



THE ADOPTION OF THE ADDIE MODEL IN DESIGNING AN INSTRUCTIONAL MODULE: THE CASE OF MALAY LANGUAGE REMOVE STUDENTS

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Abstract

This study aims to examine the process involved in designing an instructional module based on the ADDIE model which was developed by Dick & Carey (1996). An instructional module is one of the main tools in the teaching and learning (T&L) process of a subject. Therefore, the design of modules needs to be based on an instructional model that details the phases of the process carefully and systematically. Thus, this study explores the use of the ADDIE model in designing an instructional module for the subject of the Malay language at the remedial level. The ADDIE model consists of five phases: namely analysis, design, development, implementation, and evaluation. The use of the ADDIE model in designing the instructional module has helped in meeting the objectives of teaching and learning as the model uses a systematic approach that fulfills the needs of students. It is hoped that this module can help improve the mastery of basic reading and writing skills for students.

Keywords: instructional module, remedial, remove students, reading, writing

Introduction

Many educators overlook the problem of the mastery of basic reading and writing skills among removed students (students from Chinese and Tamil medium schools who are placed in a transition year to acquire sufficient Bahasa Melayu (hereafter Malay language) proficiency before they are placed in secondary schools). For some, they consider these students to be slow learners who are weak in one or two subjects or certain basic skills. There is a need for a special intervention program to help remove students who have problems mastering basic reading and writing skills in the Malay language. This is because the development of a person's language will directly affect their cognitive ability and subsequently influence their academic performance.

The design of an instructional module is pertinent to the success of the teaching and learning process of a subject. An instructional module is defined as a learning material with detailed teaching practices for the development, evaluation, and maintenance of learning environments that facilitate the learning of a unit of study (Hassan & Rahman, 2011; Ramli & Mahmud, 2006; Richey, 1986;



Shariffudin, 2007). These instructional design models are usually based on learning theories such as behaviorism, cognitivism, and constructivism. This study investigates the effectiveness of an instructional module analyzed using the ADDIE model (Dick & Carey, 1996). It focuses on the instructional module designed for remedial Malay language specifically for remove students at an urban school in Kuala Lumpur. The design of the module is based on theories and models that are suitable for the teaching and learning of the Malay language that help facilitate students to acquire skills, and knowledge and display positive attitudes as well as increase the interest of the students in learning the Malay language. In addition, it is also necessary to recommend optimal teaching methods that can transform knowledge, skills, and students' affectivity (Dick & Reiser, 1989).

Despite the many theories and models proposed by various researchers, the ADDIE model (Dick & Carey, 1996) is used in the design of the module for teaching remedial Malay language to overcome the problem in the mastery of basic reading and writing skills among remove students because the ADDIE model is very thorough and system oriented in producing a good teaching module design. Thus, this study will focus on the process of how the instructional module for remedial Malay language targeted for removing students at an urban school in Kuala Lumpur was designed.

The objective of this study is to explore and discuss the adoption of the ADDIE model in the development of an instructional module for remedial Malay language for removing students. The importance of this study signifies how the ADDIE model is used in designing an instructional module. In addition, it also explains the content of the module aimed at achieving the teaching and learning objectives effectively through a systematic approach in line with the needs of the removed students. Besides, it also will be the basis of further research, especially in the field of teaching Malay as a second language.

This study is confined to the production of an instructional module for teaching remedial Malay language to remove students using the ADDIE model which consists of five phases: namely analysis, design, development, implementation, and evaluation.

Literature Review

The reading skill is dynamic in nature, thus requiring active and meaningful communication between both reader and writer. Understanding what is being read very much depends on a person's knowledge of the language, cognitive style, and reading experience. In addition, the writing ability is a process of channeling information that is mechanical and systematic which further encapsulates the goals, language use, audience, and writing style. Accordingly, the ability to read and write is a basic skill that is significant for effective teaching and learning processes in various disciplines.

Performance achievements and having high ability of reading and writing skills can improve students' proficiency in learning the Malay language as well as other subjects (Jamian, 2011). According to Jamian & Zarin (2008), problems in mastering reading and writing skills cause poor students uninterested in learning the subject of the Malay language. Common reading problems include difficulty in recognizing uppercase and lowercase letters while reading, articulating the correct sound of the words read, and pronouncing the words spelled. A student who does

not master reading skills will also have problems with oral skills (Jamian, 2011; Peng, 2016).

