The Effect of Multimodal Learning Strategies on English Language Proficiency in Tertiary Vocational Education: A Comparative Analysis

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ABSTRACT

This research aims to explore the ways in which Learning Management Systems (LMS) significantly contribute to English language proficiency in tertiary vocational education, more especially in connection with multimodal learning approaches. The use of multimodal learning—visual, auditory, textual, and interactive modes—has shown promise to improve language acquisition. Consequently, vocational colleges are using these innovative pedagogical approaches more and more to satisfy the rising demand for graduates ready to start their careers. This comparative study aims to find the ways in which these approaches—supported by learning management systems including Blackboard, Google Classroom, and Moodle—have an impact on English language competency of students in the domains of reading, writing, listening, and speaking. LMSs enable instructors to modify their lectures to fit the demands of their students and inspire student autonomy by providing free access to multimedia material, cooperative tools, exams, and tailored feedback. The results show that students who engaged in multimodal learning using a LMS had far greater degrees of English proficiency and were much more engaged than their classmates. Furthermore emphasised in the paper is the fact that multimodal learning techniques' efficacy is much enhanced by organised LMS supporting ongoing interaction and learning at one's own pace. The findings show that adding LMS helps students acquire the kind of autonomous study habits required for vocational programs, therefore augmenting the accessibility and participation of English as a Second Language (ESL) sessions. The research ends with suggestions that vocational colleges should use LMS-driven multimodal techniques into English classrooms in order to help students enhance their language abilities and better equip them for global communication in technical and professional domains. This would enable pupils to produce better translations.

Keywords: Learning Management Systems (LMS)**,** English Language Proficiency, Multimodal Learning, Pedagogical Approaches, English as a Second Language

INTRODUCTION

Having the ability to comprehend spoken language is an essential attribute for students who are interested in pursuing careers in the academic field. Conventional listening classes, on the other hand, have a number of shortcomings that make them inadequate for all children. Research in cognitive psychology and developments in educational technology have contributed to the rise in popularity of multimodal teaching, an innovative educational approach that has gained favour in recent years. The goal of those who advocate for multimodal education is to stimulate students' interest in the process of learning English via the utilisation of a variety of sensory modalities. The objective of this study is to investigate the impact that multimodal education has on English listening classes taught at the upper vocational college level, with a particular focus on the students' ability to comprehend auditory information and their desire to learn. English language competency has become an essential component of the curriculum of current vocational higher education programs. This is mostly due to the fact that English is a language that is used quite often. At the moment, the majority of educational research conducted at higher vocational schools is focused on improving students' ability to communicate in English (Ling & Mohammed, 2024).These institutions are putting this into effect in order to improve the educaction that their students get. The incorporation of auditory, visual, and kinaesthetic learning modalities is an essential component of the continuous endeavour to enhance English education. The objective of this endeavour is to better prepare students for successful communication in English. As a reaction to the growing importance of online education and the digitisation of it in the context

of educational policy concerns, researchers have put a great amount of work into developing teaching methods that are applicable across the board. Vocational high school provides students with a solid foundation that may make it easier for them to pursue subsequent academic endeavours. Students who successfully complete this program become equipped with the skills necessary to achieve success in either future education or the workforce. The information provided by (Hamidah, 2022) indicates that this vocational school offers classes in a variety of subjects, including but not limited to agriculture, mechanical engineering, accounting, tourism, electronics, and chemistry, amongst others. In a number of well-known English as a Second Language (ESL) materials, the learning culture serves as both a frequent focus and a source of inspiration. The contents presented here could be useful for anybody who is getting ready to learn English in another country. They have the potential to contribute to the development of one's cultural identity in addition to offering the opportunity to learn a new language. In the process of developing lessons, educators who use a multimodal approach make use of a wide variety of resources. The use of multimodality is a crucial factor that makes the process of learning English substantially easier. Students who are learning English as a second language (ESL) may considerably benefit from multimodal training since it improves their vocabulary, comprehension, and writing skills. The likelihood of pupils acquiring and remembering new vocabulary is increased when they are exposed to learning techniques that are visual, auditory, and interactive. As students devote more time and effort to become proficient in the English language, they see an improvement in their ability to express themselves in writing. Several chances for students to utilise English in a variety of settings are made available to them (Reyes-Torres & Portalés Raga, 2020).

