

Feasibility of Introducing General English as a University Entry Requirement for Medicine: Results of a National Survey¹

*N. R. De Silva**

G. D. C. Priyabhashini - P. K. Godage

P. Premakumara - A. Pathmeswaran †

Abstract

The feasibility of introducing General English as an entry requirement for study of Medicine in Sri Lanka was examined through the assessment of General English results at the 2009 and 2010 G.C.E. Advanced Level examinations and through a questionnaire survey administered to principals and General English teachers in 411 type 1AB schools during the period May – June 2011. A significant proportion of students selected for Medicine in the period of study had not passed General English. Student performance was linked to teacher availability, which showed significant regional disparities. Nationally, about one-third of schools did not have enough General English teachers as evaluated by the Principal of the school.

Keywords: English Proficiency - Medical Students - School Teachers - University Admissions

¹ *This paper is based on analysis of the results of the G.C.E. Advanced Level examination and a survey of school principals and teachers regarding the teaching of General English in state schools in Sri Lanka.*

** Professor of Parasitology & Head, Medical Education Centre, Faculty of Medicine, University of Kelaniya, Sri Lanka. e-mail: nrdesilva@gmail.com*

† For institutional affiliation of rest of the authors, please refer to "About the authors" page.

Introduction

The MBBS study programmes in all eight state-run medical faculties in Sri Lanka are conducted in English. However, students who sit the General Certificate of Education Advanced Level (G.C.E. A/L) examination in Sinhala or Tamil and apply for admission to study Medicine are not required to show any evidence of proficiency in English. Several studies conducted in Sri Lanka have shown that students with better skills in English at the time of admission perform significantly better in medical school (Mendis & Babapulle 1983, De Silva et al., 2004; De Silva et al., 2006a; Mettananda et al., 2006; De Silva et al., 2006b; Hewage et al., 2011). This is despite the fact that almost all medical faculties conduct a three-month intensive course in English on registration of their medical students.

General English was introduced as a subject in the G.C.E. A/L examination over ten years ago. The objectives of this course, as set out in the Preface of the set textbook are (a) to encourage students to use English in daily life (b) to enjoy using English in everyday conversation, (c) to prepare for the examination in General English, (d), to practise both spoken and written English, (e) and to develop skills to function in English in an office. All students taking the exam were expected to sit the General English paper along with three subjects of their choice. Obtaining a pass in General English at the A/L exam could serve as a reasonably good indicator of English proficiency, but empirical evidence suggests that many schools do not have teachers to conduct classes or if they do, the time set aside for General English classes are frequently used for other classes since the subject is not perceived as of value in the fierce competition for selection to the university.

Literature Review

One of the earliest studies examining the relationship between English proficiency and performance in Sri Lankan medical schools was conducted in Peradeniya by Mendis and Babapulle (1983). Criterion-based, pre-instruction English tests, and Raven's standard progressive matrices were administered to the new entrants to the Peradeniya Medical Faculty, and correlated with scores on in-course assessments in Anatomy and Physiology. Highly significant levels of correlation between English test scores and achievement tests in Anatomy and Physiology were demonstrated.

Subsequently, in the Kelaniya Medical Faculty, several entry criteria (subject and aggregate marks at the G.C.E. Advanced Level examination, district of entry, admission category and sex) were correlated with five outcome measures based on results at summative examinations in 2nd, 3rd, 4th and final years of medical school, with regard to students who did their A/L examinations in 1994 and 1995 (De Silva et al., 2004). Multivariate analysis with logistic regression showed that female sex and an aggregate mark of >280 (of 400) in the A/L examination were independent measures of success in all outcome measures.

A later publication which extended this study to all other medical faculties (in universities of Colombo, Peradeniya, Ruhuna, Jaffna, Kelaniya and Sri Jayawardanapura) also included the candidate type as a predictor variable, and used four outcomes based on results at first and final summative examinations in medical school (De Silva et al., 2006). Multivariate analysis with logistic regression showed that the candidate type (school or private candidate), female sex and higher A/L aggregate mark were independent predictors of success for all four outcome measures.

