

The Role of a Teacher in English Language Proficiency Among Professional Students in Andhra Pradesh: A Statistical Study

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Abstract

The present article, a part of a Major UGC Research Project entitled “Emphasis on English Language at the Intermediate Level in Andhra Pradesh” (2013-2016) with a total grant of 4.7 lakhs, is on asserting the need of a teacher as a facilitator in assisting the professional students of engineering and medicine with better English listening, speaking, reading and writing skills with the help of a statistical analysis. As in the present global scenario, the importance of English in education, student's life and in the process of recruitment cannot be denied. It has become almost a necessity for a student to speak English if he has to enter a global workforce. Its importance in the global market place cannot be understated. as it is the official language.

Introduction

According to Stephen Krashen, an expert in the field of linguistics from the University of Southern California specializing in theories of language acquisition and development, a student can acquire proficiency in English as second language only when he is interested in the subject and uses the language as a medium of instruction. In a student's academic career, Intermediate is the turning point where his future gets decided especially in Andhra Pradesh. There is no doubt that majority of the students in Andhra Pradesh are eager to join professional courses like Engineering, Medical stream and Business Management. One can't find fault with them as there seems to be no other alternative. Some of the students may have a great love for literature but are not allowed to choose. They are not given a chance to pursue the course for which they have a flair or aptitude. A student who is good at English in school tends to neglect English at Intermediate level by over-emphasis on science subjects and his parents too believe that only Engineering and Medicine courses would fetch him a good job.

Besides this, there are a number of other reasons for which the students may neglect English. It is aptly said that interests and hobbies must be cultivated only when young. An Intermediate student is taxed heavily by the regular syllabi and hardly gets time for relaxation. He feels burdened by his curriculum and shows no inclination for general reading or enjoying a good book. Whatever little time that he gets is spent on watching television, movies, playing mobile games or by lazily lying on a couch. Thus, the idea of enjoying a good book is lost.

One of the greatest linguists of all times, Noam Chomsky too asserts that language is natural and there are four major skills that a learner of a foreign language needs to master: listening, reading, speaking and writing. A language can be enriched only when all the four corner skills are simultaneously developed. If one is a good listener, he is a good speaker, and if he is a good reader, he is also a good writer. Another reason for not improving English could be, the exposure to English at school is very little only with an hour of English every day and the rest of the subjects by teachers who happen to come from regional medium background.

It is commonly found with many of the English teachers from their long experience that the students at Intermediate level have forgotten all the English learnt for 10 years at the school level. In spite of this, some students are able to secure 90% in English at Intermediate level and others are effortlessly getting through it. At this point one needs to ponder on the point that 'should competence level of a student be decided on the basis of marks secured'? It could be one of the reasons that the students have developed an attitude of indifference and negligence to English. That is the reason why they are not able to perform well or improve in English. Besides, majority of students' performance in First Year of Engineering are not up to mark not only in written skills, but also in the other three skills (Reading, speaking and listening). Thus, engineering students with such indifferent attitude don't make an attempt to improve their fluency in written or oral skills. During the time of campus recruitment, they realize the lacuna, and regret the lack of the appropriate employable skills. English has become a disconnect language for the medicos after their twelfth standard. Thus, some of the interns with their good subject knowledge fail to connect properly with patients coming from different states due to poor grip on English language. They further miss better job prospects outside their respective state and country only due to poor hold on English Language.

Literature Survey

National Employability Report by Aspiring Minds states that “India has a sizeable engineering talent pool. It produces about five lakh Engineering graduates every year, but only less than one- fifth of the total number of them are fit to be employable, especially in IT service sector. It also says that the percentage of ready to be employed engineers for IT Jobs is dismally low at 2.68%”. The report which covered over 55000 engineering students, who graduated in 2011, highlighted the fact that the zeal to increase the number of colleges has impacted on the quality drastically.

