Status of English Language Knowledge in Technical Education

B.A. Mahalakshmi Prasad. M.A.

Sagar Institute of Science and Technology, Ratibad, Bhopal Madhya Pradesh India

machiprasad@gmail.com, Ph: 09844808821

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Abstract

This paper looks at language acquisition of students studying in B.Tech. in the city of Bhopal. Madhya Pradesh, India. The Study was conducted in a prestigious engineering college of Bhopal. The study also tries to analyse the reason for the lack of adequate English language acquisition in the students.

Introduction

English is the lingua franca and proficiency in English language has become prerequisite for students to be gainfully employed.

Various studies have enumerated a lack of knowledge of language skills and soft skills in STEM professionals.

A distinct paucity of research related to the teaching-learning of soft skills among STEM professionals highlights the important fact that students and institutions approach the subject and development of soft skills with a frivolous attitude (Ríos Carmenado, López, & García, 2015; Veiga, 2017; Pereira & Costa, 2017).

Employability can be read as the possessing of skills that are prerequisite to seeking a job and efficiently discharging one's responsibilities required at the job. It has further dimensions that can be categorised as the ability to transfer the knowledge to others inside the organisation, Zaharim et al. (2009) Organization for Economic Co-operation and Development OCED commission, which India is a member of, addresses the issue of employability and defines it is "as the ability to evaluate, access, communicate and analyze information—both interpreting text-based information and handling mathematical data" (OECD, 2015). The commission also highlights the need for sound technical knowledge, management skills, teamwork and soft skills.

The national Statistics Office (NSO) titled "Households Social Consumption: Education" revealed that 37% students are educated in the rural areas and the rest of the students are from vernacular. The Survey also stresses that only 17% of students of the total study in English medium schools. These statistics reveal that when the student completes his

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schooling and joins B.Tech. degree course, he joins the course with a lacuna in the language domain both in expression and reception. To counteract this, remedial language class wherein basics of English and English grammar are conducted.

Data and Method

Students of B.Tech. studying in Bhopal, Madhya Pradesh, India come from varied backgrounds Most of the students have had their basic education from the vernacular medium. The Rajiv Gandhi Proudyogiki Vishwavidyalaya (RGPV) under whose auspices all the technical courses are conducted has issued a directive to teach in the vernacular. However, there is a tangible lack of technical subject textbooks in the vernacular and therefore all the subjects are taught in English. During placements the companies also recruit students who can communicate well in English.

The Data was collected from 400 students studying a private college in the city of Bhopal, Madhya Pradesh, India A base line study was administered to the students to assess their proficiency and skill in English language.

The study was designed to test their language skills in all the four domains of language use viz listening, speaking, reading, writing.

For listening comprehension: A standardised passage was read out aloud in the class and the students were expected to answer the questions based on the passage.

Assessments in speaking skills was carried out in the form of just a minute session wherein the students had to speak about a given topic for one minute.

Reading assessments was conducted by giving the students a written recipe for making ginger tea and the students had to read the recipe and explain the steps to the class.

Writing skills was assessed by asking them to solve an objective question which were based on the basic concepts of grammar.

Results

For the sake of administering the test and collating the results. The students were divided into two sets namely- Set A [Computer Science (CS), Computer Science and Internet of Things (CS- IOT), Electronics and Communication (EC)]. Set B [Civil Engineering (CE), Electrical Engineering (EE), Artificial Intelligence and Machine Learning (AIML), Mechanical Engineering (ME)]. However, for analysis the data was taken in its entirety so as to get a complete and holistic overview of proficiency in English Language acquired by the students.

The data was graded on a 5point Scale wherein:

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1-Poor – The student has difficulty in completing tasks with listening comprehension. The student speaks in syntactic forms that is a direct translation from Hindi. Spellings, grammar and punctuation are erratic.

2- Fair-
The student can solve easy level listening comprehension passages. Can speak a bit of English. Spellings, grammar and punctuation are erratic e.g. substitution of [their] for [there].
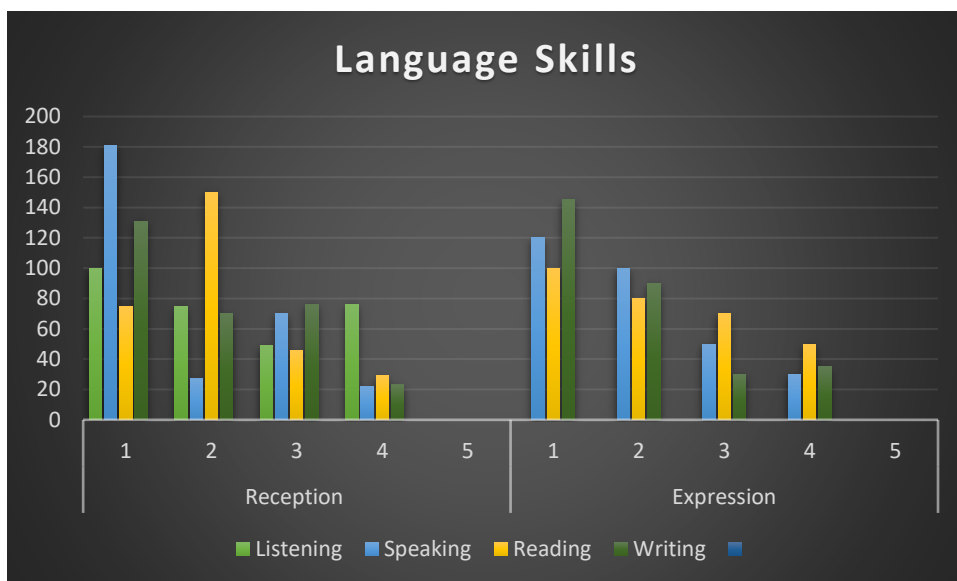
3-Good – Students can solve listening comprehension. Can speak well. Spelling, grammar, and punctuation rules are followed albeit erratically. The student is able to cognise that he has made a mistake in spelling and syntax but does not have the knowledge to correct it.

