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Development of English Teaching Materials Using the ADDIE Model at ITB STIKOM Bali

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Abstract--The development of effective teaching materials is essential to support English language learning in higher education, particularly for students in technology-oriented programs. This study aimed to develop English teaching materials using the ADDIE instructional design model for first-semester students at ITB STIKOM Bali. A developmental research approach was employed following the five stages of the ADDIE model: Analysis, Design, Development, Implementation, and Evaluation. The teaching materials were delivered through multimedia-based PowerPoint presentations integrating reading, listening, speaking, and writing activities related to information technology contexts. Students' performance was evaluated using a five-scale rubric covering organization, vocabulary and grammar, fluency, and body language. The results indicated a mean overall score of **3.78**, with **87.5% of students** achieving at least a moderate level of performance. Student feedback further revealed that **90.6%** of participants provided positive responses toward the teaching materials. These findings suggest that the ADDIE model offers a systematic and effective framework for developing English teaching materials in higher education settings.

Keywords--ADDIE model, English teaching materials, higher education.

I. Introduction

The development of teaching materials plays a crucial role in ensuring effective learning outcomes, particularly in higher education, where students are expected to acquire both academic and professional competencies. Well-designed instructional materials help align learning objectives with curriculum demands, learners' needs, and advancements in information technology (Sanjaya, 2008). In

the Indonesian higher education context, educators are required to design structured learning plans that include appropriate learning resources to support instructional activities.

According to the Regulation of the Minister of National Education No. 41 of 2007 concerning Process Standards, educators are required to develop lesson plans that incorporate learning objectives, instructional activities, assessment strategies, and learning resources. Teaching materials are one of the most essential components of this framework. These materials may be derived from various sources, including textbooks, online resources, professional experiences, and authentic materials relevant to students' academic disciplines (O'Flaherty & Phillips, 2015).

Learning resources can be categorized into two types: those that are deliberately designed (*by design*) and those that are utilized from existing environments (*by utilization*). Designed learning resources are intentionally developed as part of an instructional system to facilitate structured and formal learning experiences. Such resources may include messages, people, materials, tools, techniques, and learning environments (AECT, 1977). The Ministry of National Education (2008) further defines teaching materials as information, equipment, and texts required by instructors for planning, implementing, and evaluating instruction. Therefore, effective teaching requires carefully prepared instructional materials that support learning objectives and student engagement.

In recent years, digital presentation tools have become increasingly popular in instructional settings. Microsoft PowerPoint, one of the most widely used presentation applications, offers flexibility in integrating multimedia elements such as text, images, audio, and video. Moira (2006) emphasized that PowerPoint facilitates the creation of electronic presentations without requiring advanced programming skills and allows instructors to integrate content from other applications, such as Microsoft Word and Excel. When used appropriately, PowerPoint can enhance students' attention and comprehension by presenting information in a visually engaging manner.

To ensure systematic and effective development of teaching materials, instructional design models are often employed. One of the most widely recognized and adaptable models is the ADDIE model, which consists of five stages: Analysis, Design, Development, Implementation, and Evaluation. Gustafson and Branch (2002) argued that ADDIE provides a comprehensive framework for instructional development by emphasizing learner needs, instructional effectiveness, and continuous evaluation. Due to its flexibility and structured nature, the ADDIE model remains highly relevant for developing instructional materials across various educational contexts.

Therefore, this study aims to develop English teaching materials for the English course at ITB STIKOM Bali using the ADDIE instructional design model. The study focuses on describing each stage of the ADDIE process and examining how the developed materials support students' English learning, particularly in relation to information technology-related content (Nadiyah & Faaizah, 2015).

II. Materials and Method

This study employed a developmental research approach using the ADDIE instructional design model. The participants were first-semester students at ITB STIKOM Bali, consisting of 32 students aged between 18 and 20 years. The ADDIE model guided the systematic development of English teaching materials tailored to students' academic and professional needs in the field of information technology.

1. Analysis Phase

The analysis phase involved identifying learners' characteristics, prior knowledge, and learning needs. At this stage, students' existing competencies included introducing personal identity, identifying computer hardware and software in English, and writing basic computer-related terminology. The targeted learning competency was students' ability to use vocabulary related to computer memory in spoken dialogues. The minimum achievement indicator was students' ability to present a dialogue using appropriate vocabulary fluently and accurately.

2. Design Phase

During the design phase, instructional objectives, learning activities, and assessment strategies were formulated. The primary teaching materials included the *Career Paths: Information Technology* module published by Express Publishing (2011) and PowerPoint presentations designed to support interactive learning.

3. Development Phase

In the development phase, a set of 13 PowerPoint slides was created. The materials were adapted and expanded from the selected module and supplemented with additional online resources. Various learning activities were embedded in the slides, including reading comprehension, vocabulary exercises, listening tasks, role plays, and writing activities. A performance-based assessment rubric was also developed to evaluate students' achievement.