According to Purple Leap Survey conducted in the year 2012, only one out of ten students graduating from tier 2,3and 4 Engineering colleges can be readily employable. It also pointed out regarding the huge gap between education and employability of the so-called Engineering graduates. One third of these graduates who have done academically well by securing 60% marks are unfit for employment even after being given proper training. The pass percentage of final year of Engineering in Andhra Pradesh was 49% in 2006, 35 % in 2007, 29 % in 2008. According to Aspiring Minds National Employability Report, which is based on a study of more than 1,50,000 engineering students who graduated in 2015 from over 650 colleges, 80% of the them are unemployable and the situation continues to worsen over the years.

Scope of Research

Companies today want candidates possessing the three critical skills- Communication, Problem solving and Technical Skills and ready to start working from day one, because nobody wants to spend time and money on training. So, students need to do all that they can do to work on their skills and be industry ready. Just going to college and finishing their studies is evidently not enough. Similarly, as most of the medical books are written in English and the entire syllabus is taught in English, it becomes a prerequisite for a medico to have a working knowledge in English. Besides, all the latest journals and magazines are written in English. It is the medium of communication for doctors or medicos at all the national and international conferences. Thus, the interns and doctors need a proper grip on English Language along with their good subject knowledge to connect properly with patients coming from different states.

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They also need a good hold on English Language for better job prospects outside their respective state and country.

Proposed Methodology and Discussion

As a part of the main project, the present study has been conducted in some of the professional colleges of Visakhapatnam district by gathering information through questionnaires, personal interviews of various subject teachers at the Intermediate level and under graduation level including language teachers. 100 Teachers from 5 Engineering colleges, 4 medical colleges and 5 Intermediate colleges have been selected, thus making a total sample of around 100. After a gap of one month, collection of the filled-in questionnaires and again personal interviews are carried out. To analyse the data, some statistical tools that bring out the best results have been used. The tools used are descriptive statistics with frequencies and factor analysis. The software used to carry out statistical analysis is SPSS (Statistical Package for The Social Sciences) and the questionnaire canvassed to the teachers at the Intermediate and under graduate level is as follows:

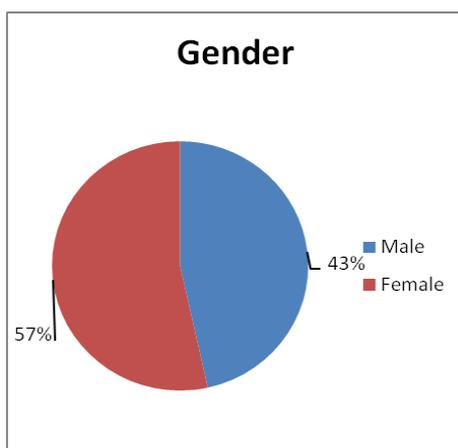
Questionnaire canvassed to Teachers of Intermediate and Graduation level

