

Improving Writing Proficiency in Engineering Undergraduates through Vocabulary Enhancement.

Sree Devi Jasti

Dept. of English, Research Scholar, Koneru Lakshmaiah Education Foundation,
Vaddeswaram,
Guntur -522502, India
Email: 163240014@kluniversity.in

Abstract

This research study aimed to assess the impact of vocabulary awareness on the enhancement of writing skills among undergraduate engineering students. The investigation took place at Vidya Jyothi Institute of Technology, Hyderabad, focusing on 120 Computer Science Engineering students in their third year, first semester (2018-19), participating in the Advanced Communication Skills Lab. The students were divided equally into two groups for experimentation. Quantitative and experimental methodologies were employed, utilizing pre and post-tests as the primary data collection tools for the experimental group.

Introduction

Students encounter numerous challenges during their learning journey, with writing standing out as one of the most formidable skills to master. This is attributed to the comprehensive nature of writing, which encompasses a multitude of language elements and components, including syntax, semantics, lexical usage, and punctuation [1].

It has been observed that the proficiency in effective writing relies even more on possessing a substantial vocabulary than the skill of reading [2]. Once students have acquired the ability to decode words, they might find themselves capable of comprehending and utilizing numerous words that may be unfamiliar. They could even deduce the accurate meanings of unfamiliar words by simply analyzing their contextual usage [3]. However, in the process of writing, a student is deprived of the luxury of relying on the context in which a word is embedded; they are the ones shaping that context. As a result, a writer must possess the capability to spontaneously retrieve words that are not only recognized visually but also thoroughly comprehended for accurate usage [4].

Importance of writings

As per Hedge (1988), within English classrooms, writing holds significant importance and is frequently employed as a tool for aiding learning. For instance, it is utilized to reinforce the understanding of novel structures, whether in general or technical vocabulary, and also functions as a means to assist students in retaining new language components [5]. In this context, the function of writing diverges from its role in technical subjects and their associated vocabulary. It enables students to assess their progress, solicit feedback from instructors, and permits teachers to oversee and identify issues. While a considerable portion of this writing focuses on sentence construction, achieving successful writing encompasses more than the capacity to produce coherent and accurate sentences [6]. Hence, educators are inclined towards tasks that guide students in composing comprehensive communication pieces, facilitating the connection and elaboration of information, concepts, or arguments tailored to a specific reader or readership [7].

Hence, writing assignments that culminate in complete texts align effectively with the ultimate objective of learners who require English writing skills for their social, academic, or vocational pursuits. Certain

students within our cohort are already well-informed about their English writing requirements or possess the capability to write proficiently [8]. Conversely, a portion of students might harbor uncertainty regarding the specific nature of their forthcoming demands. Consequently, the teacher's responsibility revolves around cultivating communicative proficiency among the students [9].

Writing Skill and Its Instruction Frith, J (2009) emphasized that acquiring proficiency in the English language involves a holistic integration of four core skills: listening, speaking, reading, and writing. The mastery of writing, in particular, is essential as it reflects a learner's performance in a foreign language [10]. Consequently, educators continually seek effective methodologies to enhance students' writing abilities and their written output.

This paper aims to introduce the art of writing and specifically focus on prevalent pedagogical approaches for its instruction. The objective is to discern the most effective techniques for teaching writing. Addressing this challenge might be achieved by explicitly teaching collocations, thus enabling learners to express themselves more appropriately. The directions for imparting this knowledge are elucidated, accompanied by supportive materials that facilitate learners' awareness of frequently used collocations [11].

Furthermore, this discussion delves into the roles assumed by both teachers and learners in the writing process. Proficiency in writing, a demanding skill, is imperative for effective communication. Regardless of native or non-native status, individuals may lack the necessary competence to become adept writers, as effective expression of ideas requires this skill. Tribble (cited in Frith, J, 2009) contends that writing mastery empowers individuals intellectually, enabling them to manage everyday affairs and articulate thoughts and arguments cogently [12].