4. Implementation Phase

The developed teaching materials were implemented in classroom instruction. Students engaged in multiple English language skills, including reading, listening, speaking, and writing. Activities included reading texts and answering comprehension questions, memorizing and applying vocabulary related to computer memory, completing listening tasks, performing dialogues, and writing advice related to computer storage performance.

3. ClearPic Troubleshooting Guide

Certain memory requirements are necessary to install and run ClearPic. Check that the computer has at least 500 MB of RAM available. For optimal performance, make sure the computer's CPU has a bit size of at least 32 bits. It should run at a bus speed of 800 MHz.

There are several options to fix problems with limited memory. One, is to limit the number of programs running at the same time.

Another, is to increase the amount of RAM. First, determine whether your computer uses SIMMs or DIMMs. Make sure that the memory's bus speed matches that of the computer. Purchase the appropriate amount of RAM and attach it to the motherboard.

You can also increase your computer's virtual memory. This temporarily stores data on a paging file on the computer's hard drive. To add virtual memory, click on the "My Computer" icon. Under "Properties," increase the maximum memory amount.

Picture 1. Reading Material

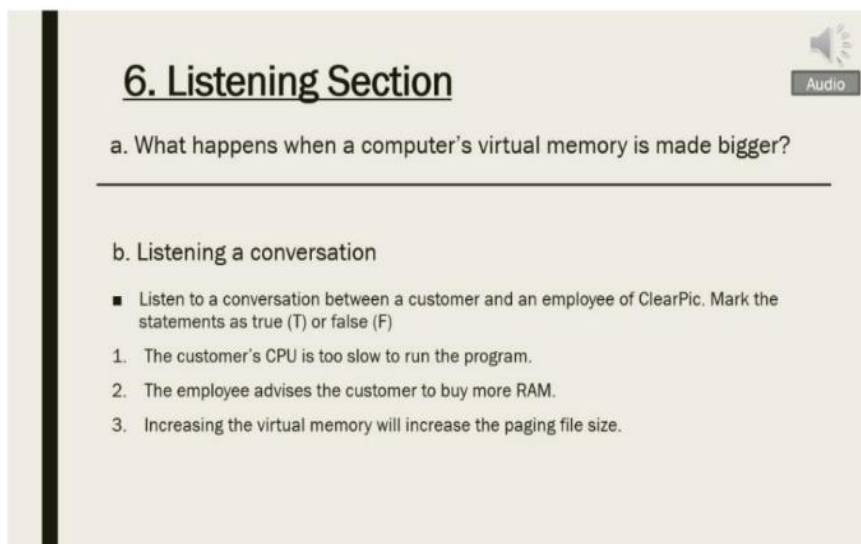
Exercises on vocabulary related to computer memory were also provided. In this picture, the definitions of the presented vocabulary were memorized by the students.


4. Vocabulary Focus (1)

1. MHz	→	A. Where data that doesn't fit in the RAM is stored.
2. SIMM	→	B. The main circuit board in a computer.
3. Motherboard	→	C. A unit of measurement that measures the speed of a CPU.
4. DIMM	→	D. A data storage method that stores data on the hard drive.
5. Virtual memory	→	E. The smallest unit of computer data.
6. Paging file	→	F. A memory module that sends up to 32 bits of data to a CPU.
7. Bit	→	G. A memory module that sends up to 64 bits of data to a CPU.

Picture 2. Vocabulary Material

Another skill addressed in this material was listening to incomplete dialogues. Students were assigned to identify the correct answers based on the audio played. In addition, incomplete conversations were completed by listening to a dialogue.



6. Listening Section 

a. What happens when a computer's virtual memory is made bigger?

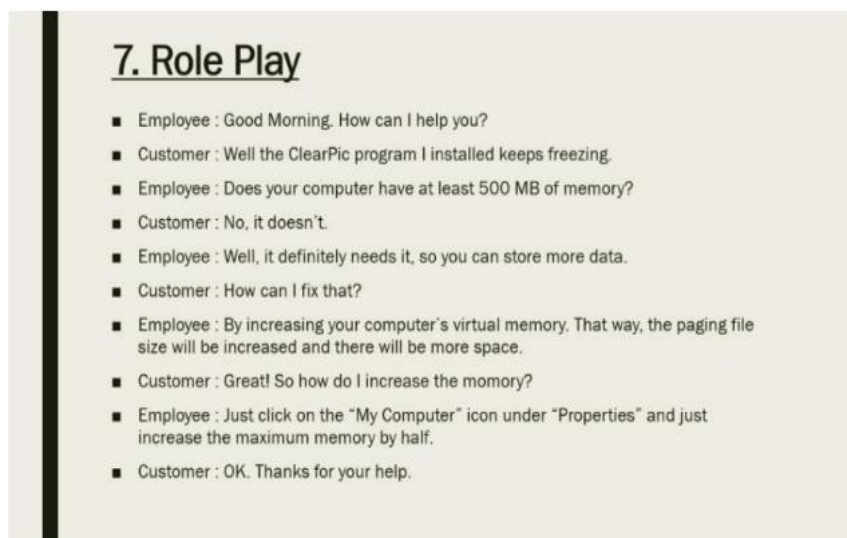
b. Listening a conversation

- Listen to a conversation between a customer and an employee of ClearPic. Mark the statements as true (T) or false (F)

1. The customer's CPU is too slow to run the program.
2. The employee advises the customer to buy more RAM.
3. Increasing the virtual memory will increase the paging file size.