Another study carried out on 4 entry cohorts of medical students at the Colombo Medical Faculty (admissions based on A/L examinations in 1993 – 1996) used the aggregate mark at the G.C.E. A/L examination, their attempt of entry, the district of entry, English language proficiency (as judged by the G.C.E. O/L results), and sex as predictor variables (Mettananda et al., 2006). The outcome was based on results at six major assessments in medical school, the cumulative MBBS exam mark and the graduate's position in merit order for internship. Multivariate analysis with logistic regression showed that the G.C.E. A/L exam attempt was the best predictor of outcome; other predictors included female sex and English language proficiency.

Subsequent to replacement of the aggregate mark by the z-score at the G.C.E. A/L examination in 2000, a study based on 2 entry cohorts (A/L in 2001 and 2002) to Colombo and Kelaniya medical faculties, used the results at the 1st summative examination in medical school as the outcome, and showed that the predictive validity of the z-score was similar to that of the aggregate mark (De Silva et al., 2005).

Finally, another study based on 2 entry cohorts at Kelaniya Medical Faculty used the z-score, attempt of entry, English language proficiency (as judged by the General English grade at the A/L exam and English test after admission to medical school) and sex as predictor variables; and the average marks at major summative examinations in medical school as the outcomes (Hewage et al., 2010). Multivariate analysis with multiple linear regression and causal path analysis showed that English proficiency, attempt of entry, and z-score were independent predictors of success in medical school exams.

Objectives of Study

A review of the literature suggests that it is very likely that requiring medical students to show a certain minimum proficiency in English will improve their performance in medical school. However, before introducing such a requirement, it is important to ascertain current provisions at school level for learning English, and to understand the current situation with regard to the subject of General English at the A/L exam.

The objectives of this study were to ascertain at the national level:

1. The proportion of students who are selected to study Medicine, who have also taken the subject of General English.
2. The General English grades obtained by students who are selected to study Medicine.
3. The proportion of Type 1AB schools that have sufficient General English teachers for A/L students.
4. The pattern of conduct of General English classes in 1AB schools that have teachers.

Methods

Data were obtained from the Department of Examinations and the Admissions Branch of the University Grants Commission (UGC), with regard to the General English results of the students who sat the A/L examinations in the Bioscience stream in 2009 and 2010, and of the students who were selected for Medicine in 2010 and 2011. All students selected for Medicine must necessarily have studied in the Bioscience stream for the G.C.E. A/L examination.

The list of 713 Type 1AB schools (all of which have Science G.C.E. A/L classes, and are thus supposed to have the best facilities), was obtained from the Ministry of Education and two groups of schools were selected from amongst these schools. The first group of 206 schools consisted of those from which students were selected for Medicine in 2010. The second group consisted of another 205 schools (matched by number for each district), from which no students were selected for Medicine in 2010.

Two sets of questionnaires were posted to each school: one to be answered by the school principal or sectional head; and the other to be answered by General English teachers. The questionnaires were designed to find out, in each district,

- a. The proportion of schools that have sufficient General English teachers for A/L classes
- b. Those schools that have teachers, the pattern of conduct of General English classes.

Data were entered and analyzed on MS Excel and SPSS Version 16.0. Along with the simple descriptive summaries, student performance in General English was correlated with teacher availability.

Findings

Performance in General English at the G.C.E. A/L Examination

In 2009, of 38,386 students who sat the G.C.E. A/L examination in the Bioscience stream, 30,312 (79.0%) were school candidates. Among these school candidates, 29,339 (96.8%) also sat the General English paper. In 2010, among 41,076 students in the Bioscience stream, 31,356 (76.3%) were school candidates, and among this group, 30,476 (97.2%) sat for the General English paper.

The General English results obtained by Bioscience students at the G.C.E. A/L exam in 2009 and 2010 are shown in Figure 1. It can be seen that only about 15% of students obtained grades of 'A' or 'B'; a similar proportion obtained a 'C' grade; and about 25% obtained a simple pass. About 40% of all students failed the subject.

Based on the results of the 2009 and 2010 A/L exams, 1159 and 1147 students respectively were selected for Medicine in 2010 and in 2011 under the usual scheme of admissions. Only about 3/4th of these (77.2% in the 2009 exam and 71.9% in 2010) were school candidates, who can be assumed to be taking the examination at their 1st or 2nd attempt; the others were private candidates, assumed to be in their 3rd attempt at the exam.