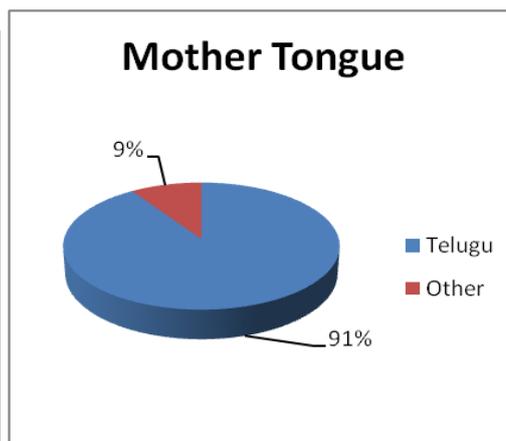
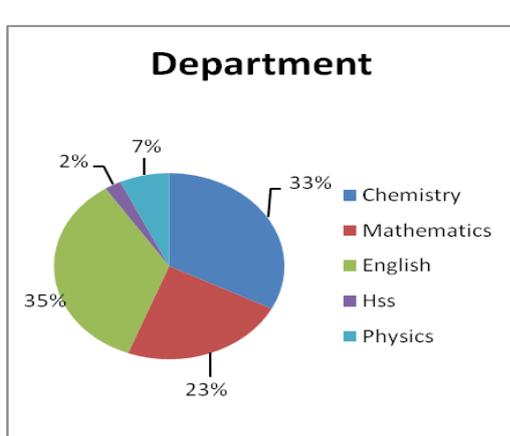
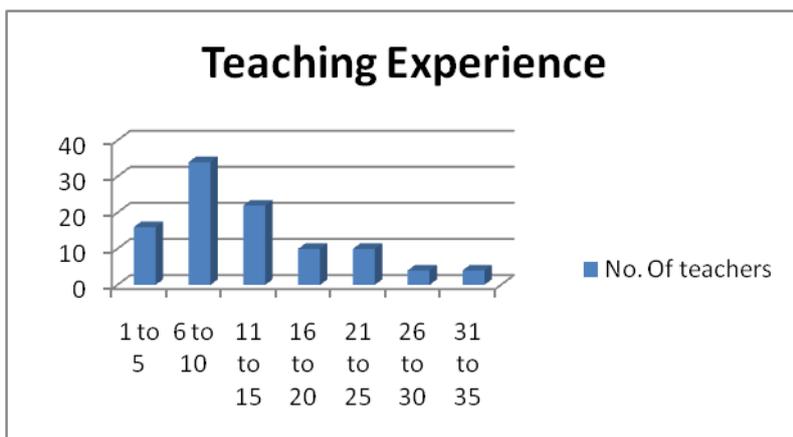
1. Name of the Teacher:
2. Sex: Male/Female
3. Age:
4. Qualifications:
5. Department:
6. Teaching Experience:
7. Name of the Institution:
8. Your Mother-tongue: Telugu/Others
9. Your background: Rural/Semi-Urban/Urban
10. In which medium did you study: High School: Telugu/English/Others
11. In which medium did you study: Intermediate: Telugu/English/Others
12. In which medium did you study: Graduation: Telugu/English/Others
13. In which medium did you study: Post Graduation: Telugu/English/others
14. In which language do you teach usually: English/Telugu/ Mixed
15. Do you teach in Telugu if necessary: Yes/No

16. Do the students take running notes: Yes/No
17. Do you dictate any notes: Yes/No If yes, how extensively: rarely/often/most often
18. Do you insist on interaction in English inside the classroom with your students: Yes/No
19. In which language do the students interact with you outside the classroom: English/ Others
20. Don't you think that a student with fluency in English would make him stand in good stead:
Yes/No
21. Is there any difference in the quality of answers written by students with fluency in English over the
students not so fluent in English: Better /No difference
22. Have you ever felt that a student who is fluent in English, expresses any subject well:
Yes/No
23. Do you encourage your students for general reading and journals: Yes/No
24. Do you agree that by improving the quality of communication skills of the Professional students, they can be made employable: Yes/No
25. Do you encourage your students to increase their verbal ability daily: Yes/No

Experimental Results with Tables & Graphs

The pie charts and the bar graph given below represent the distribution of gender, teaching experience, department and mother-tongue of the total 100 samples taken from both Intermediate and under graduate levels.





To analyse the data of the teachers, a popular dimension reduction technique, Factor Analysis is used to study the correlation structure among variables. It partitions the manifest variables into groups and each partition further signifies the effect of a latent variable called common factor. These new variables stand for constructs that cannot be directly measured. Such an analysis is vital in different fields of research such as marketing of various companies that spend huge amount of money towards advertisement of their products. This further facilitates to know whether it is worth spending money on an advertisement. The objectives of the questionnaire are:

1. What are the factors according to a teacher that influence an Intermediate or a Professional student in neglecting English language at his Intermediate level?
2. What are the measures for a professional student to improve his efficiency in English?