BACKGROUND OF THE STUDY

Students who are interested in enrolling in higher vocational programs are required to demonstrate their proficiency in the English language in order to differentiate themselves in the present highly competitive work market. The rapid development of technology and the globalisation of the economy have both contributed to the emergence of this opportunity. Historically, the majority of English education at vocational schools has been based on the use of textbooks and has been conducted in a manner that involves lectures. As a consequence, students are unlikely to be interested in learning a language since they will see the process as something that is unpleasant. Because of this, there is a significant need for innovative educational approaches that improve students' language abilities while also catering to the many learning styles that students could have (Wang, 2022).

The use of several channels of communication is an innovative and creative approach to the process of language learning. The approach incorporates a number of different sensory inputs, such as digital information, kinaesthetic information, auditory information, and visual information. It is possible to include visuals, music, motion, and interactive technology into this educational framework in addition to traditional text in order to enhance learning and improve the relevance of the material to the learner's living situation. According to a number of theoretical frameworks, multimodal approaches are thought to enhance language acquisition via the processes of comprehension, memorisation, and application. The most important thing is to get young people involved and to make use of all of their senses in order to encourage action (Yang, 2022).

The examination of the efficacy of multimodal learning techniques is especially relevant for higher vocational education because of the relevance of the industry and the emphasis placed on the strengthening of practical skills. In spite of the fact that this setting has a great deal of potential, there is a lack of research that compares the effectiveness of multimodal training methods to that of regular training methodologies.

According to the authors of the study, the findings are expected to have a substantial influence on subsequent initiatives that are focused at improving classroom instruction and vocational training (Rahmanu & Szeged, 2024).

PURPOSE OF THE RESEARCH

This study is to measure the degree of English language competence attained by students who are enrolled in higher vocational education by using various learning methods that use multiple modes of instruction. Due to the fact that English literacy is becoming more crucial in professional and global settings, there is an immediate need for research on creative teaching approaches that increase student accomplishment. The purpose of this article is to compare and contrast conventional methods of instruction with multimodal teaching techniques in order to discover which approach is more successful in developing students' abilities in the areas of hearing, speaking, reading, and writing. The approaches make use of a wide variety of media, including graphics, audio, text, and interactive digital resources, amongst others. The purpose of this study is to provide light on how multimodal education may be used to fulfil the requirements of various learners, increase engagement, and enhance language performance. This will be accomplished by comparing many different strategies that are carried out inside a single vocational school. They might be used by legislators and educators in order to get a better understanding of the possible advantages that could be gained from vocational education programs that employ multimodal methods to English instruction.

LITERATURE REVIEW

In today's society, having a solid command of the English language is becoming more important as a result of the proliferation of globalisation and technological breakthroughs. This is due to the fact that the Earth is continuously continuing to expand. All of these different classroom settings, in which students come from a variety of pedagogical, cultural, and linguistic backgrounds, will result in a considerable demand for English language education. When discussing matters that are associated with the English language, this is especially crucial to keep in mind. According to this point of view, teachers should use collaborative tactics and include model learning in order to improve their students' English language skills and to promote active engagement in the classroom. According to (Emerson et al., 2020) research, the purpose of this assessment is to investigate the potential advantages and disadvantages of these approaches in a variety of classroom situations in order to evaluate the influence that they have on the English language competency and engagement of students.

Consider the case of a language learning program that incorporates auditory, visual, and kinaesthetic modalities as an illustration of a multimodal learning strategy. By tailoring their methods to the specific preferences of each student, these strategies respect the variety of learning styles that exist in the world. They could think of employing a variety of channels to simultaneously collect and assess data in order to speed up the process of language acquisition. An extensive amount of research and analysis has been conducted on the usefulness of multimodal learning techniques in improving students' English proficiency in a variety of classroom contexts. The authors (Chen & Sun, 2019) argue that it is vital to improve the listening, speaking, and vocabulary abilities of English language learners (ELLs) in order to successfully execute the multimodal language-teaching technique. The strategy in issue makes use of a wide variety of strategies, such as gestures, visual aids, and aural effects, among others. According to a research (Zhou & Wei, 2020), multimodal learning strategies are of great help to ELLs who have unique requirements. These needs may be the result of problems such as learning difficulties or hearing impairment. There is a possibility that this will evaluate not just their degree of engagement but also the results of their language learning. It is possible that the use of visual aids might be beneficial for students who are studying ELLs and who have difficulties with understanding and retention. According to (Zhou & Wei, 2020), individuals who are deaf or hard of hearing who are learning ELLs have the potential to improve their language and communication skills by learning sign language. However, it may be difficult for teachers to implement them with pupils that come from a variety of historical and cultural backgrounds. The absence of enough financial resources and technical assistance is a fundamental obstacle that new multimodal pedagogies must overcome. It is unfortunate that not all classrooms or educational institutions have the