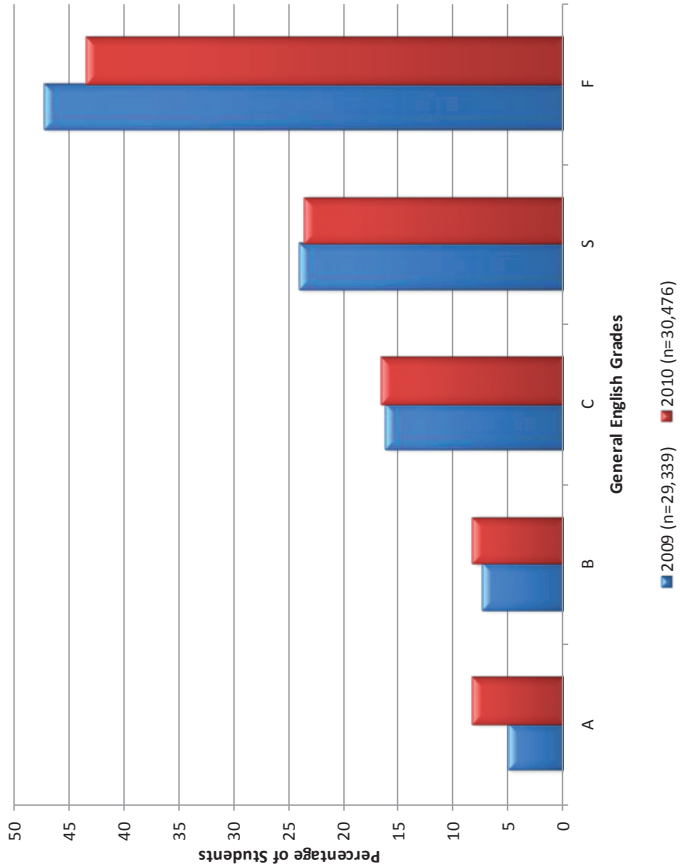
In contrast to the Bioscience students in general, only about 13% of students selected for Medicine failed General English, while about 25% of students obtained an 'A' grade. The pattern of grades was very similar in both years. About 7% of students did not sit for the General English paper in the attempt at which they were selected for entry to study Medicine.

Figure 2 compares the performance of school and private candidates in General English. It can be seen that the large majority of students who did not take the subject were private candidates; about 20% of all private candidates selected for Medicine had no General English grade. Overall, the performance of private candidates in General English was worse than that of school candidates.

Availability of A/L General English Teachers and Teaching Practices in State Schools

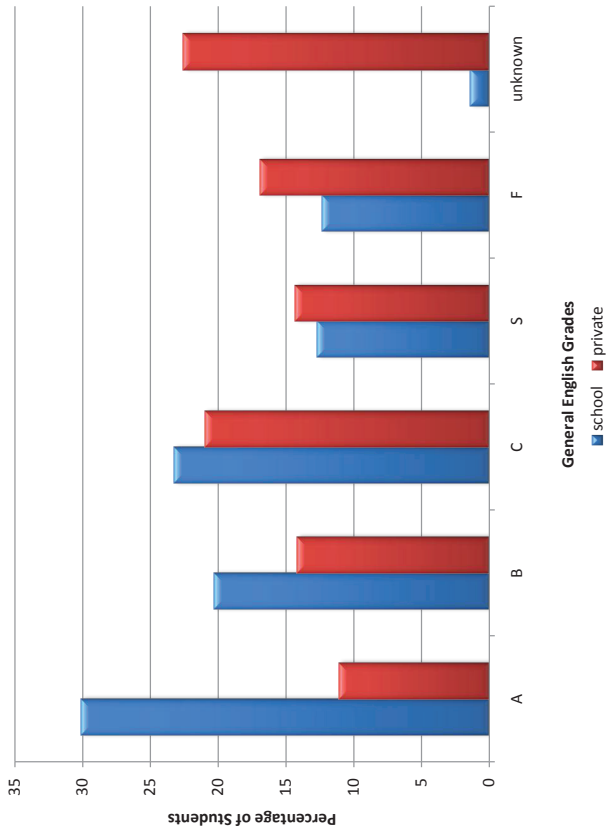
Questionnaires were sent out at the beginning of the 2nd school term in 2011 to 411 Type IAB schools in 25 districts (206 schools with students selected for Medicine in 2010, 205 without). Responses were received from 240 school principals and 942 teachers in 24 districts (all except Kilinochchi). Of the 240 responsive schools, 114 were those with students selected for Medicine (response rate of 55.3%), and 126 without (response rate of 61.5%) shown in Table 1. About 85% of schools had 1 to 3 A/L Biology classes. In about 60% of schools, Biology students had 4 periods of English per week, while another 10% had 6 periods per week. In about 25% of schools, Biology students had less than 4 periods of General English per week.

