

CHAPTER II

REVIEW OF RELATED LITERATURE

2.1 Hearing Impaired Learner

El-Zraigat (2013) stated that hearing impaired learner has a small function of all or some parts of hearing ability because someone got problems or lost their hearing ability and it will give the impact on their language development. They are considered as learners with special needs.

Hearing impaired learner is being deprived of the sense of hearing, not only defined that they cannot hear the sounds, but they also have the lack of access to many helpful and promising experiences of both individual and social life as well (Zamfirov & Saeva, 2013).

Deaf learner have troubles in their hearing sense, so, they will get obstacles to respond some outside sounds and face the problems to communicate or deliver their ideas toward peers hearing impaired or normal learner. Those problems will limit individual development, intelligence, and performance competency in society. According to Parhoon, Hassanzadeh, Parhoon, & Movallali, (2014) hearing-impaired learner needs special technique and special education services reflecting their special needs as exceptional learners.

Considering on those experts above, the researcher concludes that hearing impaired child is someone who has lost or breaks some part of or all of his/her hearing sensor so their hearing sense can not be normally functioned, they usually get helped by a hearing aid.

2.2 Vocabulary for Hearing-Impaired Learners

Vocabulary is one of the most important aspects of the language to be learned. Vocabulary has been defined as “the storehouse of word meanings that we draw on to comprehend what is said to us, express our thoughts, or interpret what we read” (Moats, 2005, p. 7). It means that vocabulary is part of the English and vocabulary is needed for the reader to easily understand the English language in the four skills to achieve a certain level of understanding. Based on Karasu, Girgin, Uzuner, & Kaya, (2016) learners who have richer vocabulary knowledge and improved the language level are better in literacy skills.

Hearing impaired learners lack of communication with their peers in the critical area of vocabulary knowledge because of their sensory limitations (Massaro & Light, 2004). Word selection is important especially when we teach learners with low vocabularies; they need to know the words deeply to access the specific content-words they encounter in the text. One central importance of vocabulary knowledge is to understand the world and to gain the language ability. Children experience language delays because of specific language impairment benefit once this level of word knowledge is obtained. It follows that the increase of the effectiveness of vocabulary learning offers a promising opportunity to improve conceptual knowledge and language competence for all individuals, whether or not they get disadvantages because of sensory limitations, learning disabilities, or social condition.

Vocabulary development of hearing impaired individuals have shown that there is a strong relationship between reading comprehension and vocabulary development. Furthermore, in addition to common vocabulary, it is important to

develop occupational vocabulary in hearing impaired learners for their future occupational success. Therefore, it is important to conduct research on vocabulary development for hearing impaired learners. Vocabulary has important aspect which will meet in every competence. Understanding vocabulary will determine the result of knowledge that someone has. Vocabulary can be improved by understanding reading text and it shows someone's intelligent. It is important to learn vocabulary because it improves the skill of English. There are so many advantages if the learners can master vocabulary well.

2.3 Longtion Autorun Application

In this study, the researcher uses Computer Assisted Language Learning (CALL) program—which is Longtion Autorun Application—to develop vocabulary material for hearing impaired learners on the eleventh grade. According to Naraghizadeh & Barimani (2013) Longtion Autorun Application is a Computer Assisted Language Learning (CALL) in modern language teaching and learning arena, it involves the use of technology in the form of computers ranging from software. It means learners can learn language in any context with, through, and around computer technologies. Technology has surely influenced human activities and education. Applying technology to the learning is becoming an important thing. The use of computer in educational setting has increased from the combination of educational needs and technological means. Longtion Autorun Application is increasingly integrated into curricula to promote the development of all skills, especially for vocabulary aspect.

