematics, Economic and Management Sciences and Natural Sciences?
- Does the relationship, if any, between English language proficiency and academic achievement vary according to content subjects mentioned above?
- Is there a significant relationship between male and female learners in English and Mathematics?

Purpose of the Study

In view of the importance of English language to learning in South Africa as the medium of instruction after Grade three, the purpose of the study was to find out the influence of English language proficiency on learners’ academic achievement in Mathematics, Economic and Management Sciences and Natural Science.

RESEARCH METHODS

Research Design

The study adopted a correlational research design and it was felt relevant as the study sought
to assess the degree of relationship between English language proficiency and academic achievement. Based on the purpose of the study, the design was further considered to be suitable because it is to determine whether and to what degree does the relationship exist between English language proficiency and learners’ academic achievement.

Subjects

All Grade 8 learners enrolled in a Primary school in Butterworth (South Africa) were purposefully selected for the study. The sample (215) consisted of 108 male and 107 female learners aging between 15 and 18 years. The learners had been exposed to English First Additional language as medium of instruction from Grade 4 hence were assumed to have enough proficiency in English.

Data Collection Procedure

The data was collected from the end of the year (2013) mark schedule of the Grade 8 learners. The focus was on the marks obtained by students in Mathematics, Economic and Management Sciences and Natural Science. In the study the Chi-square tests were used in order to examine the relationship between English language proficiency and academic achievement between English First Additional language scores and learners’ performance in Mathematics, Economic and Management Sciences and Natural Science.

RESULTS

Research Question 1

Is there any significant relationship between English language proficiency and the academic achievement of the selected group of learners in Mathematics, Economic and Management Sciences and Natural Sciences?

From Table 1, it is clear that poorest performances in percentage are in Mathematics and Economic and Management Sciences (EMS), which are quantitative subjects, and they are 96.76 and 59.26 respectively. While English language performance increases until it reaches its peak at the 61-70 percent performance level, Mathematics reaches its lowest performance at the same level and has no other learners who have performed more than this level. On the other hand, compared to English, EMS peaks at a lower level than English, which is the 50-60 percent level, and 21.30 percent of the learners scored at this level in EMS. The levels that follow the 50-60 percent in EMS level show a steep decline in performance.

Compared to English, the Natural Science subject, which is more qualitative than quantitative shows a better performance ratio than the Mathematics and the EMS. Although there is more poor performance in Natural Science than English where 35.65 percent of students fall below the 0-49 percent score level, this is still comparatively higher than the quantitative subjects, EMS and Mathematics. Table 1 also shows that the performance of learners in Natural Science gradually drops, but still reflects a higher pass rate percentage than the EMS and Mathematics, although English reflects the highest pass rates out of all the subjects.

Research Question 2

Does the relationship, if any, between English language proficiency and academic achievement vary according to content subjects mentioned above?

From Table 1, it can be noted that the students seem to be struggling with subjects that require quantitative didactics, while they perform better in subjects that are qualitative in

| Table 1: Summative graph of learner performance on all 4 subjects |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                | 0-49%          | 50-60%         | 61-70%         | 71-75%         | 76-85%         |
| English        | 17.59          | 29.54          | 31.94          | 11.11          | 13.89          |
| Maths          | 96.76          | 2.31           | 0.63           | 0.0            | 0.0            |
| EMS            | 59.26          | 21.30          | 10.19          | 5.09           | 0.93           |
| Natural Science| 35.65          | 27.78          | 23.61          | 7.41           | 6.2            |
nature. Such subjects in this study are Maths and EMS. From the scores, it can be noted that almost all the students struggle with Mathematics since 96.76 scored below the pass mark. At the same time, nearly 60 percent of the learners seem to be struggling with EMS since 59.26 scored below the pass mark. As mentioned above, students seem to perform better in qualitative subjects which are English and Natural Sciences. This is reflected by the 93 percent pass rate in English 64 percent pass rate in Natural Sciences. It cannot, at this stage, be concluded that there is any relationship between the performances in the two qualitative subjects even though a number of students seem to be coping in them. This is because the English scores seem to exhibit a pattern of being lower on the lower score levels, higher on the middle score levels, drop at the 1st distinction level, and pick up again at the 2nd distinction level.