The sampling units consist of 100 samples of teachers from Intermediate and Undergraduate level, which further rate several variables on a 5 and 2-point semantic Likert-scale. The data

obtained then is analysed by using Factor procedure of SPSS package. In Data Screening after being given a set of variables, SPSS usually finds a factor solution to that particular set. The solution obtained does not have any real meaning in-case the variables analysed turnout to be insensible. There are several techniques such as study correlation among the variables, Anti-Image Matrix, Kaiser-Meyer-Olkin Measure of Sampling Adequacy that can be used to know whether to proceed with factor analysis of the given data set.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy method is a popular diagnostic measure and provides a measure to assess the extent to which the indicators of a construct belong together. There are no statistical tests for the KMO measure and the following guidelines are suggested (by Kaiser and Rice):

KMO Measure	Recommendation
≥ 0.9	Marvelous
0.80+	Meritorious
0.70+	Middling
0.60+	Mediocre
0.50+	Miserable
Below 0.50	Unacceptable

This criterion is accurate when there are less than 30 variables and communalities after extraction are greater than 0.7. On the other hand when the sample size exceeds 250 then the average communality is greater than 0.6. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Bartlett's Test values obtained for the data under analysis are given in the following table.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.892
Bartlett's Test of Sphericity	Approx. Chi-Square	7339.461
	Df	.190
	Sig.	.000

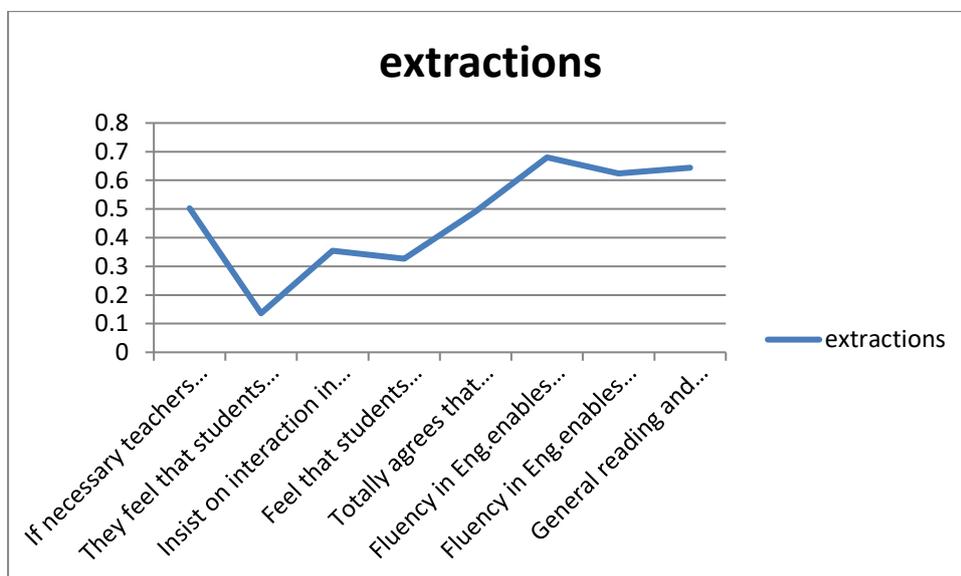
Hence the KMO value, 0.892, suggests the appropriateness to proceed with factor analysis of the data on hand.

Further Bartlett's Test of Sphericity tests the null hypothesis to find out whether the original correlation matrix is an identity matrix, which would indicate that, the variables are unrelated. For factor analysis there has to be some relationships between variables and if the correlation matrix is an identity matrix then all correlation coefficients would be zero. Therefore, the present test has to be significant as it gives the result of the test. As very small values (less than 0.5) indicate that there are probably significant relationships among the variables, a significant test tells that the correlation matrix is not an identity matrix. Finally, one can expect some relationships between the variables. Had the value been more than 0.10, then it would have indicated the unsuitability of the data for factor analysis. As the significance value is 0.000 for the problem under analysis, it can be said that the variables are not independent.

Further the Extraction of Factors consists of selecting the method of extracting the components, the number of components to be extracted, and the method of rotation for interpretation of the factors. At present, the Principal Component Method of extraction and the Varimax method of rotation are taken into consideration. The number of factors extracted is based on Eigen value more than one rule. Usually Communalities table gives the proportion of variance explained by the underlying factors. After extraction, some of the factors are discarded and the amount of variance in each variable that can be explained by the retained factors is represented by the communalities table below.