Based on Miles & Ja Kwon (2008) CALL is increasingly seen as an attractive option for learning. Longtione Autorun Application is a powerful visual tool to create professional autoplay interfaces and presentations to your cd/dvds. It is the easiest way to create, edit professional autoplay interface and generate autorun files for cd/dvds, just click, point, place and run. So every material has a good, fast, and simple visual. Autorun is easy to learn by demos and wizards. Even though it is very easy to learn and use, it has everything you need to develop professional software applications. So, every teacher can be easily develop media for English teaching and learning process according to the statement that the researcher thinks about the Longtione Autorun Application. It will be used to create an application of vocabulary material which is interesting and fun for the learners because the way of how to operate the program is simple and easy. It is appropriate for the eleventh grade hearing impaired learners, longtione autorun have 25 objects: panel, tab notebook, tab sheet, group box, scroll box, splitter, button, Image button, label, text, image, bevel, fade button, fade label, fade text, shape, balloon, note, slide show, memo, rich text, web browser, media player, flash player, pdf reader. To make longtione autorun application for interactive vocabulary material, you can mix this application with another application.

2.4 Developing Material

Instructional Design is defined as a procedure of developing an instructional system which can provide a good, well-organized and valuable skill for the learners (McGriff, S.J., 2000). These steps are including how an instruction can fulfill the needs of the learner, proposing the right goal of the study and also

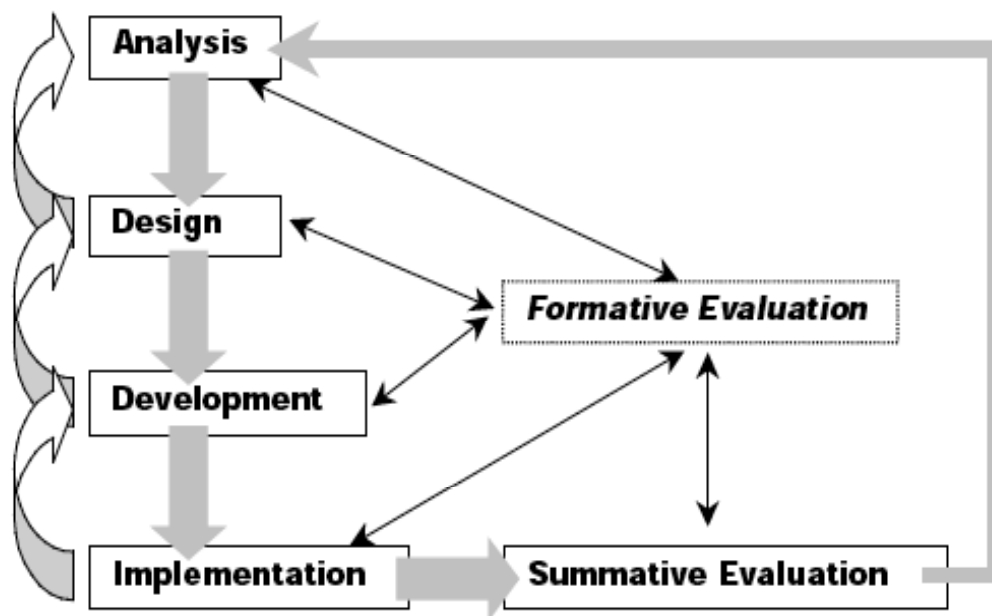
help to improve the learners' ability. The aims are to develop education and training programs in a consistent and reliable fashion.

Based on Sink, D.L. (2014) for the development of instructional design there are some models that are commonly used, instructional design with emphasis on two popular approaches are the first is ADDIE and the second is Dick and Carey. The more explanations about the model will be presented. Before that, let me explain the summary explanation of ADDIE model and Dick & Carey model.

Firstly, the ADDIE model the model was initially developed by Florida State University to explain the processes involved in the formulation of an instructional systems development program for military interservice training that will adequately train individuals to do a particular job and which can also be applied to any interservice curriculum development activity. According to McGriff (2000) ADDIE model is the systematic approach to the Analysis, Design, Development, Implementation, and Evaluation of learning materials and activities. The phase are:

1. Analysis: the analysis phase is the foundation for all other phases of instructional design. The phase may include specific research technique such as needs analysis. These outputs will be the inputs for the design phase.
2. Design: this phase involves using the outputs from the analysis phase to plan a strategy for developing the instruction. The outputs of the design phase will be the inputs for the development phase.

3. **Development:** the phase builds on both the analyze and design phases. During this phase you will develop the instruction, all media that will be used in the instruction, and any supporting documentation, hardware and software.
4. **Implementation:** the phase refers to the actual delivery of the instruction. The purpose of this phase is the effective and efficient delivery of instruction.
5. **Evaluation:** the phase measures the effectiveness and efficiency of the instruction. main goal is to determine the efficiency and success rate of the project. This phase can be broken down into two parts: formative and summative.