financial resources necessary to undertake multimodal instruction. There are times when projectors and other multimedia tools are not accessible, despite the fact that they are really useful. Furthermore, in order to deliver education that is not only successful but also efficient, educators may need sufficient aid and training in order to develop and execute effective multimodal teaching practices. There is a possibility that this guarantee might not apply to certain areas (Gao et al., 2025).

RESEARCH QUESTIONS

- What features of LMS platforms are most effective in supporting English language learning?

RESEARCH METHODOLOGY

Research Design

The quantitative data analysis used SPSS version 25. The odds ratio and 95% confidence interval were used to determine the degree and direction of the statistical association. The researchers established a statistically significant criteria at $p < 0.05$. A descriptive analysis was conducted to identify the main features of the data. Quantitative methods are often used to assess data acquired via surveys, polls, and questionnaires, together with data altered by computing tools for statistical analysis.

Sampling:

Research participants filled out questionnaires to provide information for the research. Using the Rao-soft programme, researchers determined that there were 587 people in the research population, so researchers sent out 780 questionnaires. The researchers got 673 back, and they excluded 24 due to incompleteness, so researchers ended up with a sample size of 649.

Data and Measurement:

A questionnaire survey served as the principal tool for data gathering in the study. The survey had two sections: (A) General demographic information and (B) Responses on online and offline channel variables assessed using a 5-point Likert scale. Secondary data was obtained from many sources, mostly on internet databases.
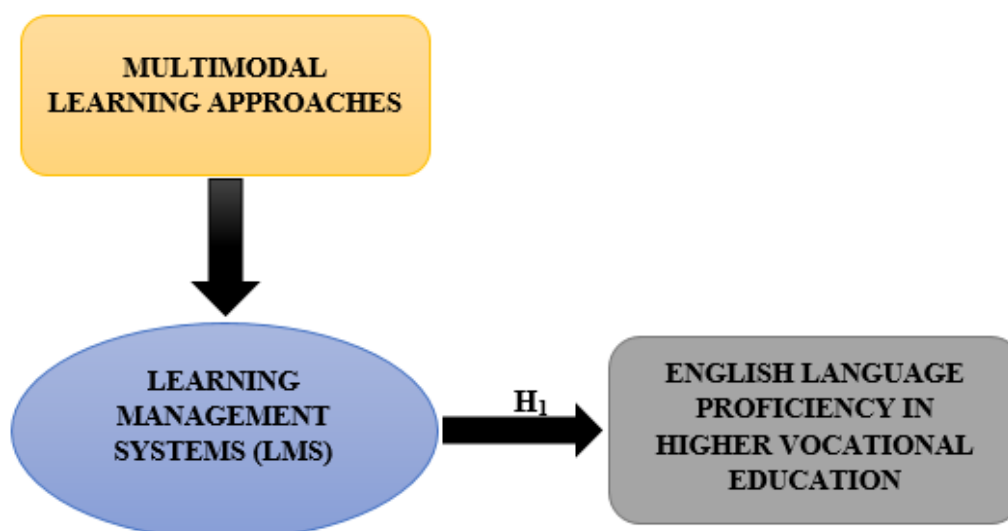
Statistical Software:

The statistical analysis was conducted using SPSS 25 and MS-Excel.

Statistical Tools:

To grasp the fundamental character of the data, descriptive analysis was used. The researcher is required to analyse the data using ANOVA.

CONCEPTUAL FRAMEWORK

RESULT

- **Factor Analysis**

Confirming the fundamental component structure of a set of measurement items is a prevalent use of Factor Analysis (FA). The scores of the observed variables are believed to be influenced by latent factors that are not easily detectable. The FA technique is a model-based approach. This study largely focusses on establishing causal pathways that connect visible occurrences, latent causes, and measurement inaccuracies.

The appropriateness of the data for factor analysis may be assessed with the Kaiser-Meyer-Olkin (KMO) Method. The adequacy of the sample for each individual model variable and the overall model is assessed. The statistics quantify the extent of possible common variation across many variables. Data with lower percentages is often more suitable for factor analysis. KMO produces integers between zero and one. Sampling is deemed adequate if the KMO value ranges from 0.8 to 1.