Figure 1: General English Grades of School Candidates in Bioscience Stream



Source: Compiled by the author

Figure 2: Relative Performance in General English of School and Private Candidates Selected for Medicine in 2010/2011



Source: Compiled by the author

Table 1: Selected and Responded Number of Schools by Administrative Districts

Administrative District	Schools with Medical Students		Schools with no Medical Students		Total Schools	
	Number of Selected Schools	Number of Responded Schools	Number of Selected Schools	Number of Responded Schools	Number of Selected Schools	Number of Responded Schools
Colombo	34	18	34	17	68	35
Gampaha	15	14	15	7	30	21
Kalutara	11	6	11	6	22	12
Matale	2	2	2	1	4	3
Kandy	12	7	12	7	24	14
Nuwara Eliya	8	3	8	4	16	7
Galle	10	10	10	6	20	16
Matara	8	6	8	6	16	12
Hambantota	5	4	5	4	10	8
Jaffna	11	5	11	7	22	12
Kilinochchi	1	0	1	0	2	0
Mannar	3	1	3	2	6	3
Mullaitivu	3	0	2	3	5	3
Vavuniya	3	3	3	2	6	5

Cont'd...

Trincomalee	7	3	7	2	14	5
Batticaloa	7	5	7	5	14	10
Ampara	10	7	10	3	20	10
Puttalam	7	3	7	3	14	6
Kurunegala	14	10	14	12	28	22
Anuradhapura	6	4	6	3	12	7
Polonnaruwa	3	1	3	2	6	3
Badulla	4	2	4	3	8	5
Monaragala	6	6	6	3	12	9
Kegalle	7	3	7	2	14	5
Ratnapura	9	3	9	4	18	7
Total	206	126	205	114	411	240

Source: Compiled by the author

Overall, only about 2/3rd of the principals who responded felt that they had adequate numbers of General English teachers shown in Table 2. About 3% said that they had more than enough English teachers, but about 8% said that the number was highly inadequate. Availability of an adequate number of teachers was not significantly different between schools with medical students in 2010 and those without (78/113, 69.0% vs. 77/124, 62.1%, $\chi^2 = 0.263$, $p = 0.277$).

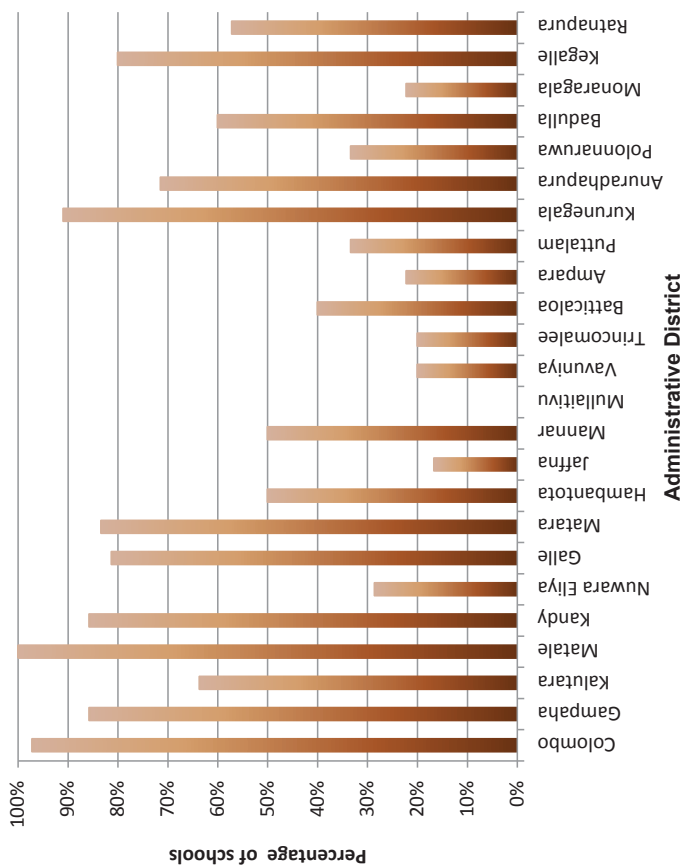
Table 2: Schools with Adequate Numbers of General English Teachers According to the School Principal's Opinion, by Administrative Province

