

EFFECT OF LANGUAGE PROFICIENCY ON ACADEMIC PERFORMANCE: SPECIAL REFERENCE TO THE UNDERGRADUATES OF GENERAL SIR JOHN KOTELAWALA DEFENCE UNIVERSITY

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Abstract- English language plays an important role in education, obtaining employment and even gaining power and special privileges in Sri Lanka. With the introduction of Official Languages Act of 1956, prominence given to English became a downfall. The shift towards the mother tongue in school education lead to offering degrees in Sinhala and Tamil medium in tertiary level education. However, most of the BSc and MBBS degrees continued to be conducted in the English medium.

This research examines the effect of English Language proficiency of the undergraduates on their academic performances.

The study was carried out in General Sir John Kothalawala Defence University (KDU) based on a self-administered questionnaire and a test paper. The sample was 50 civil Engineering undergraduates at the faculty of Engineering (FOE).

The study showed that the students who have done their secondary education in English medium (20% of the target group) performed well in the test paper and believed that their medium of study during A/L was a good platform to their degree programme. The remaining (80%) have achieved low marks for the given test paper. They preferred to have participated in an English intensive course before they started academics even though they

have obtained good grades at Advanced Level General English.

Thus, it was proven that language proficiency is a decisive factor in academic performances especially during the 1st year. It was also found that as they progress through semesters, they become competent and comfortable with the language which lead to a positive impact in academic performances.

Keywords- Language proficiency, Secondary education, academic performance, Faculty of Engineering

I. INTRODUCTION

English language governs Sri Lanka since early 19s despite, Sinhala and Tamil are the national languages which natives use in inter ethnic communication. According to Allen, (1993) “when the British took over Sri Lanka, they provided schooling entirely in English for an elite who were expected subsequently to become administrators in the civil service. The vernacular schools continued to function in Sinhala and Tamil in the rural areas”.

The professionals of the country had to work using both their mother tongue and English since communication

skills is essential for the betterment of any career. This is no exception to Engineers as they have to master the English language apart from their 1st language in order to be outstanding professionals in their respective fields. Thus according to the University Grants Commission of Sri Lanka, 7 Sri Lankan state universities offer BSc in Engineering and all the degrees are conducted in the English medium.

Therefore, a sound knowledge in the English language is very important for the undergraduates who are reading for BSc in Engineering. Especially, when English is not the native language, catching up lessons during the lectures become a challenge for them. The medium of the degree programme has become an issue mainly for the first year undergraduates as most of them have done their secondary education in their mother tongue and are not exposed to study in English medium.

Identifying the level of current language proficiency of undergraduates, recognizing student-friendly ways of improving language and identifying ways which will improve vocabulary and writing of the undergraduates were the objectives of the study.

Thus the research focuses on the “Effect of language proficiency on Academic Performance”, referring to the 1st year undergraduates at the faculty of Engineering of General Sir John Kotelawala Defence University and the hypothesis was “Lack of language proficiency of the undergraduates at the Faculty of Engineering leads to a deficiency in obtaining results in semester end examinations”.

II. LITERATURE REVIEW

A. English Language Teaching in Sri Lankan Universities

Literatures comprehend the importance of using a singular benchmark to measure the undergraduate language potential, such that a promising job opportunity be granted to the undergraduates considering the competitive world or careers. Hwang, Martirosyan and Wanjohi (2015) point out that the skills such as academic reading and writing, reference skills, listening and note taking ability along with interactive language skills are the ones to be brought to limelight. According to Wijetunge

and Jayasinghe, (2015) “KDU undergraduates need to be highly skilled and master the language competencies to thrive in the field”.

Similarly, the research done by Ranasinghe and Ranasinghe, (2012) reveals that the deficiency in English Language communication skills among present day undergraduates in Sri Lanka is a key factor in deciding the employability in the private sector. In addition, it points out that many universities shifted from the vernacular medium of instruction to English even without adequate facilities to teach English Language to undergraduates. Overall, the problem seems persistent where the root of it is mainly in the language used during secondary education.

B. International Necessity of English Language

Widening the scope internationally, similar researches carried out in conceptualizing undergraduate language resistances have revealed that usage of plagiarism is on the rise and in return dropout rate too increases. According to Evans and Morrison, (2011) there are plenty of language-related challenges that first year students face when adjusting to the demands of English Medium higher education in Hong Kong given that many foreign students enroll themselves with a variety of mother tongues.