Communalities

communalities	extractions
1.If necessary teachers teach in telugu	0.502
2.They feel that students take running notes	0.136
3.Insist on interaction in English inside the classroom	0.354
4.Feel that students interact in English outside the classroom	0.327
5.Totally agrees that fluency in English is beneficial to students	0.491
6.Fluency in Eng. enables students to frame better answers	0.68
7.Fluency in Eng. enables students to express any sub. Well	0.624
8.General reading and journals improve the quality of communication	0.644



It shows that the factors included in the analysis have accounted for fairly good amount of communalities among all the variables. Most of the communalities are above 0.136 and unimportant variables are already eliminated from the analysis. There are quite a number

guiding rules to determine the number of factors to be extracted. Some of the popular criteria are Eigen value greater than one rule and Total variance explained.

Total Variance Explained						
Component	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.371	36.854	36.854	7.371	36.854	36.854
2	1.796	18.979	55.833	1.796	8.979	45.834
3	1.266	16.328	72.161	1.266	6.328	52.162
4	1.094	8.470	80.631			
5	.916	6.580	87.211			
6	.880	4.401	91.612			
7	.850	4.249	95.861			
8	.816	4.139	100.00			

Extraction Method: Principal Component Analysis.

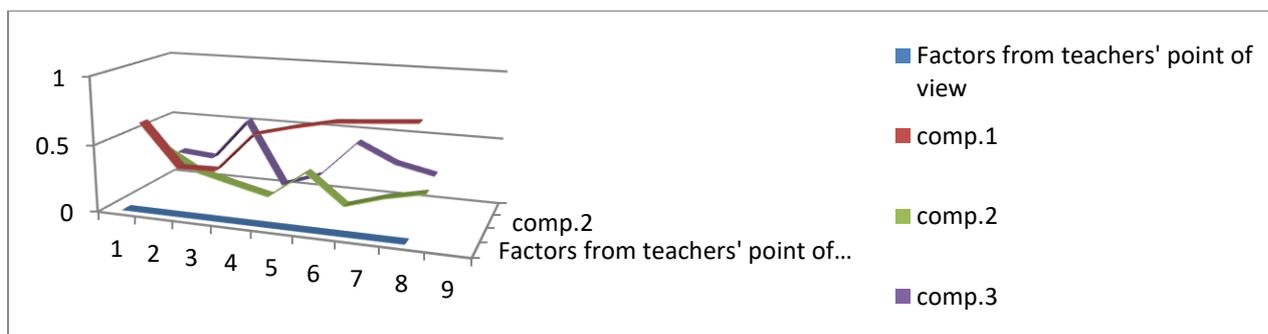
Further the Total Variance Explained table given above says that there are three Eigen values greater than one. Here one observes that there are three Eigen values, namely, 7.371, 1.796, 1.266 and their values exceed 1. These factors account for 57.631% of the total variation. Individually, the first factor explains 36.854%, the second factor explains 45.834% and the third factor explains 52.162% of the total variation. Considering the kind of social survey, the amount of variance explained by the factor model is regarded to be fairly good.

Usually component matrix gives the estimated factor loadings. The elements of this matrix describe the covariance or the correlations between the manifest variables and the latent common factors depending on whether the covariance matrix is involved in the analysis. The sum of squares of the row elements of component matrix gives the communality of the corresponding variable. Using which one can estimate the specific variances of the manifest variables. Similarly, the sum of squares of the column elements of the component matrix gives

the Eigen values of the covariance / correlation matrix. These values help in the computation of the proportion of variance explained by each factor. The method of estimation used to get the component matrix is the principle component method of estimation. This is referred to as un-rotated factor solution. Further the elements of the loading matrix or the coefficients of the factor model are displayed in the Component Matrix Table below. Factor loadings of this order are usually neglected. From the table below, it is observed that there are some values that are loaded on more than one factor. Thus, this complicates the problem of identification of factors and necessitates rotation.