4- Very Good- The student has acquired functional knowledge of language in all the domains and is able to perform satisfactorily. However, a distinct lack of knowledge in vocabulary is observed.

5-Excellent- The student has acquired functional knowledge of language in all the domains and is able to perform satisfactorily. There is no observable irregularity in speaking and writing.

Table 1: Data of students across language skill set

	Reception					**Expression**				
	1	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
Listening	100	75	49	76	0	0	0	0	0	0
Speaking	181	27	70	22	0	120	100	50	30	0
Reading	75	150	46	29	0	100	80	70	50	0
Writing	131	70	76	23	0	145	90	30	35	0

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Language Skills

Result and Analysis

An analysis of the data shows that most of the students in the poor, fair and good category are from government and government aided schools. There is a

slightly higher percentage of students in the good category who have been educated in the urban government schools.

The students also suffer from linguistic and cultural barriers- Receptive (difficulty in distinguishing sounds with common place and manner of articulation e.g. /v/ and /b/ [Vikram] and [Bikram]), expression.

An analysis of their writing skills and speaking skills revealed that the students lack general as well as specific subject related vocabulary and as a result do not know the words in English that have to be substituted for Hindi words. E.g., The robber killed the king. Here the students did not know the meaning of the word "robber".

The language ability of the students is also affected by socio-economic and psychological attitudes as enumerated by (Ríos Carmenado, López, & García, 2015; Veiga, 2017; Pereira & Costa, 2017). Their approach to language is very complacent and are lazy to actively involve themselves in learning the language. They suffer from a deep sense of insecurity and low self-esteem as a result they are reluctant to come forward to participate in activity-based learning. The whole scenario is compounded and confounded further with the students thinking that an engineering student does not require adequate language skills to find to become employable.

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However, the realty is much further than what the students think as excellent soft skills are of paramount requisite for attaining roles in leadership, creativity, communication, management, and other allied fields.

The RGPV has taken an initiative to alleviate this problem by introducing a course in English Language for communication for students studying in the first year of B.Tech. The syllabus comprises of a well-planned module to help students acquire adequate language skills in English. (see attachment syllabus)

Conclusion

The study reveals that the students studying in the STEM branches need rigorous training in English language, communicative skills, soft skills. These are students who are good in their technical subjects. However, they are unable to be gainfully employed due to lack of adequate soft skills.

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Appendix

RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA, BHOPAL New Scheme Based On AICTE
Flexible Curricula B.Tech. First Year Branch- Common to All Disciplines BT103 English for Communication 3L-0T-2P 4 Credits

COURSE CONTENTS:
Unit-I Identifying Common errors in writing: Articles, Subject-Verb Agreement, Prepositions, Active and Passive Voice, Reported Speech: Direct and Indirect, Sentence Structure.

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Unit-II Vocabulary building and Comprehension: Acquaintance with prefixes and suffixes from foreign languages in English to form derivatives, synonyms, antonyms, Reading comprehension.

Unit-III Communication: Introduction, Meaning and Significance, Process of Communication, Oral and Written Communication, 7 c's of Communication, Barriers to Communication and Ways to overcome them, Importance of Communication for Technical students, nonverbal communication.

Unit-IV Developing Writing Skills: Planning, Drafting and Editing, Precise Writing, Précis, Technical definition and Technical description. Report Writing: Features of writing a good Report, Structure of a Formal Report, Report of Trouble, Laboratory Report, Progress Report.

Unit-V Business Correspondence: Importance of Business Letters, Parts, and Layout; Application, Contents of good Resume, guidelines for writing Resume, Calling/ Sending Quotation, Order, Complaint, E-mail and Tender.

Course Outcomes: The student will acquire basic proficiency in English including reading and listening comprehension, writing and speaking skills. Communicative Language Laboratory:

Course objective: The language laboratory focuses on the practice of English through audio-visual aids and Computer software. It intends to enable the students to speak English correctly with confidence and intends to help them to overcome their inhibitions and self –consciousness while speaking in English.

Topics to be covered in the Language laboratory sessions: 1. Listening Comprehension. 2. Pronunciation, Intonation, Rhythm 3. Practising everyday dialogues in English 4. Interviews. 5. Formal Presentation

Final Assessment should be based on assignment, assessment, presentation, and interview of each candidate.
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