The other argument Jeyasala (2016) points out is despite of proficiency shortage of second language in India, development of skills and strategies for communication and improvement of interpersonal skills among academic peers might advance second language skills. Similarly, Hwang, Martirosyan and Wanjohi, (2015) elaborate on how in USA, the GPA of undergraduates enrolled in four-year degree programmes is directly proportional to the English Language proficiency and statistically proves that undergraduates with self-perceived language proficiency tend to have a higher GPA and less difficulties in skills such as writing, reading, listening and speaking.

Table 1. Language proficiency vs. GPA

Language Proficiency	Mean GPA
Average	3.09
Good	2.97
Excellent	3.57

Since this research is based on a target group reading for BSc in Engineering, proficiency in technical terms / jargon is of highly importance to excel in related academics. There is a research gap on language proficiency due to the lack of related jargon in tertiary level worldwide. Related researches mainly focused on vocabulary and grammar aspects of the language.

C. Multiple Intelligence Theory (Mi Theory)

Howard Gardner explains how human intelligence can be broadly categorized into eight scopes rather than seeing a person excel in a single modality. An individual student can inherit all or many intelligences. Each student has his own mix of intelligences, with some dominating over others. According to Barrington (2004), “Gardner’s MI theory has received inadequate concentration in higher education”. Verbal-linguistic intelligence, which is one of the eight, elaborates on how one’s ability to write and speak languages enables to achieve life goals. Higher competency in linguistic intelligence also relates to more efficient problem solving and reasoning abilities. MI Theory is a “useful instrument for fostering the development of high school students’ unique talents and abilities within an interdisciplinary curriculum” (Weber, 1998, p 209). MI Theory also hints that children could depict their talents not in one single way, but in many different ways. “The job of an educator, then, becomes identifying the ways in which children exhibit intelligence and using their particular strengths to help them learn”. (Hoerr, 2003, p 92)

III. METHODOLOGY

The research included both qualitative and quantitative elements. It was done in 2 steps. First, a questionnaire was distributed to the target group. The target group consisted of 50 undergraduates at the FOE; 25 each from the first year and the second year. Convenience sampling method was used to select the undergraduates. They were randomly grouped for English. Along with it, a trivial test was distributed to find out the existing English knowledge related to Engineering. The data gathered were analyzed and presented using MS Excel.

The questionnaire was based on General English qualifications, medium of secondary education, undergraduate view point of the issue, how the

undergraduates managed to cope up with the vocabulary related to ‘Engineering English’ despite their capacity of vocabulary and writing skills. It also focused on finding out the modules in which the target group had to face difficulties due to lack of knowledge related to technical English words. Also, the frequency of the use of four basic skills; reading, writing, speaking and listening which every undergraduate years was also analyzed. The variables; more frequently, some times and seldom were used in analyzing the usage of skills.

The question paper was based on some commonly used engineering terms, few widely used theorems, few multiple-choice questions related to ‘Engineering jargon’ and grammar. Here, the direct-indirect speech (reported speech) was given prominence as it is widely used in writings in the field of Engineering. Knowledge on engineering terms was found out to assess the basic ‘Engineering English’ knowledge. Understanding the theorems were tested to comprehend the ability to answer questions within a short period of time and their familiarization with the Engineering terms. Fluency on such terms is usually proportional to language proficiency. Multiple choice questions were included to analyze the students’ ability to grasp literacy skills of Engineering terms without confusion. Also MCQs are a more reliable method of assessment.

Target groups from two different semesters were chosen to analyze the improvement of engineering vocabulary within a year.

IV. DATA REPRESENTATION AND ANALYSIS

A. The Target Group

Sinhala was the native language of 47 undergraduates. There was one undergraduate whose native language was Tamil. The other two were from Zambia and their native language is Bemba.

Most of the undergraduates were from the western and central provinces of Sri Lanka and had relatively good fluency in speaking, reading and understanding the English language. Considering the medium of secondary education, it was found that 68% were educated in the Sinhala Medium while 28% in English Medium and 4%

in Tamil medium when it comes to the undergraduates of the second year. Thus, the majority has not done their secondary education in the English medium.

From the first year target group, it was found that 84% was educated in Sinhala Medium and 12% in English Medium. 4% of them haven't mentioned the medium of Secondary Education. The majority of this group has also done their studies in the Sinhala Medium marking none in Tamil Medium and very few in English medium.