Component Matrix Table

Factors	Component		
	1	2	3
1. Teachers teach in Telugu if necessary:	0.594	0.318	0.221
2. Students take running notes:	0.268	0.158	0.197
3. Teacher should insist on interaction in English inside the classroom:	0.275	0.088	0.52
4. Students should interact in English outside the classroom:	0.571	0.021	0.031
5. Feels that a student with fluency in English will stand in good stead in the long run:	0.645	0.238	0.133
6. Quality of answers written by students with fluency in English is better compared to the other students:	0.708	0.01	0.422
7. Students with fluency in English express any subject well:	0.73	0.103	0.285
8. Students should be encouraged general reading and journals to improve the quality of communication :	0.753	0.168	0.222

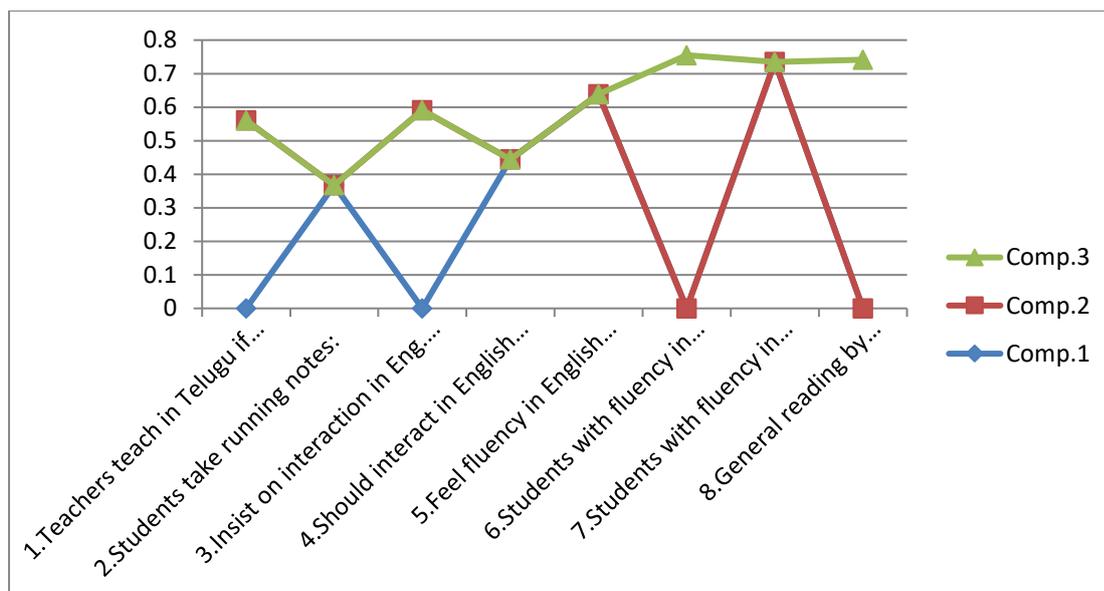


Component Matrix Graph

From the above matrix graph, one observes that most of the variables are loaded on to the first factor. A subset of the variables is loaded both on to the first and second factors and further another subset of the variables loaded both on to the first and third factor. One also observes that only one variable among the three factors has its loading value more than that of its counterparts. However, common sense says that they do not belong to a single category. This makes interpretation of the factors difficult. To facilitate the interpretation of the factors, the varimax rotation is considered. In Rotated component matrix all the variables have got partitioned into three mutually exclusive groups and are clearly interpretable. This explains how the rotation of initial factor solution is useful in the interpretation of factors. The factor solution obtained below clearly shows all the three mutually exclusive groups in the total set of variables. It can be further noted that the relative order of the factors are the same as in the case of the total sample.

Rotated Component Matrix

Factors	Component		
	1	2	3
1. Teachers teach in Telugu if necessary:		.561	
2. Students take running notes:	.367		
3. Teacher should insist on interaction in English inside the classroom:		.591	
4. Students should interact in English outside the classroom:	.444		
5. Feels that a student with fluency in English will stand in good stead in the long run:	.639		
6. Quality of answers written by students with fluency in English is better compared to the other students:			.755
7. Students with fluency in English express any subject well:	.735		
8. Students should be encouraged general reading and journals to improve the quality of communication :			.741