The situation is even more significant in national-type Chinese and national-type Tamil schools where the Malay language is the second language of Chinese and Indian students. The problem of not using the Malay language is unavoidable as these students are not used to speaking in the Malay language before entering primary school. The problems of comprehending and speaking they face justify the fact that they are unaccustomed to a new language. The problems faced by Chinese students in learning the Malay language are noted in a study by Peng and Luck (2009) who found Chinese pupils in the national-type Chinese school failed to master the pronunciation and writing in the Malay language. The inability to read certainly affects their interest to learn the language, especially when Chinese students believe that the Malay language is not an easy subject to study (Ibrahim & Mahamod, 2017; Jamian, 2011).

Nevertheless, the study conducted by Jamian (2011) shows that problems associated with reading skills can be mitigated by planning interesting and conducive instructional activities by teachers. In addition, a comfortable learning environment, motivation, and encouragement from teachers as well as continuous reading practice can also improve students' reading skills. The results of this study found that additional reading exercises can improve students' reading skills and drills that are conducted regularly in reading can help with the pronunciation and fluency of students in reading. In addition, encouragement from teachers and the use of relevant teaching aids can make the atmosphere of reading activities more effective and meaningful to students. The selection of appropriate teaching and learning methods and techniques for remedial reading and writing which meet the needs of the students is very important since it can make it easier for students to understand and master the skills taught. Drills or repeated exercises can strengthen students' memory and understanding of these skills.

The effectiveness of the ADDIE model has been proven in developing effective and engaging teaching modules. In a study conducted by Lee (2006) adopting the ADDIE model in analyzing the needs and interests of students, the model was identified as very effective and efficient in attracting students and motivating students in their learning.

Method

The study explores the development of a Malay Language instructional module for remedial students. The research team involves six lecturers from a teacher education institute in Kuala Lumpur and eight teachers from a target urban school. The research team conducted several series of discussions, briefs, and workshops to develop the module grounded in the ADDIE model (Dick & Carey, 1996; White & Marsh, 2006) over a period of five months. According to them, instructional design is a systematic process to design, develop, implement, and evaluate instructions. In education, instructional design is a systematic approach that uses technology to enhance students to achieve desired learning outcomes. The focus of the instructional design is to produce competent and effective instructions which will enable students to obtain the skills, knowledge, and desired attitudes.

The ADDIE model was adopted in developing the remedial instructional Malay language module because it is a generic model that aids in the development

of other models. The model is highly reliable as it grounds many other instructional models which use all five elements in the ADDIE model: analysis, design, development, implementation, and evaluation (Larson & Lockee, 2014; McKenney & Reeves, 2012; Morrison, Ross & Kemp, 2007).

Findings and discussion

The ADDIE model is mainly grounded in the behaviorism theory, an idea developed by Dick and Carry (1996) for developing learning systems. The term ADDIE is an acronym for Analysis (analysis), Design (design), Development (development), Implementation (implementation), and Evaluation (evaluation). From the acronym ADDIE, it's noted that the model applies five levels or elements of interrelated activities which propel the practice of developing teaching programs or teaching modules. Each of these elements or levels does not essentially follow a progressive pattern. Rather, the element or level informs one another in a design system.