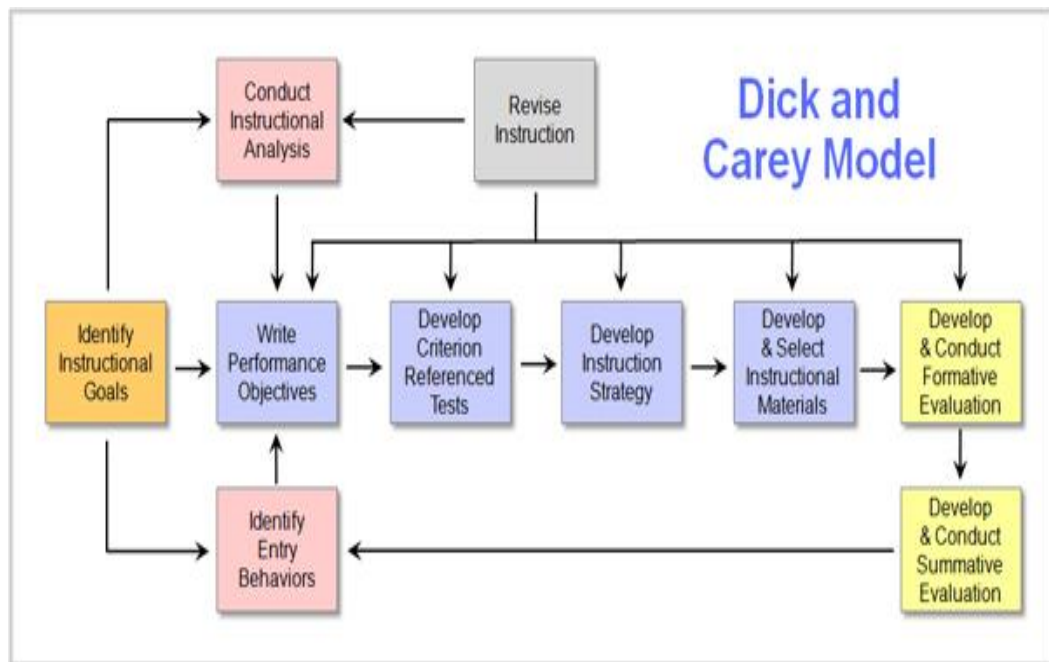


Source: McGriff (2000). *Instructional System Design*.

The second is Dick and Carey Model. The model was originally published in 1978 by Walter Dick and Lou Carey in their book entitled *The Systematic Design of Instruction*. Dick and Carey made a significant contribution to the instructional design field by championing a systems view of instruction. Based on Dick, Carey, and Carey (2014) the phases are:

1. Instructional Goals: identify instructional goal, a goal statement describes a skill, knowledge or attitude that a learner will be expected to acquire. This means that designer is able to, or will be able to, identify what it is the learners need to be learned.
2. Instructional Analysis: conduct instructional analysis, identify what a learner must recall and identify what learner must be able to do to perform particular task. Determining the skills that the learners will need to learn what you plan to teach them.
3. Entry Behaviors and Learner Characteristics: analyze learners and contexts, identify general characteristics of the target audience, including prior skills, prior experience, and basic demographics; identify characteristics directly related to the skill to be taught.
4. Performance Objectives: write performance objectives, objectives consists of a description of the behavior, the condition and criteria. The component of an objective that describes the criteria will be used to judge the learner's performance.
5. Criterion-Referenced Test Items: develop assessment instruments, purpose of entry behavior testing, purpose of pretesting, purpose of post-testing, purpose of practice items/practice problems.
6. Instructional Strategy: begin to outline the lesson plan, develop instructional strategy: pre-instructional activities, content presentation, learner's participation, and assessment.
7. Develop and select instructional materials, and ready for the lesson.

8. Formative Evaluation: design and conduct a formative evaluation of the instruction, designers try to identify areas of the instructional materials that need improvement.
9. Summative Evaluation is Revise phase, this step is all about making sure that when you restart the teaching process, it'll work out.