Picture 3. Listening to Dialog

After the incomplete dialogues were completed, they were practiced in front of the class. The dialogues were memorized and performed fluently.

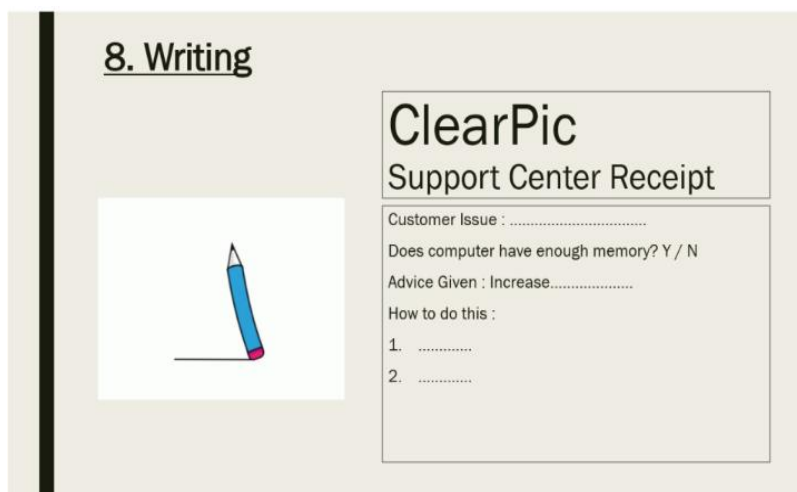


7. Role Play

- Employee : Good Morning. How can I help you?
- Customer : Well the ClearPic program I installed keeps freezing.
- Employee : Does your computer have at least 500 MB of memory?
- Customer : No, it doesn't.
- Employee : Well, it definitely needs it, so you can store more data.
- Customer : How can I fix that?
- Employee : By increasing your computer's virtual memory. That way, the paging file size will be increased and there will be more space.
- Customer : Great! So how do I increase the momory?
- Employee : Just click on the "My Computer" icon under "Properties" and just increase the maximum memory by half.
- Customer : OK. Thanks for your help.

Picture 4. Role Play

In the final section, writing skills were addressed. Based on the previously conducted dialogue, suggestions and advice for improving computer storage performance were drafted.



Picture 5. Writing Material

To determine whether the learning objectives were achieved, student presentations were assessed using a five-point scoring rubric. The rubric was specifically applied during students' dialogue presentations.

Table 1
Assessment Rubric

Assessment Areas	1 (Very Low)	2 (Low)	3 (Moderate)	4 (Good)	5 (Very Good)
Organization					
Vocabulary and Grammar					
Fluency					
Body Language and Eye Contact					
Total Score					

5. Evaluation Phase

Evaluation was conducted through students' performance in presenting dialogues, assessed using a five-scale rubric covering organization, vocabulary and grammar, fluency, and body language. Students were considered successful if they achieved at least a moderate average score. Additionally, students were asked to provide feedback on the teaching materials to assess their learning satisfaction

III. Results and Discussion

Students' performance in presenting dialogues was evaluated using a five-scale rubric covering organization, vocabulary and grammar, fluency, and body language. The results showed that the mean score across all assessment areas was 3.78, indicating a good level of achievement. Specifically, the average score for organization was 3.75, vocabulary and grammar 3.82, fluency 3.69, and body

language 3.86. Based on the assessment criteria, students were considered successful if they achieved a minimum average score of 3.00 (moderate level). The findings revealed that 87.5% of the students met or exceeded this criterion, while 12.5% scored below the moderate level.

In addition to performance assessment, student feedback on the teaching materials was collected through a questionnaire. The results indicated that 90.6% of students expressed positive responses toward the teaching materials, particularly in terms of clarity, relevance, and learning support. These results suggest that the developed teaching materials were effective in supporting students' learning and engagement (Candlin et al., 2002).

IV. Conclusion

This study concludes that the ADDIE instructional design model is effective for developing English teaching materials in higher education contexts, particularly for first-semester students at ITB STIKOM Bali. The systematic stages of analysis, design, development, implementation, and evaluation enabled the teaching materials to be aligned with students' learning needs and course objectives. The quantitative results demonstrated that most students achieved at least a moderate level of performance, indicating that the developed materials supported students' vocabulary development and communicative skills. Additionally, students' positive responses toward the teaching materials suggest that multimedia-based instructional resources can enhance learning engagement. These findings indicate that the ADDIE model provides a practical and adaptable framework for instructional material development in English language teaching. Future research may explore the application of this model in different learning contexts or with larger participant groups to further validate its effectiveness.

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