Remedial action is necessary if the KMO is below 0.6, indicating inadequate sampling. Employ the researcher best discretion; some authors use 0.5 for this reason, hence the range is 0.5 to 0.6. A KMO score around 0 indicates that the partial correlations are significant in comparison to the overall correlations. Component analysis is greatly hindered by strong correlations.

Kaiser's acceptance levels are specified as follows:

A dismal range of 0.050 to 0.059.

0.60 - 0.69 inadequate

Typical range for a middle grade: 0.70 to 0.79.

Exhibiting a quality point value between 0.80 and 0.89.

The range from 0.90 to 1.00 is notably exceptional.

Table 1: KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.982
Bartlett's Test of Sphericity	Approx. Chi-Square	3252.968
	df	190
	Sig.	.000

The significance of the correlation matrices was further substantiated by Bartlett's Test of Sphericity. The Kaiser-Meyer-Olkin measure of sampling adequacy is 0.982. Employing Bartlett's sphericity test, researchers achieved a p-value of 0.00. A significant outcome from Bartlett's sphericity test demonstrated that the correlation matrix is invalid.

❖ **INDEPENDENT VARIABLE**

- **Multimodal Learning Approaches:**

Multimodal learning, the integration of many sensory modalities, enhances the efficacy of the learning process. Various modes denote the diverse techniques via which new information is conveyed. The researcher appreciate any information that can aid us in understanding the problem more thoroughly. An increasing number of instructors are using multimodal learning methodologies to engage children who retain information most successfully via visual, auditory, kinaesthetic, and verbal modalities. In corporate training, it is advantageous for

organisations to use diverse content formats to enhance learning results for all employees Rowsell & Walsh, 2021).

To illustrate my approach, let us consider a training program that instructs salespeople beyond only closing deals via resource reading. This course presentation may use several formats, including text-based slides, graphics that reinforce key concepts, a voice-over, and a role-play simulation. In the latter, students get the chance to observe customer responses to their communication approach via real-life emotions, facial expressions, and gestures (Kress, 2020).

❖ **FACTOR**

● **Learning Management Systems (LMS):**

An LMS, which stands for "learning management system," is a piece of software or a web-based application that assists in the design, implementation, and assessment of educational training programs. A learning management system (LMS) often consists of a user interface (UI) as well as a server that is responsible for performing fundamental activities.

The development and delivery of content, the monitoring of student involvement, and the grading of assignments are elements that are often included in LMS. There is a possibility that students may have access to additional features such as threaded chats, video conferencing, and discussion boards (Salim, 2024).

Colleges and universities, both online and traditional, as well as companies and government agencies, often make use of these platforms. They have the potential to improve more traditional forms of education in addition to lowering costs and boosting efficiency for the educational system. Using a system that has been thoughtfully developed to be of use to both administrators and instructors, it is possible to significantly simplify the administration of calendars, materials, quizzes, certifications, notifications, as well as user registration and access (Abaricia & Delos Santos, 2023).

❖ **DEPENDENT VARIABLE**

● **English Language Proficiency in Higher Vocational Education :**

Listening, speaking, reading, and writing of the English language are the four competencies that make up the English language; competency in English shows that one has mastered all of these abilities. For the purposes of this operational definition, linguistic competence is defined as the capacity to get a minimum score on an English language proficiency test. In order to achieve fluency in a language, it is necessary to devote more time and effort than just speaking the language fluently (Zeleke et al., 2025).

It is very necessary to have a solid command of the English language in order to create a charismatic and successful personality. Having a strong command of the English language is vital for effective communication, as it enables one to broaden their professional possibilities, get jobs that offer better salaries, and increase their influence within their sector. The most efficient ways to develop one's talents are via reading and writing, which includes both reading and writing. Improvements should be made to the pronunciation of those who are not native English speakers, with a particular emphasis placed on consonants that are vital to the English language. The possession of a very large vocabulary is absolutely necessary in order to develop fluency in a language. English is a crucial component of a well-rounded education, and it should be studied in combination with all of the other topics that are required (Masood, 2023).