Mastering the Art of Writing

In professional fields such as engineering, where language acquisition is pursued for vocational purposes, students grapple with composing accurate English text due to various linguistic hurdles. Writing entails fundamental grasp of grammar, lexis, and vocabulary and the capacity to convey ideas proficiently, free from mother tongue interference.

The ultimate goal for learners in writing is proficiency, which is occasionally used interchangeably with "competency." Nunan (1988) underscores that proficiency involves executing real-world tasks with a predetermined level of skill. Additionally, Lewis (2000) identifies three dimensions within proficiency: accuracy, fluency, and complexity. Under the communicative approach, accuracy is secondary to meaning transfer, favoring fluency. Conversely, traditional approaches like the audio-lingual and grammar translation methods prioritize accuracy over fluency. Balancing this "accuracy/fluency" dilemma in instructional approaches can be challenging. Encouraging fluency should be prioritized, with accuracy refining as the writing process unfolds.

The concept of "complexity," as delineated by Lewis (2000), pertains to the advancement of students' writing skills, particularly at advanced levels and across various subjects. It signifies the writer's adeptness in constructing content-rich noun phrases, an aspect often overshadowed by the traditional focus on verb phrases in grammar instruction.

Importance of Vocabulary

The Significance of Vocabulary Awareness for Language Learners Vocabulary holds a crucial position in language acquisition, serving as the fundamental building blocks that label objects, actions, and concepts – essential for effective communication. The role of vocabulary knowledge in mastering a second or foreign language has gained substantial recognition from scholars and researchers. This recognition has led to the introduction of various approaches, techniques, exercises, and practices aimed at vocabulary instruction. Consequently, this study asserts that vocabulary teaching should encompass

more than mere word dissemination; it should equip learners with strategies to enhance their lexical repertoire. This is imperative because words serve distinct functions across reading, writing, and speaking. For instance, readers must decipher and attribute meaning to words, while writers and speakers meticulously select words to convey their thoughts. Limited vocabulary can impede both expression and comprehension of ideas.

The contention that an extensive vocabulary plays a pivotal role in reading prowess has been put forth. Research has pinpointed vocabulary comprehension as the foremost determinant of effective reading comprehension. A robust correlation between reading and writing has been established. These two processes, reading and writing, exhibit similarities and mutually reinforce one another. They both encompass the generation and arrangement of ideas, iterative drafting to attain coherence, and the revision of concepts as necessary. The interrelationship between these processes is so intertwined that certain scholars advocate for a combined approach to teaching reading and writing, treating them not as distinct entities but as interconnected components.

Enhancing Writing Skills

Through Vocabulary Enrichment the research delved into the notion that elevating vocabulary proficiency can lead to improved writing skills, contingent upon the creation of a classroom environment that prioritizes writing. In such a context, the process of writing is intricately linked with the surrounding atmosphere, and their synergy is essential for effective outcomes.

To cultivate a writing-focused classroom, several techniques were employed by educators. Firstly, students engaged with articles or TED talks containing intriguing vocabulary, enabling the introduction of new words and expressions. These served as catalysts for discussions, fostering a deeper understanding of the vocabulary.

Moreover, the classroom emphasized a writer-centric approach, where written expression was utilized to convey ideas. Writing became an integral component across various subjects in the curriculum. Students were granted autonomy in their assignments, enabling them to choose topics that resonated with them. This could encompass assignments such as elucidating contemporary concepts, summarizing journal or newspaper articles, outlining pertinent research subjects, or exploring various iterations of these tasks. A crucial facet was allocating ample time for students to immerse themselves in the writing process.

Teaching writing was regarded as an intricate process necessitating comprehensive exploration, prompting the allocation of substantial time for dedicated writing sessions.