The Natural Science patterns seem to exhibit a pattern of peaking at the lower level scores and then decreasing as the level of scores increases. This is a similar pattern that is exhibited by the quantitative subjects EMS and Mathematics. The only difference is that there is a higher percentage of students in EMS that seem to be proficient than the other two subjects.

Therefore, what can be concluded from Table 1 is that learners seem to struggle more in quantitative subjects and seem to be coping in the qualitative subjects regardless of their performance in English.

In order to see the level of correlation between English and the other three subjects, the researcher isolated the data and compared EMS with English, Natural Science with English and Maths with English. The Chi square tests below show that there is no significant relationship between the learners’ performance in English and their performance in the other 3 subjects. Such a conclusion can be reached comfortably if a series of tests, for example, spread over all 4 terms, were to be assessed in all subjects so that a pattern can be established, and the limitation of this particular study is that it is based on one term’s performance. The researcher isolated each one of the Chi-square tests below for each one of the subjects. These are shown as Tables 2, 3 and 4.

Table 2 shows that in this study, there is no correlation between the variables Maths and English. This is because the value is less than 0.05. The issue here might be that several external factors such as the curriculum, teaching and learning and so on are affecting the performance in Mathematics.

Table 3: Chi-square Tests for variables EMS and English

<table>
<thead>
<tr>
<th>Value</th>
<th>Df</th>
<th>Asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-square</td>
<td>46.927*</td>
<td>10</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>27.033</td>
<td>10</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>16.411</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 3 shows that in this study, there is no correlation between the variables EMS and English. This is because the value is less than 0.05. Just like Mathematics above, the issue here might be that several external factors such as the curriculum, teaching and learning and so on are affecting the performance in Mathematics.

Table 4: Chi-square Tests for variables Natural Science and English

<table>
<thead>
<tr>
<th>Value</th>
<th>Df</th>
<th>Asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-square</td>
<td>101.376*</td>
<td>25</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>59.181</td>
<td>25</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>34.521</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 4 shows that in this study, there is no correlation between the variables Natural Science and English due to the values being less than 0.05. Although the pass rate is closer to English than the EMS and Maths, there does not seem to be a corresponding pattern that links this subject to English. The reason for this might be that several external factors such as an environment that is supportive of qualitative learning. Table 5 shows the learners’ performance in English per gender.
Research Question 3

Is there a significant relationship between male and female students in English and Mathematics?

From Table 5, it is clear that the female learners are performing at a higher rate in English than male learners. The table above also shows a high concentration of male learners in the lower percentage scores (0-49) and (50-60). This number of males peaks at the 61-70 percent score level and declines drastically in the high score levels of 71-100 percent. On the other hand, female learners’ high scores are concentrated from 61-70 percent score levels upwards. What this implies is that in this assessment, girls have performed better than boys in term 3, and they show a potential to excel in language. This observation can be concretized through several assessments where the research would observe a clear pattern of performance between boys and girls. This can then be discussed in view of literature points to several causes for the imbalance in female and male learners’ proficiency in language generally.

From Table 6, it can be noted that there is no clear distinction between male and female learners’ performance. One can note that the performance for the whole group is below average, and that both boys and girls performed poorly. The chi square tests in Table 8 show that there is no significant correlation between these two variables for us to conclude that either gender of male and female learners and English since the value is more than 0.05. However, since this is a singular assessment, these results cannot be generalized. Table 7 shows learners’ performance in Mathematics by gender.

Table 4: Chi-square tests for variables English and Natural Science

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>Df</th>
<th>Asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>192.129</td>
<td>25</td>
<td>.000</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>92.623</td>
<td>25</td>
<td>.000</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>57.679</td>
<td>1</td>
<td>.000</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>216</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 5: Learners’ performance in English by gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Performance in English</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0-49%</td>
</tr>
<tr>
<td>Male</td>
<td>27</td>
</tr>
<tr>
<td>Female</td>
<td>8</td>
</tr>
</tbody>
</table>