➢ **Relationship Between Learning Management Systems (LMS) and English Language Proficiency in Higher Vocational Education:**

In higher occupational education, LMS have become extremely essential; they provide systematised, dynamic, adaptable language learning environments. Especially educational institutions aiming to improve students' communicative capacity for worldwide employment

are beginning to understand the importance of the link between LMS use and English language proficiency (Veliza & Véliz-Campos, 2023).

By use of multimedia materials, discussion forums, quizzes, and real-time feedback, LMS include Google Classroom, Blackboard, and Moodle aid reading, writing, listening, and speaking as part of a language program. These resources enable classrooms to be more student-centered, therefore encouraging the kind of active participation and independent study that are basic for language development.

Especially important in higher vocational education programs focussing practical skills and workplace readiness, strong English provide the researcher access to technical resources, talk well in global situations, and thrive in worldwide employment. LMSs may help to close the achievement gap by allowing access to real English resources and online interactions between teachers and students (Ling & Mohammed, 2023).

.Studies reveal that improved degrees of English proficiency are favourably connected with regular use of LMS. For students who utilise the tools offered by learning management systems appropriately, common outcomes include better motivation, vocabulary development, and language abilities. Still, the result relies on factors such students' digital ability, the calibre of the materials, and the duration of study. Therefore, intentional integration of LMS in English language education may assist to greatly improve learning results in settings connected to vocational education (Liao, 2023).

On the basis of the above discussion, the researcher formulated the following hypothesis, which was analyse the relationship between Learning Management Systems (LMS) and English Language Proficiency in Higher Vocational Education.

- *"H_{01}: There is no significant relationship between Learning Management Systems (LMS) and English Language Proficiency in Higher Vocational Education."*
- *"H_1: There is a significant relationship between Learning Management Systems (LMS) and English Language Proficiency in Higher Vocational Education."*

Table 2: H_1 ANOVA Test

ANOVA					
Sum					
	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Between Groups	78158.735	159	4726.532	691.578	.000
Within Groups	798.754	489	9.952		
Total	78957.489	648			

This investigation yields remarkable results. The F value is 691.578, attaining significance with a p-value of .000, which is below the .05 alpha threshold. This signifies the *"H_1: There is a significant relationship between Learning Management Systems (LMS) and English Language Proficiency in Higher Vocational Education"* is accepted and the null hypothesis is rejected.

DISCUSSION

Regarding postsecondary vocational education, the use of LMS significantly influences the link between multimodal learning approaches and English language competency. Online accessible LMS include Moodle, Blackboard, Google Classroom, and Moodle provide students well-organised surroundings in which they may study using a range of approaches. On these systems, there are a great range of teaching resources available. Among these materials are films, audio samples, interactive quizzes, books, and debate forums. This therefore helps students to actively engage with the material relevant to the English language and facilitates the accommodation of many learning strategies. LMS provide learners in

vocational fields—who often require task-based, practical instruction—great flexibility, self-paced learning, and quick feedback. This therefore greatly raises the efficiency of multimodal learning. Furthermore, by giving students many access points to the content of the relevant course, LMSs inspire them to participate in self-directed learning and constant practice. Learners in vocational education courses, where English competency is needed for technical communication, manual decoding, and global work environments, are ready with language skills and digital literacy thanks to LMS aided multimodal instruction. When compared to students registered in more conventional classrooms, students who utilise LMS to access multimodal methods show higher in terms of language competency, learner autonomy, and intrinsic motivation. To gain the most from multimodal learning, one must have a well-organised learning management system. Therefore, educational institutions must provide great attention on the use of LMS in conjunction with multimodal methodologies if they want to enhance the results of English language acquisition in vocational education. This guarantees that students get not only readily accessible but also interesting and customised language instruction to fit their particular educational and occupational requirements.

CONCLUSION

Since it lessened the burden on instructors, the use of LMS for English language instruction proved to be effective. Also, compared to paper copies, students received their comments far more quickly.

The instantaneous results shown on the LMS also allowed both the students and the professors to monitor their progress every day, and this made the pupils very conscious of their errors. With less time spent checking and grading, instructors had more time to devote to children who needed it. Since their course materials were constantly available on the LMS, students also felt more at ease.

The research also brought attention to the fact that students need training before they can use the LMS, and that a curriculum should be developed with their requirements in mind. While faculty members lack proper training, they often fail to achieve the intended outcomes while using LMS. The recommendation is to use LMS or similar applications to teach English language classes, but to ensure their optimal utilisation, qualified instructors should be on hand.

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