Research Methodology and Design

In order to achieve the research objective, a combination of experimental and quantitative methodologies was employed. The primary data collection tool utilized for this study was a single instrument, namely a test, which served as a means of gathering data. The research design was thoughtfully crafted to effectively assess vocabulary awareness's impact on enhancing engineering undergraduates' writing skills.

Study Participants

The subjects of this research comprised students enrolled in the Advanced Communication Skills Lab for English language at Vidya Jyothi Institute of Technology. These participants were divided into two distinct groups: the first group consisted of students from section A of the Computer Science Engineering third year first semester, while the second group included students from section B of the same academic year and semester. There were 120 students, with 60 students in section A and 60 in section B. The selection of these participants was purposeful, and they were all pursuing English

Language Communication within the Advanced Communication Skills Lab to cater to their professional needs.

Research Instrument

The primary instrument employed for data collection in this study was a test, comprising a set of five carefully designed questions. Each question was meticulously crafted to evaluate the participants' level of vocabulary awareness. The first question entailed filling in the gaps within a passage with 20 provided words. The second question adopted a multiple-choice format to assess students' vocabulary size. Each word was presented within a sentence in this section, requiring students to select the correct definition from four choices. The third question focused on matching, while the fourth question centered on prefixes and suffixes. The fifth and final question encompassed both synonyms and antonyms. Before vocabulary instruction, a pre-test was administered to both student groups, and a post-test was conducted following the vocabulary teaching intervention.

In summary, the research methodology involved a systematic blend of experimental and quantitative approaches, utilizing a comprehensive test instrument designed to gauge the influence of vocabulary awareness on the refinement of writing skills among engineering undergraduates.

Testing Hypotheses through Test Outcomes

Hypothesis 1 (H1): "Enhanced vocabulary awareness stimulates students' drive to enhance their writing abilities."

The provided table (Table 1) demonstrates a p-value of 0.000, which is below the chosen significance level of 0.05. This indicates a noteworthy statistical contrast between the anticipated mean (12) and the observed mean (7.08). When the observed mean is lower than anticipated, these disparities substantiate the initial hypothesis that "enhanced vocabulary awareness boosts students' incentive to enhance their writing proficiency."

The data presented in Table 2 is evident in showing p-values that are nearly zero, approximately 0.021, for both the pre-test and post-test evaluations of each skill. The mean scores of the pre-test are lower than those of the post-test, indicating noticeable advancement and improvement in students' performance at both the 2nd and 3rd levels. As a result, it becomes apparent that there was notable progress and enhancement in the students' abilities. Consequently, these findings provide robust affirmation and bolster the initial hypothesis of the paper, which suggests that an increased awareness of vocabulary motivates students to enhance their writing skills.

Hypothesis 2 (H2): "The awareness of learners' vocabulary significantly contributes to the creation of precise written work."

One sample T-test for the second hypothesis

Expected mean	Mean	St.d.	t-value	d.f	p-value
12	7.52	2.49	-12.71	49	0.000

Table (3) presents a p-value of 0.000, which is lower than the significance level of 0.05. This indicates a substantial disparity between the anticipated and observed means. The observed mean (7.52) is lower than the expected mean (12), and this outcome provides evidence that supports the second hypothesis: "The awareness of learners' vocabulary plays a role in generating precise written work."

Skill	Test Class	Mean	St.d.	t-value	d.f	p-value
1 st Class						
Q1	Pre	1.88	1.604	-10.422	39	0.000
	Post	3.53	1.935			
Q2	Pre	6.15	2.143	-10.422	39	0.000
	Post	8.63	2.361			
Q4	Pre	4.13	1.202	-8.247	39	0.000
	Post	5.60	1.277			
2 nd Class						
Q1	Pre	2.53	1.853	-7.722	39	0.000
	Post	4.70	2.574			
Q2	Pre	8.35	2.045	-7.911	39	0.000
	Post	9.88	2.151			
Q4	Pre	4.23	1.776	-5.596	39	0.000
	Post	6.00	1.754			

The data in Table (4) is clearly indicative of p-values that are nearly zero, approximately 0.000, for both the pre-test and post-test analyses for each question. The mean scores of the pre-test are lower than those of the post-test, underscoring discernible progress and advancement in the writing performance of all students. This progress is attributed to their vocabulary instruction between the pre-test and post-test periods. Consequently, the test outcomes have addressed the research questions and provided robust support for the second hypothesis: "Enhanced learner vocabulary awareness contributes to the creation of accurate written work."