B. Analysis Of Data Collected From The Questionnaire

First half of the questionnaire was based on the undergraduates' capacity of English knowledge before the degree programme commenced. Grades obtained for GCE A/L examination General English paper are as follows

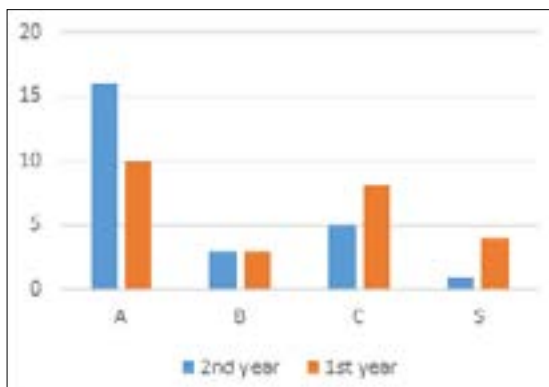


Figure 1. G.C.E Advanced Level General English Results

The undergraduates have had a sound knowledge in basic English (General English) as more than 50% from both batches got A or B passes.

Yet, only 18% of the target group had participated in the English Intensive Programme conducted by KDU before commencement of the degree programme. They have mentioned that it was a good and well-structured module which helped them to improve their reading, writing and speaking abilities. The university has not conducted English Intensive programme in 2017 so the 1st year undergraduates haven't had the opportunity to take part in such a programme.

For the question where it was probed if Engineering English was manageable throughout the lecture series, 72% said it was handy and the rest couldn't manage it. Even though they have mentioned that some of the modules like Soil Mechanics, fluid Mechanics, Fundamentals of Manufacturing and Geology were difficult to grasp due to their lack of knowledge in Engineering English.

Subsequently, the research was carried out to perceive the usage of certain English skills with respect to 1st semester lecture series.

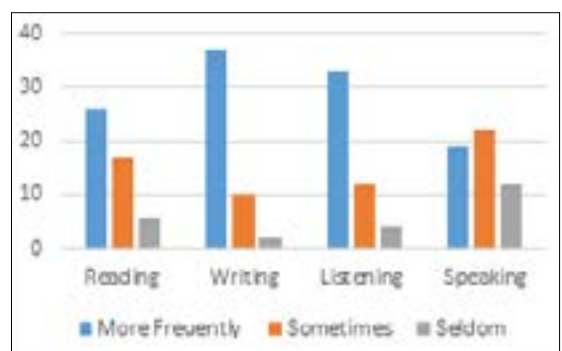


Figure 2. Usage of English Skills in the 1st Semester

As per the results, Reading, Writing and Listening are the skills an undergraduate needs the most in order to increase their grades at semester exams. So that improvement of English vocabulary / jargon related Engineering is a must. Speaking is specified as the only skill among the four basic skills that is not used frequently with regard to the language abilities of the 1st semester academics.

The target group also agreed that the lack of knowledge related to 'Engineering English' is a major problem for the 1st year undergraduates and have given some suggestions to overcome the issue. Some of them are watching subject related videos, listening to subject related documentaries in English and increasing time of reading. 72% of them suggested self-studying as a good method to overcome language barrier. Also 83% of the target group, people who haven't had the opportunity to take part in pre-English course of the university suggested that KDU should re-start the English Intensive course. Few undergraduates requested the lecturers (language and subjects) to use Sinhala terms in teaching the very 1st modules since it helps in reducing the language gap and helps the learners build confidence of their academic activities as English language plays a pivotal role in their academic success.

C. Analysis Of Engineering English Test

A trivial test was handed along with the questionnaire to assess the basic knowledge that the target group possessed. It included 4 sections namely defining technical terms, knowledge on indirect speech, multiple choice questions and theoretical knowledge.

Majority of students (who have done their secondary education in Sinhala Medium), scored less than five marks and all the students who have done their secondary education in English medium scored above five, which clearly defines a boundary between the two. This also indicates that the familiarity in the medium of education affects the overall scores. Knowledge in indirect speech was tested as it is a skill needed for undergraduates at the FOE when presenting assignments and laboratory reports (in practical sessions) during the 1st semester. None of the students from Sinhala Medium scored full marks while 4 out of 7 from the English Medium students scored full marks.

Multiple Choice Questions is a skill that all students develop during the course of secondary education. Even so, majority of the target group failed to score high marks while majority scored more than 50% in this criterion. Multiple-choice questions included many numerical questions and the questions related to basic Engineering knowledge. Thereby it was assessed how the language used in secondary education affected the 1st semester lecture series.

Lastly, theoretical knowledge was assessed or rather the comprehensive skills were put to test. It was the most crucial in identifying grammar, spelling and vocabulary of the students. The skill here showed the same trend as the prior skills. The significance was that the interest in answering these comprehensive questions were mostly shown by some undergraduates while some showed a reluctance in answering any of the theoretical based questions.