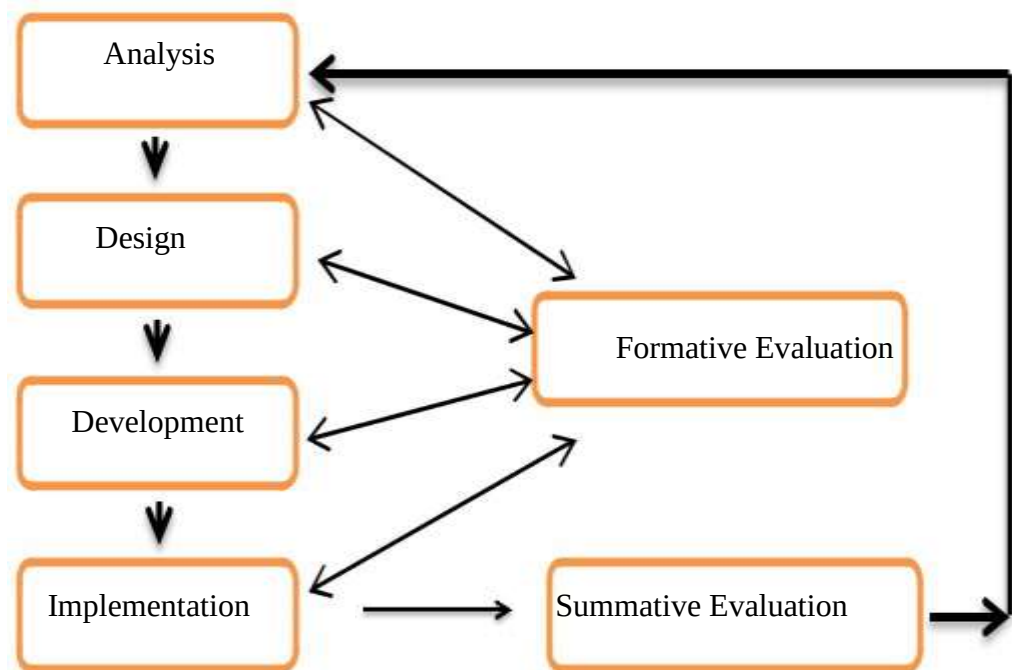


Figure 1. The process of developing a teaching module according to the ADDIE model (Dick & Carry, 1996)

Figure 1 describes the process of designing an instructional module based on the ADDIE Model (Dick & Carry, 1996). It clearly shows that the ADDIE model outlines a comprehensive process of instructional design activities and this is an advantage of the ADDIE model over other models.

Analysis

The analytical stage is the basis for all other stages in instructional design aimed at identifying objectives, content, suitability of targets, and achievable teaching and learning models (Gustafson & Branch, 2007; Larson & Lockee, 2014; McKenney & Reeves, 2012; Morrison, Ross & Kemp, 2017). At this stage, several

analyses are conducted, and among the most important is the identification of problems. The purpose of this process is to ensure that the instructional design produced meets the actual needs of the students. Related problems can be identified through various methods or techniques such as interviews, observations, surveys, questionnaires, and so on.

In summary, in the context of the current study, the analysis process involved three main aspects:

1. Analysis of students
2. Analysis of the learning environment
3. Analysis to identify teaching goals

In obtaining information related to these three main aspects, the key questions that can be asked during the analysis process are:

1. Who are the students who will be involved in the use of the module?
2. What is the student's background knowledge of the Malay language?
3. To what extent is their proficiency in languages other than the Malay language?
4. What is their interest in studying languages other than the Malay language?
5. What are the skills required to meet their interests and needs in the Malay language?
6. What are the materials that are appropriate to be used in grasping Malay language skills?
7. What effective form of teaching methodology is required to deliver teaching modules for the remedial Malay language?
8. What forms of assessment test skills are learned for the remedial Malay language?
9. What are the other problems that can interfere with and affect the process of teaching and learning in achieving the goals and objectives of the module?

These are some of the important questions that need to be answered in the initial stage of the study. All outputs for this phase will be inputs for the design phase and beyond.

Design

Design is the second phase in designing lessons according to the ADDIE module. This second phase aims to determine and design the instructional methods to be used. In this study, this phase addresses the issues raised by the analysis phase. After identifying the general goals of teaching and analyzing student information, more specific learning objectives need to be constructed to explain in more detail the researcher's expectations of the student's knowledge and abilities. Among the elements of this stage are constructing learning objectives and defining the teaching and learning model. The findings of this phase become input for the third stage, which is development.