Administrative Province	Number of Teachers				Total
	More than Enough	Just Enough	Not Enough	Highly Inadequate	
Western Province	4	55	8	0	67
Central Province	1	16	6	1	24
Southern Province	0	27	5	4	36
Northern Province	1	3	11	7	22
Eastern Province	0	7	13	4	24
North Western Province	2	20	5	1	28
North Central Province	0	6	3	1	10
Uva Province	0	5	7	2	14
Sabaragamuwa Province	0	8	4	0	12
Total	8	147	62	20	237

Source: Compiled by the author

Figure 3 shows the regional disparities in availability of General English teachers. More than half the responding schools in all districts of the Northern and Eastern Provinces, as well as those in Nuwara Eliya, Puttalam, Polonnaruwa and Monaragala districts did not have enough teachers. Principals of 18 schools reported that they had no General English teachers at all. Four of these were in Colombo district; another 3 each in Nuwara Eliya and Mullaitivu districts; 2 each in Batticaloa and Puttalam; and one each in Kandy, Jaffna, Trincomalee and Kurunegala districts.

Figure 3: Availability of Adequate Numbers of General English Teachers by Administrative District



Source: Compiled by the author

In schools where the principal stated that they had more than enough teachers, and in those where the number was just adequate, there were 3.2 classes per teacher. When teachers were reported to be inadequate, there was a mean of 4.7 classes per teacher; and 7.5 classes per teacher when they were reported to be highly inadequate.

Of the 916 teachers who responded, 257 (28.1%) mentioned that they taught A/L Biology classes. Most of them conducted 5–6 General English classes a week. About half (56%) of the teachers who responded to the question reported that they had not been able to conduct all their scheduled General English classes during the past week. The reasons (which could be more than one) why they could not conduct classes as scheduled were personal (32.6%); because the periods scheduled for English were required for other classes (19%); because the students did not attend classes (59%); or for other reasons (26.5%), such as the school 'sil campaign'.

Among teachers of A/L Bioscience students, a similar proportion (55%) said they had been unable to conduct all their scheduled classes in the past week. Of those unable to conduct classes, 59% said it was because students did not attend the class; 35% cited personal reasons; and 13% said it was because the period was required for other activities.

Three-fourths (75%) of the English teachers were females; 44% were in the 41 – 50 year age group; 28% were in the 31 – 40 year age group; and 20.4% were over 50 years of age. 33% said that they had 11-20 years of teaching experience while 41% said they had >20 years experience teaching English. The vast majority (71%) had attended Teacher Training Colleges; only 18% were English graduates.

A large majority (82%) felt that there were enough English teachers in their school, but only 51% said that they had sufficient books and audio material to teach English in the school. The majority (71%) felt that their students were keen to learn English and 82% said that the other teachers encouraged the students to learn English, but only 60% of teachers felt that their students were proficient or highly proficient in English. Many teachers commented on the fact that students did not see General English as an important subject, and suggested that it is made compulsory at the A/L examination.

The following are some typical comments made by the General English teachers

Students enthusiastically start to learn English, but their enthusiasm diminishes towards their final exam as receiving a pass in English is not compulsory for university entrance. [Teacher from Batticaloa]

Students are not really encouraged in learning English. In my bio-science class, students are highly concerned about other 3 subjects. Most of the times they expect to stay free in English periods. It is too difficult sometimes to keep them in the lesson. [Teacher from Chilaw]

Some topics of the text book should be changed and current topics must be included. General English should be made compulsory for the advanced level examination. The grade for general English should be concerned at the university admissions. [Teacher from Nattandiya]

English should be introduced as a compulsory subject for A/L classes. Then only students would be keen learning English. Now students are not interested in learning English as the subject is not compulsory. [Teacher from Ampara]

Introduce enjoyable new text book. There present book is too heavy. Provide audio & video material. Second year students priority goes to main subjects. [Teacher from Kandy]

General English paper should be more interesting. It can be made bit easier. The 1st question in 2nd paper is always very difficult. It should be made compulsory to sit and pass English. Students who have failed O/L exam find hard to grasp the ideas in text book. Song & some other items are outdated. [Teacher from Kandy]