Source: Dick, Carey, and Carey (2008). *The Systematic Design of Instruction*.

Those models will be compared to find the most suitable one for this research and development. The summary of comparison between ADDIE model and Dick & Carey model is as follows:

1. Each model has its own unique characteristics and elements that make up each phase.
2. The phase of the ADDIE model have a clear meaning and understanding. The phase of Dick and Carey model, it includes much more detail phases.

3. The ADDIE method is set up to evaluate in the fifth and final phase in its approach, this phase consists of two forms of evaluation formative and summative. The Dick and Carey model has evaluations throughout each phase of the method.

The similarity between both the ADDIE and Dick & Carey models of instructional design. The system approaches that are both models are on the input, the output, and the process of designing the curriculum.

In this study, researcher choose ADDIE model in developing material because of some reasons:

1. ADDIE model is the representative of any models.
2. The model has been adopted as the standard method by many instructional designers.
3. Flexibility based on the step that is simple and in systematic structure. So, this model will be easier to be learned.
4. This design model is used by many professional instructional designers for technology-based teaching.
5. ADDIE model is extremely valuable for large and complex teaching designs.
6. It is heavily associated with good quality design, with clear learning objectives, carefully structured content, controlled workloads for faculty and learners, integrated media, relevant learner activities, and assessment strongly tied to the desired learning outcomes.

Here is the detail explanation of ADDIE model in each phase:

2.4.1 ADDIE Model

2.4.1.1 Analyze

According to Lehman (2007) analysis refers to the gathering of information, the tasks to be completed, how the learners will view the content, and the project's overall goals. The phase can be considered as the goal-setting stage.

The outcome of this phase is a need analysis report. In analyzing the need, information is needed to know their need, we can take the data from the observation, interviews, test and questionnaires (Aldoobie, 2015).

Hutchinson and Waters (1987) stated that there are two types of need which should be analyzed. Thus, the need analysis focuses the need into two majors, their target needs and learning needs. The target needs, where the researcher identifies and analyzes what are the learners need in target situation. The learning needs, where the researcher as observer analyzes what the learners' need to support their learning activities. The explanation is below:

2.4.1.1.1 Target Need

Target need is one of the analysis that should be investigated to understand what the learners need to do in target situation. The analysis of target needs of the learners, it is used to know their necessities, lack and wants (Hutchinson and Waters, 1987), they are :

1. Necessities

This target needs refers to the things or necessities that should be possessed by the ones according to the demands of the target situation. This needs mean the competence that the one has to have in order to perform effectively in the target situation.

2. Lacks

Analyzing the lack of someone can be recognized when we have already known what the one has already understood about the target situation. If the lacks of the students have been discovered, then it would be easier for the teacher to design vocabulary material.

3. Wants

Wants defined as the learners' thought about what they want to know and it is very personal and based on the learner perceived needs. Learners' perceived needs are important factor in motivating the learners to learn a subject. The teacher is required to find out what the learners' wants from the teaching and learning process.

2.4.1.1.2 Learning Need

Hutchinson & Waters (1987) stated that learning needs relies on the need, restriction and competency in the learning situations in order to help the learners to achieve their goals in learning. Learning need can infer that learning is about what the learners have to carry out in order to learn in the course, the strategy that should be used in order to learn.

2.4.1.2 Design

In this phase, instructional designers begin to create a framework and create the project in order to meet the goals identified in the analyze phase. So, the result of this stage is a program designed outline (Lehman, 2007).

Danks (2011) stated that the instructional designers collaborates with its stakeholder to complete the analysis step, the design of a support logic model can help clarify the learner requirements, goals, and measures.

According to Aldoobie (2015) the instructional designer in this step thinks about how design instruction can really be effective in ways that facilitate learner's learning and interaction with the materials you create. In design phase the steps of instructional design are:

1. Selecting content
2. Identify instructional strategies
3. Design testing

2.4.1.3 Develop

Lehman (2007) stated that during this stage the instruction topics identified, researched and the program content is determined. This content is then transformed into a variety of products. It is important to remember that it come up with the content that addresses the true learning needs and how the information will be presented.