Table 6: Chi-square Tests for the variables Gender and English

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>Df</th>
<th>Asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>21.013</td>
<td>5</td>
<td>.06</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>21.878</td>
<td>5</td>
<td>.001</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>19.050</td>
<td>1</td>
<td>.000</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>216</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 7: Learners’ performance in mathematics by gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Performance in mathematics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0-49%</td>
</tr>
<tr>
<td>Male</td>
<td>99</td>
</tr>
<tr>
<td>Female</td>
<td>95</td>
</tr>
</tbody>
</table>
The findings from the study revealed that there was no significant relationship between the learners’ academic performance in English and their performance in Mathematics, EMS and Natural sciences. However, the results showed a weak relationship between the learners’ performance in English and their performance in Natural Sciences. This finding is supported by Arsad et al. (2014) who investigated the impact of the learners’ English language on their performance in their academic subjects. Their findings indicated that although there was some relationship between the learners’ English language proficiency and their performance in other subjects, but there was no relationship at all between their performance in English language performance and their performance in engineering courses. The authors further revealed that such an outcome was expected because engineering courses are mostly based on calculation and problem based activities. This could justify why there is no relationship between learners’ performance in English and their performance in Mathematics and EMS in the current study, because both subjects are based on calculations and problem solving skills. In addition, Douady (1997 in Essien and Setati 2007:218) contends that Mathematics involves the acquisition, at a functional level, certain concepts and theorems that can be used to solve problems and interpret information, and also be able to pose questions. He further states that to know Mathematics is to be able to identify concepts and theorems as elements of a scientifically and socially recognised corpus of knowledge. In addition, Setati (2005) points out that the relationship between language and Mathematics is that language serves as a medium through which mathematical ideas are expressed and shared. Based on the findings of the current study the question to be researched further is what aspects of English language are relevant for the development of Mathematics and EMS? In other words, what English language content is relevant to facilitate the understanding of Mathematics and EMS concepts?

The current study is further supported by the results of a study conducted by Addow et al. (2013) on English language proficiency and academic achievement for undergraduate students in Somalia. In their findings they identified that there were other factors, other than English language proficiency that affect students’ academic performance. The authors further recommended the improvement of study skills in order to improve the academic performance of the students. The results of a study conducted by Stephen et al. (2004) on English language proficiency as an indicator of academic performance at a tertiary institution also point to the existence of other factors other than English language proficiency. Their findings point to the contribution of other factors, like impoverished background, socio-economic environment and students’ awareness of their specific problems. The above mentioned findings of the current study are also supported by Vinke and Jochems (1993) who conducted a study on English language proficiency and academic success in international postgraduate education. Their remarkable finding was the observation of a cut-off point in the relationship between English language proficiency and academic success. They further point to the contribution of other variables like age and the extent to which a student makes an effort for the successful completion of a course and the extent to which the student has certain abilities that are relevant to a specific academic discipline.

The findings of the study further indicated that the girls performed better than boys in English language. This finding is supported by Al-Mously et al. (2013) who conducted a study on the impact of gender and English language on the academic performance of students. Their finding showed that female students significantly outscored their male counterpart in English courses. In addition, the results of the current study revealed no significant correlation between male and female performance in Mathematics. This finding contradicts the results of a study conducted by Muhammad et al. (2012) where they compared the performance of male and female students in Mathematics. Their results revealed that the performance of male was
better than female students in all the chapters of Mathematics.

CONCLUSION

In view of the findings of this study it is enough to conclude that proficiency in English language is not related to learners’ academic performance in Mathematics and EMS. Both subjects are based on calculations and problem solving skills. Therefore, it can be deduced from the results that the current status of the English language provided for the learners under study does not meet the requirements to develop such skills. The results further revealed a relationship, though not significant, between English language proficiency and learners’ academic performance in Natural Science. This shows that the current English language offered can match the qualitative subjects like the Natural Science but fail to support learners’ academic achievement in quantitative subjects like Mathematics and EMS. This calls for the alignment of the skills developed in English language with the skills demanded in Mathematics and EMS. Both performance in Natural Science and EMS. The findings also revealed that there was a significant correlation between the performance of male and female learners in English language. This manifested itself where the female learners received better scores than the males. This finding could help the language teachers identify the areas where male learners are weak and the areas where female learners are strong. Having this information could help teachers pay attention to the problem areas in order to improve the English language proficiency of the male learners.

REFERENCES


The South African Constitution, Sub-section 6, Languages.

