Identifying Effective English Language Learning Activities for Informatics Students: A Need Analysis Survey

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ABSTRACT

The aim of this study is to determine which instructional materials and learning activities informatics students can use to enhance their English language proficiency. Students were surveyed about their preferences and impressions of different learning activities and media using an analysis of needs questionnaire. Based on the survey results, games are considered to be the best exercise for expanding vocabulary—76.2% of students agreed with that assertion. 81.0% of students believe that YouTube videos are the best resource for improving listening skills. The two activities that are considered most useful for improving speaking skills are role-playing and simulation, both of which received a 57.1% recommendation. Chatting emerges as the most favored activity for enhancing writing skills, with 71.4% of students supporting its effectiveness. As far as improving writing skills go, talking is the most preferred activity (71.4% of students agree). Lastly, per 61.9% of students, reading articles from newspapers or magazines is the best exercise that improves reading abilities. By adjusting their teaching methods to better suit the needs of informatics students, lecturers will be likely to create an English language environment for learning that is both more successful and entertaining for students.

Keywords: English Learners; Informatic Students; Need Analysis

INTRODUCTION

Teaching ESP to lecturers is getting more challenging. English has been deemed necessary by universities while developing their curricula. For most students, English is largely a generic topic. In daily life, many people still view this language as "foreign." They use English a lot, whether they realize it or not. Although their use is still limited, smartphones are a wonderful help when learning English. In the age of globalization and digitalization, English proficiency has become essential for informatics students. People can advance with these competencies when they connect across cultural gaps in their careers. They also aid in improving performance in the worldwide job market. A significant portion of the informatics program includes the making up of the English classes.

For students participating in informatics studies programs, English language teaching is required from the first to the third semester. A questionnaire was distributed to twenty-one students from Sekolah Tinggi Teknologi Payakumbuh. The students' preferred methods of learning, ideal learning activities, and goals for improving their language skills were all acquired through the questionnaire. The study determined the degree of linguistic competency among students and its correlation with their preferred learning styles. The findings will give lecturers guidance for developing curricula that are appropriate for informatics students while utilizing ESP and more efficient teaching techniques. The previously mentioned approach is employed to ensure precise results from a small but equivalent sample size.

The purpose of this study is to learn more about the preferences and needs. By examining the student viewpoints and creating more effective teaching strategies tailored to the unique requirements of informatics students enrolled in ESP courses, this study aims to close the gaps in the literature. There are several sections in this article. The goal and background of the study are explained in the introduction, followed by a review of the literature that includes pertinent earlier introductions. The following section on research methodology is a description of the study strategy. The research findings interpretation will be throughout the session. The main conclusions will be discussed, together with suggestions for additional study and the creation of policies in informatics education.

LITERATURE REVIEW

The study looks into a number of important factors that are necessary to comprehend how to teach English to informatics students in an efficient manner. The kind of learning activity is one important factor that has been well-studied in educational psychology. Mayer (2014) asserts that active learning techniques like role-playing and group discussions greatly improve student engagement and recall of material. This argument is consistent with the study's findings, which showed that students much preferred simulation and storytelling as speaking-skill-improving exercises.

The selection of instructional materials has a big influence on how well students understand and engage with the material. McLuhan's (2011) theory of media states that the message and the way the information is interpreted and remembered are greatly influenced by the medium. The results of this survey showed that students preferred to use movies and note apps. These results are in line with those of other studies (Richardson, 2013) that indicate multimedia tools can improve language learners' understanding and retention.

One of the many difficulties facing English as a foreign language instruction in Indonesia is the necessity to create efficient teaching strategies that meet the needs of individual students. The difficulties of teaching English in Indonesia are brought to light by Cahyono and Widiati (2011), who observe that conventional approaches

frequently fail to consider the particular linguistic and cultural context of Indonesian.

The study then considers the students' opinions regarding the advantages of becoming fluent in English. This variable is related to more general talks about employment options and language. English ability is becoming more and more valued in global employment markets, especially in IT professions since it is the universal language, according to a Graddol (2018) study. These more general worldwide trends are consistent with the students' understanding of the importance of English in improving their competitiveness.

Previous Related Study

It is impossible to overestimate the significance of English language skills in the field of informatics. English is essential for information technology (IT) research, development, and communication since it is the universal language of technology. Graddol (2006) states that professionals in science and technology must be fluent in English since it has become the de facto language in these fields. As a result, the need for effective English language instruction tailored to the specific needs of informatics students is becoming increasingly apparent.

A subset of English language instruction known as English for Specific Purposes (ESP) concentrates on the special linguistic needs of certain fields, such as informatics. According to Hutchinson and Waters (1987), ESP is made to cater to the unique requirements of students by emphasizing the language and abilities required for their field of study. Within the field of informatics, this may entail the use of specialist jargon, proficiency with technical writing, and the capacity to understand and generate intricate technological writings.