Rotated Component Matrix Graph

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Conclusion

From the statistical analysis carried out in this section, one notes that the teachers teaching various subjects including language teachers at the Intermediate and Professional level feel for students' lack of proper emphasis on English at the Intermediate level. Majority of the Teachers irrespective of their branches feel that students who take running notes in classroom get benefitted in future as they are aware of various nuances of English. The ability to write effectively in order to convey a message is also a very important skill for a college student in his career. They share from their experience that students who interact in English outside the classroom are benefitted in the long run because they are in constant touch with the language. They can informally assess for correct use of language structures by the students. Also, sharing successes and challenges with students will help them to grow and benefit academically. Making students speak more English in the classroom demands good preparation by the students. They believe that a student with fluency in English enables him to stand in good stead because he can make his point of view clear to the person on the other side. They all agree that student with fluency in English can express any subject well and feel that any kind of regular general reading in the library would improve their quality by getting ready to be employable.

They share the view that students must be updated with latest developments in the world by doing a lot of general reading. They should have access to a great wealth of knowledge and thus have greater cultural understanding. Students with access to an incredible amount of information ultimately get benefitted.

After considering the statistical report, a bridge course is suggested to improve Listening, Speaking, Reading and Writing skills of the students who are not fluent at English. It is an attempt made both through literature and language to improve LSRW skills at the first year of their professional courses. It will try to fill in the gap and help them to come on par with the students that are fluent at English. It can be further suggested that a test of proficiency in English for the students already admitted into professional courses by the respective Institutions will certainly segregate the weaker students from the ones with fluency in English. The suggested bridge is meant for “not so confident in English” students to take up the course and fill in the gap in order to come on par with the regular batch of students. They will follow the course for 35 to 40 hrs in the first semester of their respective professional course for 3-4 credits. This bridge course has to run for only segregated weaker students in order to bridge the gap between students, not so fluent at English with the ones who are fluent at English and following the regular course in English prescribed by the respective Institutions. As medical students don't have English Language in their curriculum, the suggested list of reading given below will definitely be helpful to them who are not so fluent in English and wish to go out of state on a better career prospective. For deeper understanding of any subject and communication at interstate level doctors too need fluency in English. Thus, it will certainly prove to be helpful in meeting the professional students' requirements at the time of recruitment and later at various work places. It will also contribute competency, efficiency, necessary life skills and on the whole a holistic development in them.

Suggested-Reading: A selection of fictional and non-fictional prose pieces from English and Indian Literature are chosen to introduce the students to different writings and induce the importance of values in life. The list includes different forms like short stories, novels, plays and autobiographies. The suggested writers are:

17th Century-18th Century— i. Charles Dickens-Great Expectations,

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- ii. Thomas Hardy-The Mayor of Caster bridge,
- iii. Lewis Carroll-Alice’s Adventures in Wonderland,
- iv. Arthur Conan Doyle-The Hound of The Baskervilles,
- v. Rudyard Kipling-The Jungle Book,

19th Century-20th Century— i. O Henry-Short Stories like Girl, Dream, After Twenty Years,

- ii. H.H. Munro-- Short Stories like The Story Teller, Tea, The Threat
- iii. Mark Twain—The Adventures of Tom Sawyer,
- iv. Somerset Maugham-- Short Stories like Luncheon, The Rain, The Colonel’s Lady
- v. G.B. Shaw—Play -Pygmalion,

20th century-- Present- i.R.K. Narayan- Swamy and Friends,

- ii. R.K. Laxman—The Distorted Mirror,
- iii. A.P.J. Abdul Kalam—Wings of Fire,
- iv. Khushwant Singh—The Mark of Vishnu and other Stories,
- v. Anita Desai-The Artist Of Disappearance,

Besides the above suggested reading, daily reading of the newspaper/s will be certainly helpful to the students.

II. Writing- Paragraph, Essay, Précis, Reading Comprehension, Letter Writing, Resume writing, emails, notices and minutes of the meeting.

III. Speaking and Listening- Students need to practice by listening to the news daily and speaking to others in English.

IV. English Practice- Above all, grammar plays a key role both in the written and spoken communication of English. This umbrella term “grammar” includes many smaller components such as tenses, subject verb agreement, prepositions, articles, conjunctions and S+V+O (subject+ verb+ object) pattern. Thorough practice on all the above components will certainly make the students confident in their expression in English.

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