A/L students are not interested in learning general English as this is not compulsory for the university entrance. They devote their full time for the other three subjects. Most of the A/L students have the attitude that they can improve their English knowledge after the A/L exam. As A/L is very highly competitive they have to devote their full time for the other three subjects. [Teacher from Kalutara]

From any point of view we request change the syllabus better to introduce two separate books for English. Introduce a work book with more grammar exercises. Pupils prefer to have Simple sample of letters, notice applications, summarizing exercises with answers. Duration of examination should be reduced. [Teacher from Colombo]

Our students are keen to learn English. But our main problem is they are reluctant to bring text book to school. Sometime 3 or 4 students have to share one book. Straight away from school they go to tuition and say textbook is too heavy to carry. [Teacher from Moratuwa]

Regarding English paper, long duration of the English paper may cause the high rate failures in the subjects each year. Majority of the students sit only for PI. As a teacher of English teaching English since 2001 & having 9 years of experience in marking papers, I'd like to suggest you to take necessary steps to reduce duration of the paper up to 2½. Regarding teaching of the subjects, normally A/L students pay less attention so teachers have to do some exam oriented teaching. Seminars have never been conducted for subject teachers to update knowledge, to solve problems in teaching. [Teacher from Colombo]

The need to make General English a compulsory subject at the Advanced Level examination, and include it in the z-score was a recurrent suggestion made by many teachers from all parts of the country. The need to revise the current textbook was also mentioned by many teachers; some suggested that it should be split into at least 2 books which are lighter to carry than the present one.

Correlation between Students' General English Results and Teacher Availability in Schools

In 80 schools that were surveyed, students were selected for Medicine in 2011 based on the results of the A/L examination in 2010. The marks obtained for General English by the students selected for Medicine in these 80 schools were analysed in relation to the school principals' opinion regarding the adequacy of General English teachers in the school. In the 54 schools with adequate teachers, students had a mean mark of 58.1%, whereas in the 26 schools that

did not have enough General English teachers, the mean mark was significantly lower, at 46.2% (Student t-test, $t=-2.838$, $p=0.006$). This suggests that teacher availability does have a significant impact on students' performance in General English.

Discussion

Our analysis of the G.C.E. A/L examination results suggest that over 90% of school candidates for the G.C.E. A/L examination in the Bioscience stream took the subject of General English. This is the contrast to the findings of an evaluation of the General English programme, commissioned by the National Education Commission and conducted soon after introduction of the subject (Wijeratne *et al.*, 2003). This report found that only 64% of all students took the subject in 2001, although a larger number took the subject in 2002. We found that 60% of students in the Bioscience subjects passed the General English paper, whereas this proportion was very much higher (87% pass rate) among students selected for Medicine. These pass rates are much better than those reported in the previous study, which found that only 41% of students passed the subject in the 2001 examination, while even less (24%) passed in 2002 (Wijeratne *et al.*, 2003). The NEC study also found marked regional disparities in examination results.

With regard to provisions for teaching of General English, analysis of the questionnaires returned by the school principals in our study indicated that in the majority of schools (60%) only 4 periods per week were assigned for the subject and only 10% of schools scheduled the recommended 6 periods per week. The previously mentioned study reported that in the 43 schools sampled by the investigators, 66% provided 6 – 7 hours per week for General English in their time tables (Wijeratne *et al.*, 2003).

The situation with regard to availability of texts and audio materials for conduct of classes appears to be not much improved despite the lapse of nearly ten years: in 2002, only 43% of teachers reported that the whole teaching package was available in their school, whereas in our study, 51% of teachers said that they had sufficient books and audio materials.

A little over half (55%) of the 916 teachers who responded to our survey said that they had been unable to conduct classes

as scheduled during the preceding week. The most commonly cited (59%) reason was that the students did not attend classes. This observation is further supported by the comments made by many teachers to the effect that students do not take the subject seriously. In contrast, the 2003 NEC survey found that over 80% of students attended General English classes regularly. This suggests that the enthusiasm for General English classes may have declined over the years.

Poor attendance of General English classes may be, however, a reflection of poor school attendance in general. A study of the attendance patterns of G.C.E. (A/L) students in 56 schools in 4 districts in 2004 – 06 found only 77.4% attendance on average among Grade 12 students in the Science Stream and 35% attendance in Grade 13 (Gunasekera, 2009).