Furthermore, it has been determined that Task-Based Language Teaching (TBLT) is a successful method for teaching English in specialist domains like informatics. The utilization of authentic tasks that mirror real-world situations that students would face in their professional careers is emphasized by TBLT. According to Ellis (2003), by giving students meaningful tasks that necessitate the use of the target language in context, TBLT can aid in the development of students' pragmatic and linguistic competence.

METHOD

This research employed a quantitative survey design to gather data on the students' preferences and perceptions regarding English language learning. The survey included multiple-choice questions, allowing participants to select more than one option where applicable. This design facilitated the collection of broad and diverse responses from the participants, providing comprehensive insights into their learning preferences.

The students were provided with the survey in an organized manner and told to answer all of the questions truthfully. The methodology employed for data collection guaranteed anonymity and fostered sincere answers by highlighting the absence of either right or wrong responses. The most popular media and activities for each language skill were then determined by compiling and analyzing the replies. Descriptive statistics, such as percentages, were used in the data compilation process to provide a clear picture of the needs and preferences of the students. The purpose of this investigation was to guide the creation of a program in English that is specific to each student, meets their preferences, and improves their language learning process.

For example, the exercises that participants felt improved their vocabulary, speaking, listening, writing, and reading the most were the subject of questions.In each section, there were questions about the best materials and exercises to improve specific language skills. For example, the exercises that participants felt most improved their vocabulary, speaking, listening, writing, and reading were questioned. The study also gathered information about the teaching styles, classroom layouts, and advantages that students thought coming from an English background would have for their field of informatics.

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RESULT AND DISCUSSION

Vocabulary Development

The majority of pupils (76.2%) believe that learning new words is best accomplished through playing games. Exercise practice was selected by 47.6% of students, making it another popular choice. 33.3% of students said that discussions and role-playing/simulation exercises were beneficial. Just 9.5% and 14.3% of participants, respectively, indicated that they liked lectures and group projects. Merely 4.8% of participants mentioned reading and writing assignments as advantageous pursuits.

Based on the survey's findings, students can improve their vocabulary most

effectively by playing games. Games were chosen by a huge majority of respondents —76.2% — as their favored approach. Engaging activities are very important for vocabulary development, and games may be vivid, intriguing, and participatory. It implies that picking up new vocabulary can be more enjoyable and memorable.

Table 1. Learning Activities to Improve Vocabulary

Activity	Percentage (%)
Discussion	33.3
Group Work	9.5
Practicing Exercises	47.6
Simulation/Role Play	33.3
Lecture	14.3
Games	76.2
Others (Reading & Writing Practice)	4.8

Listening Improvement

81.0% of students reported that watching YouTube videos was the most beneficial exercise for improving listening skills. Podcast consumption was particularly noteworthy, as 38.1% of respondents chose this media. 33.3% of students found that using multimedia to facilitate class discussions was effective. A small percentage of students (4.8% each) recommended music and action movies as additional useful strategies.

Table 2. Learning Activities to Improve Listening

Activity	Percentage (%)
Listening to Podcasts	38.1
Watching YouTube Videos	81.0
Using Multimedia for Discussion	33.3
Others (Songs, Action Movies)	4.8

When it relates to speaking skills, 57.1% of students claimed that role-playing, or simulation, and storytelling were both very effective. 42.9% of students chose games, while 33.3% preferred individual presentations. Of the students, 14.3% thought that the class discussions and English debates were advantageous, whereas 33.3% thought the opposite. Only 9.5% of respondents thought oral book reports were effective, making them the least popular. With 57.1% of the votes, narrative and simulation/role play are thought to be the most helpful exercises for improving speaking skills. Through these exercises, children can practice speaking in authentic and imaginative settings in a hands-on and participatory way. Role-playing enables the practice of conversational skills in a variety of contexts, while storytelling promotes the use of language in an organized and creative way, role play enables the practice of conversational skills in a variety of contexts.

Table 3. Learning Activities to Improve Speaking

Activity	Percentage (%)
Simulation/Role Play	57.1
Group Discussion	14.3
Individual Presentation	33.3
Games	42.9
English Debate	33.3
Storytelling	57.1
Oral Book Report	9.5

Writing Improvement

Chatting was ranked as the most effective activity by 71.4% of students in improving writing skills. Students agreed that writing essays and diaries was beneficial, with 38.1% and 33.3%, respectively. 33.3% of students selected emailing friends. Writing blogs and summarizing articles from newspapers or magazines were less popular activities; only 4.8% and 28.6% of students, respectively, thought that these tasks were effective. According to 71.4% of students, chatting is the best exercise for developing writing skills. This choice highlights the value of regular, informal writing practice, which interacting encourages. The relaxed atmosphere of conversation might help students feel less pressure to write, which will eventually lead to better writing fluency and an easier time expressing themselves.