According to Danks (2011) when the logic model has been designed, the instructional designer develops mechanisms to communicate it to the key stakeholders.

The instructional designers integrate the technology with the educational setting and process. The instructional designer starts to develop and create a good quality factual sample for the instruction design and the materials (Aldoobie, 2015).

2.4.1.4 Implement

The implementation phase is the actual delivery of the instruction created during the development phase (Lehman, 2007). This phase allows the instructional designer to test all materials to determine if they are functional and appropriate for learners.

According to Danks (2011) in this phase the instructional designer implement each of the support functions and monitors progress in order to ensure that the tasks continue to meet needs, contribute to the development of innovative solutions, and facilitate improvement.

According to Aldoobie (2015) this phase is about transforming our plan into action. The instruction should be delivered effectively and efficiently to promote learners' understanding of material, support the learners' mastery of objectives, and ensure the learners' transfer of knowledge in order to achieve the implementation phase.

2.4.1.5 Evaluation

Based on Lehman (2007) the final phase, evaluate and ensures the materials achieved the desired goals. The evaluation strategies described in the logic model, the instructional designer collects data at the end to evaluate whether each of the key strategic goals have been met (Danks, 2011). In this phase, collect participant feedback and take the information to learn how to improve the program and then make the changes necessary for that improvement with something more appropriate.

According to Aldoobie (2015) this phase can be broken down into two parts: First, formative evaluation, happens while learners are conducting the study in each phase of ADDIE model. Second, summative evaluation, at the end of the program. It helps to see the real value of instructional design when the whole instruction for the course is finished. The ADDIE model is an iterative process of instructional design, which means that at each stage the designer can assess the project's elements and revise them if necessary.

2.5 Three Phases Strategy

2.5.1 The History of Three Phases (Pre, Whilst, and Post) Strategy

Once the domain and area of construction have been identified, then the researcher designs a lesson plan. There are some formats of lesson plan. As a good language teacher, they should have good lesson plan which contain three critical components as stated by Rhea (2001) there are domain and area of instruction, learning outcome and materials.

Focus on materials, the teacher should have a variety of ways for learners to connect their experiences to the lesson. According to Hommond (1992) the curriculum design and program planning in school have to be based on: theoretical understanding of language and literacy ; initial and ongoing assessment of learners ; analysis of learners' need and goals ; analysis of demands of language content.

We better understand the ways, conditions, and spirit in which children do their best learning and are able to make school into a place where they can use and

improve the style of thinking and learning natural to them, we may be able to prevent much failure.

There are steps in teaching in order to the learners understand the lesson. It's called Three Phases Strategy (Pre, Whilst, and Post Strategy). Each of phases in Three Phases Strategy is involved learners to have activities when having teaching and learning process.

2.5.2 The Rules of Three Phases (Pre, Whilst, and Post) Strategy

This strategy consists of three stages. There are Pre-Teaching, While-Teaching and Post-Teaching. That can help teacher to prepare learners for and guide them, so that they will learn from them most effectively.

The first is Pre-Teaching, it is focusing on prior knowledge activates of learners. This stage contains of building the context of the topic which should involve the learner in as many ways as possible. One of the purpose is to acknowledge the different contexts, experiences, and background knowledge of learners that will influence how they learn from a topic. According to Jacobs (2010) in the stage of Pre-Teaching, teachers prepare learners for achieving learning goals by providing purposes for learning, activating and organizing broadening learners background knowledge and experience that will be relevant to learning, previewing a lesson's vocabulary and central concepts, promoting s learners' motivation through their development of questions and hypotheses.

The second is While-Teaching, describes what will be learned and how it will be learned. As stated by Jacobs (2010) in the stage of While-Teaching, learners engage in problem-solving, exploration, and practice by engaging in

focused study (e.g., analysis) integrating the “given” they bring to learning process with the new lesson, practicing new skills by following teachers’ models.

The last is Post-Teaching, that is the closing of the lesson. The teacher should reinforce the important generalizations learned from the lesson and regarding assessment. Based on Jacobs (2010) learners set their learning by answers through additional analysis, testing the validity of their generalizations about their learning before assessment, providing learners with means to understand their own learning processes, preparing for evaluation of learning.