In conclusion, based on the aforementioned hypotheses and research questions, and in alignment with the primary objectives of the article, it can be affirmed that vocabulary awareness significantly contributes to the enhancement of students' writing skills.

The data analysis revealed a noticeable improvement in the students' performance during the final post-test, where they achieved higher scores than their scores in the initial pre-test. This comparison between pre-test and post-test results clearly demonstrated the significant impact of vocabulary awareness on enhancing the writing skills of undergraduate engineering students. Both groups were exposed to the same amount of vocabulary instruction before the experiment and received instruction in English Communication Skills in the ACS Lab. This ensured a relatively similar language proficiency level among all subjects. Despite this, their abilities were evaluated based on the outcomes of the pre and post-tests. The study encompassed 120 students, equally divided into two groups of 60 each, although they were collectively treated as a single experimental group.

Summary

The significance of vocabulary holds paramount importance for learners in both CSE A and B sections of the third year's first semester English Language Communication skills. This article has not only expanded the teacher's understanding on this subject but has also spurred the search for effective techniques and approaches to elevate the students' vocabulary awareness and proficiency. The focal point of this article was to delve into the efficacy of vocabulary awareness in enhancing the writing skills of undergraduate students. This was accomplished by meticulously comparing the students' scores in two distinct tests, revealing a substantial advancement in their writing skills due to the incorporation of vocabulary teaching materials as an intervention. This intervention effectively aligned with the primary objectives of the article.

References

1. Brynildssen and Shawna (2000) vocabulary influence on successful writing. ERIC Digest D157. www.eric.ed.gov. ERIC information analysis product (IAPS).
2. Byrne, D. (1999) Teaching writing skills. Longman Handbook for language teachers. Longman: London and New York. British library cataloguing in publication data.
3. Corona, C., Spangenberg, S. and Vent, T (1998). Improving students writing through a Language Rich Environment. M. A. Action Research Project, St. Xavier University and /R//skylight,/6/ pages.
4. Duin, A. and Graves, M. (1987) Intensive Vocabulary instruction as A prewriting techniques. Int. J. Eng. Lang. Lit & Trans. Studies (ISSN:2349-9451/2395-2628) Vol. 4. Issue.3, 2017 (July-Sept) 474 SADIA OSMAN IBRAHIM et al.,
5. Echevarria, J. Vogt, E., and Short J. (2004) Making content comprehensible for English learners. United States of America: Washington.
6. Farrell, C. (2009) Teaching Reading to English language learners. United States of America: Corwin press ASAGE Company.
7. Frith, J. (2009). A Process Genre Approach to Writing Transactional letters. Retrieved August 24, 2009, from http://www.Developingteachers.com/articles_teacher_training/processgenre1_james.Htm.
8. Ghazal, L. (2007) Learning vocabulary in E.FL. context through vocabulary learning strategies. Islamic Azad University. (online) Available: www.Novitasroyal, org/Ghazal. Html vol,1 (2) p (84- 91).
9. Hedge, T. (1988) Writing. Oxford: Oxford University Press.
10. Henry, S. and Scott, J. (1999) Linking university and teachers communities: "Athink tank" model of professional development. Teacher education and special education 22- (4) 251-267.
11. Johnson, B. (1999) Word works Exploring Language Play. Golden, Co: Fluum publishing.
12. Kamil, M. and Hiebert, E. (2007) Vocabulary assessment: what we know and what we need to learn. Reading research: vol.42 page (282-296) international reading association