Table 4. Learning Activities to Improve Writing

Activity	Percentage (%)
Sending Emails	33.3
Chatting	71.4
Writing Diaries	38.1
Writing Essays	33.3
Developing Blog Content	4.8
Summarizing Newspaper/ Magazine/ Articles	28.6

Reading Improvement

Reading articles from newspapers or magazines was deemed the most helpful reading activity by 61.9% of the students. For 42.9% of students, reading aloud was good, and for 33.3%, having discussions with others about articles was helpful. Just 4.8% of students chose to speed read or watch movies with English subtitles, which was less popular. 61.9% of students responded that reading articles from newspapers or magazines is the most beneficial practice for improving reading skills. The list below highlights the importance of reading a variety of real texts that expose readers to a range of topics, languages, and writing styles. Reading articles from periodicals and newspapers can help students become more proficient readers and increase their understanding of a wide range of topics and current issues.

Table 5. Learning Activities to Improve Reading

Activity	Percentage (%)
Reading Newspaper/Magazine Articles	61.9
Speed Reading	4.8
Reading Aloud	42.9
Group Discussion on Articles	33.3
Others (Subtitles in Movies)	4.8

Preferred Learning Media

The study also identified the learning media preferences of the students. In terms of listening skills, 61.9% considered songs worked well, whereas 76.2% preferred films. When it was about speaking abilities, voice chat was chosen by 66.7% of students, followed by audio (42.9%) and video clips (38.1%). The two methods that improved writing skills the most were note programs (71.4%) and videos (38.1%). Online resources were most frequently used for reading (52.4%), followed by digital libraries (42.9%).

The Preferences of Students in English Classes

A noteworthy 76.2% of students said that they preferred an education in both Indonesian and English. The majority of respondents (90.5%) said that English classes should start at the beginning of the day. Of all the instructional methods, group discussions were the most popular (52.4%), followed by U-shaped seating arrangements (42.9%). A combination of softcopy and hardcopy resources, as well as materials from different digital sources, were preferred by students (42.9%). 57.1% of students stated that learning English will provide them with greater opportunity to compete internationally. Furthermore, 57.1% of students indicated that speaking skills needed to be improved the most. This made speaking skills the area that required the most attention.

The analysis of the questionnaire results provides valuable insights into the preferences and needs of Informatics students regarding English language learning. The results emphasize the value of interesting and dynamic activities for students with different language proficiency levels. Games are the most successful activity for vocabulary development. This suggests that adding gamified learning activities can improve vocabulary engagement and retention significantly. Instructors should consider integrating vocabulary games into their curriculum to leverage this preference.

The preference for YouTube videos in terms of listening skills indicates that multimedia resources—especially videos—are very effective at improving listening comprehension. Teachers should accommodate this preference and improve students' listening skills by incorporating a variety of video content, such as podcasts, movies, and educational YouTube channels. Speaking skills—both

simulation/role play and storytelling activities—were rated equally effective. These activities offer students realistic and immersive opportunities to practice spoken English in a controlled environment. Using these strategies in the classroom can help students become more confident and fluent speakers.

Chatting is the most productive activity when it comes to writing. This suggests a predilection for conversational and casual writing styles. Instructors can maintain student engagement while enhancing writing abilities by encouraging peer-to-peer contact using chat-based systems. Reading articles from newspapers or magazines was thought to be the most effective way to improve reading skills. This choice emphasizes how crucial it is to give kids access to real reading resources. To help students become more proficient readers and critical thinkers, educators should give them access to a wide variety of reading materials, such as online journals, print newspapers, and magazines.

The preferences of students for the format and method of instruction in English classrooms were also investigated in the study. A sizable majority favored using both English and Indonesian as the instruction language, indicating that a bilingual approach can aid in closing comprehension gaps and improve learning effectiveness. Another essential element supporting English sessions in the morning session was timing, maybe because of increased energy and improved focus in the early hours of the day. Group talks were the most preferred instructional style, indicating a preference for this cooperative approach. This suggests that learning activities that are interactive and peer-based are highly appreciated for their capacity to promote deeper comprehension and involvement.

Students favored a U-shaped seating arrangement in the classroom, probably because it encouraged eye contact and engagement with peers and the teacher. This preference implies that setting up the classroom to encourage collaboration and diversity can improve the educational process. Students responded that they preferred a combination of hardcopy, softcopy, and other digital sources when it came to learning materials. This highlights the significance of a wide range of readily accessible learning materials that accommodate various learning preferences and styles.

Furthermore, students emphasized how learning English would improve their chances of competing internationally. This emphasizes how crucial fluency in English is for improving job opportunities and maintaining competitiveness on a worldwide scale. Remarkably, speaking abilities were found to require the most development. This shows that to close this gap, the curriculum should give special attention to solutions that help students improve their speaking abilities.

CONCLUSION

In conclusion, the study's conclusions offer insightful information about the particular requirements and preferences of informatics students when it comes to

learning English. The lecturers may create a more effective and interesting learning environment that supports students' language development and gets them ready for global possibilities by matching instructional strategies, media, and class structures with these preferences.

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