Conclusions and Recommendations

In summary, among students selected for admission to Medical Faculties in 2010 and 2011, a small but significant proportion (about 7%) of students did not sit the General English in attempt at which they were selected, almost all being private candidates. About 25% of students selected for Medicine obtained 'A' grades, but about 13% failed General English. Only about 65% of principals, but about 82% of teachers were of the opinion that their school had sufficient General English teachers. There were significant regional disparities in teacher availability. Over 50% of the teachers of A/L Bioscience were unable to conduct classes as scheduled in the preceding week; this was mostly because students did not attend classes since they did not perceive the subject as important. About 50% of the schools surveyed did not have enough text books and audio materials for conduct of General English classes as recommended.

These findings suggest that the introduction of a requirement that all students must obtain at least an 'S' pass in General English along with their 3 main subjects, in order to be eligible for selection to study Medicine, would be unfair by a significant proportion of students, particularly those from schools that do not have enough General English teachers. However, given the importance of proficiency in English for medical students, there are other measures that could be taken to promote English proficiency among prospective medical students.

For example, students who apply for admission to study Medicine could be required to demonstrate some competency in English, by passing General English either at the same exam at which they are selected for Medicine, or at a previous attempt at the A/L (at which they were not selected for Medicine). Alternatively, students selected for Medicine could be required to sit a separate test (such as that currently administered to university entrants at the Pre-Orientation Programme), to achieve a given level of proficiency at a standard test of English competence. A student who fails to reach the required standard would have to re-sit the test before entry into university, to demonstrate achievement of competency. Another option would be to stipulate that a student who fails to reach the required standard of competency before entry, could enter the university, but be required to demonstrate competence before proceeding beyond a given point of the MBBS course.

Acknowledgements

We thank Prof. Manique Gunasekera and Ms. Nirmali Wickremasinghe for helpful suggestions regarding questionnaire design; Mr. Edward Reginold Soosaipillai for assistance with Tamil translation of the questionnaires; Dr. Nipun Dasanayake and Shalika Wijesena for assistance with data entry and Prof. Diyanath Samarasinghe for useful comments on the manuscript.

References

- De Silva, N.R., Pathmeswaran, A., & De Silva, H.J. (2004). Selection of students for admission to a medical school in Sri Lanka. *Ceylon Medical Journal*, 49,81 - 85.
- De Silva, N.R., Pathmeswaran, A., De Silva, N., Edirisinghe, J.S., Kumarasiri, P.V.R., Parameswaran, S.V., Seneviratne, R., Warnasuriya, N., & De Silva, H.J. (2006a). Admission to medical schools in Sri Lanka: Predictive validity of selection criteria. *Ceylon Medical Journal*, 51, 17 – 21.
- De Silva, N.R., Chandratilake, M.N., Pathmeswaran, A., & Dias, R. (2006b). Selection of students to medical school. *Ceylon Medical Journal* 51, 51-52.
- Gunasekera, P. D. J. (2009). A study of the attendance patterns of G.C.E. (A/L) students at school. *Sri Lankan Journal of Educational Research*, 11, 56 – 89.

- Hewage, S.N., Salgado, L.S.S., Fernando, G.M.O., Liyanage, P.L.C.K., Pathmeswaran, A., & De Silva, N. R. (2011). Selection of medical students in Sri Lanka: Time to re-think criteria. *Ceylon Medical Journal*, 56, 22-28.
- Mendis, A.L., & Babapulle, C.J. (1983). *IQ, English and 'A' level scores as predictors of success in a medical school – A preliminary study*. Proceedings of the 6th Annual Sessions of the Kandy Society of Medicine. Kandy: Kandy Society of Medicine.
- Mettananda, D.S.G., Wickramasinghe, V.P., Kudolugoda Arachchi, J., Lamabadusuriya, S.P., Ajanthan, R., & Kottachachchi, D. (2006). Suitability of selection criteria as a measure of outcome of medical graduates: University of Colombo. *Ceylon Journal of Medical Sciences*, 49, 1 – 12.
- Wijeratne, K., Cumararatunge, L., & Perera, I. (2003). *Evaluation of the G.C.E. (A/L) General English programme: Final report*. Colombo: National Education Commission. Retrieved March 01, 2013, from http://www.nec.gov.lk/web/images/pdf/research/general/Advanced_Level_General_English.pdf