From the second year target group, the highest score was 25 out of 30 and the undergraduate who scored the

Table 2. Analysis of Engineering English Test

	SINHALA MEDIUM		ENGLISH MEDIUM		TAMIL MEDIUM	
	0-5 marks	6-10 marks	0-5 marks	6-10 marks	0-5 marks	6-10 marks
Defining Technical Terms						
2 nd year	10	7	0	7	1	0
1 st year	18	3	2	1	-	-
Knowledge on Indirect Speech	Less than 5 marks	5 marks	Less than 5 marks	5 marks	Less than 5 marks	5 marks
2 nd year	17	0	3	4	1	0
1 st year	19	2	3	0	-	-
Multiple Choice Questions	0-4 marks	4-8 marks	0-4 marks	4-8 marks	0-4 marks	4-8 marks
2 nd year	10	7	3	4	1	0
1 st year	19	2	2	1	-	-
Theoretical Knowledge	0-4 marks	5-7 marks	0-4 marks	5-7 marks	0-4 marks	5-7 marks
2 nd year	10	7	1	6	1	0
1 st year	14	6	3	0	-	-

highest was educated in English during G.C.E. Advanced Level / secondary education.

In the first year test paper analysis, one student got 20 out of 30, which is the highest mark obtained by an undergraduate of the 1st year. Only 8 students got marks greater than 10 for the paper, while others got less than 10. But in this set of papers the majority of the undergraduates have done their secondary education in Sinhala medium. Average mark of the paper was 7.5 while 11 students out of 25 were able to go through this average mark, which is only 44% of the 25 undergraduates.

V. FINDINGS AND DISCUSSION

The sample of undergraduates who had participated in the research, had taken a competitive test of English language at the KDU entrance examination. They were selected as they were eligible to follow a degree in English medium. Therefore, KDU undergraduates at the FOE, have the basic English knowledge compared to the undergraduates of other state universities. Also when it comes to General English at GCE (A/L), every student in the target group had passed the exam and most of them obtained A and B passes which is a higher expectation from state university students. Also some of them have participated in a pre-English course conducted by KDU which helped them catch up with the basics for the students who got comparatively lower marks in the university entrance English exam.

Even though the target group has a good knowledge in general English, it was found that they face many difficulties in their first semester academics due to lack of knowledge in 'Engineering English' because they were not familiar with the English engineering terms / jargon. The reason behind this was the medium they used for their secondary education. It was found that nearly 80% was educated in their mother language while only 20% did in English Medium during the course of G.C.E. Advanced Level prior to enrolment at the University. Thus, majority had a 'Non-English' background in secondary education.

The sample of the undergraduates didn't perform well in the evaluation test. Only very few were able to obtain more than 20 marks out of 40. Those few who have done their secondary education in English medium comparatively proved to have a good knowledge in technical English terms related to Engineering.

Regarding the comparison of two groups, the second year undergraduates proved to have a higher capacity in the scope of 'Engineering English' as they have spent nearly two years as engineering undergraduates and had more exposure to the field than the first year undergraduates who were exposed to the language only for few months.

VI. CONCLUSION

It was observed that the effect of language proficiency was predominant during the 1st semester. Furthermore, the hypothesis was proven signifying that the medium of secondary education is highly affective. On top of that, undergraduates have developed their vocabulary of English related to the degree programme (within a year). This was evident through the marks obtained for the trivial test distributed to the target group of 2nd year undergraduates. This highlights the fact that the rapid usage of a language results in its gradual development. The second year undergraduates; irrespective of their medium of secondary education, have shown considerable progress of language competencies related to vocabulary / jargon.

This concludes that the medium of secondary education matters enormously for the 1st semester as the undergraduates who completed secondary education in Sinhala or Tamil medium can hardly catch up the diverse teaching styles with an unfamiliar set of words during the lectures and this leads to getting inadequate grades for the modules even though they got excellent results in Advanced Level Examination.

VII. RECOMMENDATIONS

The pre-English course which is conducted by KDU prior to the academics can be made compulsory despite the results of the General English module. Also, a separate lecture should be introduced in the 1st semester to elaborate technical terms related to Engineering and develop vocabulary and grammar needed to grasp the lectures.

Developing interpersonal relationships between senior undergraduates, such that assistance can be obtained if lack of understanding of lectures prevails throughout the semester and also making the lecturers available during evening hours for the students to approach and

clarify their doubts especially with respect to language proficiency.

Similarly, encourage students to analyze short texts, newspaper articles and other authentic texts related to Engineering during English Module of 1st semester. Likewise, the free Wi-Fi available in University premises can be utilized to watch YouTube Videos that enhance listening skills.

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