To construct learning objectives, each focus from the analysis stages is converted into the learning objectives of the activity designed. The method of research and development in the model is determined by exploring cooperative learning methods, problem-solving, games, simulations, discussions, exercises, tutorials, demonstrations, or presentations. Tools and teaching aids used are also

determined in this stage such as using audio, video, computer, internet, and existing or concrete materials. In this study, some of the principles of learning theories based on Piaget's theory of cognitive development, Vygotsky's sociocultural theory, and Froebel's play theory determined the methods used in the teaching module. The pertinent principles of the teaching and learning session are shown in Table 1 on the following page:

Table 1. Teaching and learning principles of remedial Malay language for Remove students

No.	Subject	Principle
1.	Students	1. Each student is unique and has potential 2. Active involvement of students 3. Freedom of choosing materials 4. Equality in obtaining knowledge 5. Planning of individual learning
2.	Parents	1. Involvement of parents and family 2. Inclusion of reading environment in the home 3. Daily reading routine
3.	Teacher	1. Integrated approach 2. Fun learning 3. Learning through play 4. Encouraging creativity 5. Continuous assessment - A balance between assisted learning and 6. exploration 7. Room for the enrichment and early remedial needs 8. Multiple media usage. 9. Multiple learning techniques 10. Starts with existing knowledge and continues.
4.	Environment	1. Guarantees students' well-being for acceptance 2. Fun and stimulating environment 3. Adults as role models 4. Appreciating multiculturalism - A conducive learning environment that supports the 5. curriculum 6. Life-long internalization of the Malay language

Development

The developmental stage refers to the provision of learning to transition pupils to achieve the learning objectives set at the design stage. This stage involves the construction of learning plans, teaching aids, and supporting documents. In this study, the teaching module included an activity execution plan (AEP) for each focal component of remedial Malay language (the alphabet, vowels, syllables, words, and simple sentences) involving reading and writing skills.

To design the AEP, the researchers collaborated with teachers who taught the subject in a particular school. This ensures the development of the modules is accurate and of quality because these teachers are knowledgeable and experienced in the field of language. Each member of the research group is divided into 6 groups according to predetermined skills that were derived through a series of discussions, briefs, and workshops that lasted for five months in the development of teaching modules remedial Malay language more systematic and comprehensive.

Implementation

The implementation stage refers to the actual delivery of the teaching and learning model (TaLM) which is carried out effectively and efficiently either in the classroom, laboratory, or via computer. Usually, if the planning is good during the analysis, design, and development stages, the implementation stage of the TaLM should run smoothly and can motivate students. On the other hand, the implementation of the TaLM is unsuccessful when students do not understand, are not enthusiastic, and are not involved in the learning process. This happens when the material is too challenging or too easy for students which either could demotivate or bore them.

Evaluation

The evaluation stage measures the effectiveness of the execution of TaLM from one stage to another. This stage consists of two types of assessment, namely formative assessment and summative assessment. A formative assessment was conducted during a specific stage and from one stage to another. The purpose of formative evaluation is to increase and improve the level of effectiveness of the TaLM which has been designed before the actual implementation of the final version. In this study, formative evaluation was conducted through content validity for the analysis, design, development, and implementation stages.

Content validity refers to the extent to which an instrument or module can collect data that covers the content of a field under study (Piaw, 2006). To improve the validity of the content of a module, researchers need to obtain views and feedback from external evaluators or expert services. The role of the external evaluator is to evaluate and ensure that the domains contained in a module represent the field of study. Thus, researchers have gained insights and feedback from three external reviewers who are experienced experts in the field of remedial Malay.

Conclusion

The development of teaching modules in Malay is relevant to support and complement the existing curriculum to remove students who are in a transition period. This study has shown that the ADDIE Model is a good framework in designing effective TaLM. Its efficacy in embracing various elements of an effective TaLM supports motivation among the removed students. In addition, the module can be used as the main support for teachers to teach students to read and write more efficiently and optimally. The production of such modules also concurs with Davis' (2014) assertion that educators' teaching requirements can be supported through training, material assistance, and positive experiences with students. This coincides with Lovelace's postulation (2010) that educators need to modify teaching strategies to suit the individual needs of students.

Overall, the development of teaching modules for remedial Malay language is completer and more systematic through the adoption of the ADDIE model at all levels, namely; (i) Analysis; (ii) Design; (iii) Development; (iv) Implementation; and (v) Evaluation. Further research can be conducted on the production of Malay language materials that support the TaLM. In addition, similar research can be conducted on a larger population to yield a better understanding of its efficacy.

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