

Cognitive Instructional Design (CID) In Proficiency Oriented English Instruction: The Design Principles

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Abstract: English language instruction, as a foreign language, has specific characteristics comparing with other learning instruction. The early language learning put cognitive as the basic of language learning. Learning theory is intricately tied to Instructional Design (ID) which can be seen from the elements that branch from learning theory and fit into the ID. Cognitive learning theory, as an early learning theory, focuses on explaining the cognitive structures, processes and representations that mediate instruction and learning. In the process of designing an instructional model, there are some principles that should be adapted. The four-phase cycle of instruction proposed by Merrill (2007) can be implemented in designing a Cognitive Instructional Design (CID) in proficiency oriented English instruction. The four-phase cycle of instruction consists of demonstration principle, application principle, activation principle and integration principle. This paper discusses the application of four principles in designing proficiency oriented English instruction.

1 INTRODUCTION

English becomes the most important language to be mastered since English is the first international language used all over the world (Sharifian, 2009). The recent condition shows that the importance of English can be seen from many aspects of life that require English proficiency. Data taken from English Proficiency Index (EPI) shows that many countries eager to improve their proficiency of English. In 2013, Indonesia is in 25th position while in 2015 is in 32nd position (First and First, 2015). Furthermore English develops rapidly and very complex in our life. This, of course, demands students' mastery of English to be able to go along with the development in every sector of life. A country with better proficiency in English will have better economic condition as well (McCormick, 2013). This statement indicates that English proficiency influences the economic condition of a country. One of the examples is Singapore, which is in higher level of proficiency than Indonesia, has better economic development. So, that is why many countries have some efforts to improve the quality of English mastery of the citizen. Hongkong, for instance, allocates millions of dollar to design appropriate English instruction and implement

it in courses. Besides, a country with better English proficiency level will be more innovative (Tran, 2015). English has been well developed in other sectors including business and media (Lauder, 2010). English proficiency becomes one of the requirements for joining certain position in business and work field. In media, most of expressions and communications used in media are in English which is generally understood by many people. Those examples show that English proficiency plays important roles in this life.

Looking at the importance of English, in education field, the best model and approach of teaching English is needed to be found and implemented. More students, especially higher education students, learn English in order to take proficiency test rather than to learn English for communication (Li, Zhong and Suen, 2012). In Indonesia, some students in senior high school prepare themselves to take English proficiency test in order to help them enter qualified universities or higher education. Furthermore, students of both senior high school and higher education are interested in taking English proficiency test to get standard score in applying scholarship. Nowadays, there are many kinds of proficiency test such as test of English as Foreign Language (TOEFL), Test of English for

International Communication (TOEIC), International English Language Testing System (IELTS), Business English Certificate (BEC), and many more. One will choose kind of the proficiency test based on his or her need and purpose. In Indonesia, the most popular proficiency test taken by the students is TOEFL (Sulistyo, 2009). Meanwhile, approach and instructional materials for English proficiency oriented have not been discussed deeply.

In the process of learning, an individual will change his or her knowledge or behaviour and it is relatively permanent due to experience. Three major learning theories that commonly used as the basis of designing an instruction are behavioural, cognitive, and social learning theories. Learning theory is used as the framework in Instructional Design (ID). In language instruction, cognitive theory is mostly used as the approach of designing the instruction since in the process of both acquiring and learning of language, cognitive plays the most important roles (Krashen, 1988). English proficiency oriented needs special approach and design since the instruction must be designed based on the need of getting expected score of proficiency test.

2 METHOD

This study is classified into literature review using meta-analysis method. Since the source of data are taken from books and articles of current research results, this study reveals the concept of proficiency oriented of English instruction from the past time and the progress of the proficiency orientation of English instruction. There are three phases of the research; collecting, analysing and synthesizing.

3 DISCUSSION

Instructional Design (ID) and Instructional System Design (ISD) are two common terms used by the designer or instructor in instruction. The definition of Instructional design (ID) is varied in some ways but most of the definitions highlight processes. (Smith and Ragan, 2005) define Instructional Design as “the systematic and reflective process of translating principles of learning and instruction into plans for instructional materials, activities, information sources and evaluation”. This definition underlines ID’s scientific foundations and range of products emanating from ID projects. Meanwhile, (Dick, 2009) simply say that ID is ISD in which ISD process

covers analysis, design, development, implementation, and evaluation.

In the other hand, Instructional Design (ID) is interpreted as a facet of instruction. It covers the process of deciding what methods of instruction are best for bringing about desired changes in student knowledge and skills for specific course content and a specific student population (Reigeluth, 1983). In this case, design is viewed as a planning activity. Since design is a planning activity, it is suggested that the teacher or designer needs to take into her/ his consideration all possibilities of the factors that will influence the instructional process and outcome. Moreover, the success of an instruction is also determined by the quality of the planning.

Some instructional design definitions emphasize function more than process. Instructional design (ID) is a systematic process that is employed to develop education and training programs in a consistent and reliable fashion (Branch and Kopcha, 2014). Teacher also play his /her role as designer in education so he/she knows better what problems are there in the instruction and also what are the best programs to be implemented in the class. This is also in line with the definition of instructional design proposed by (Reigeluth, 1983) where ID is defined as a body of knowledge that prescribes instructional actions to optimize desired outcomes, such as achievement and affect (Reigeluth, 1983).

The scope of ID is a vast range of activity starting from analysis through evaluation. To some designers, ID processes are almost same as the various design phases. ID knowledge relates to a wide variety of topics that impact many parts of the design process. (Richey, Klein and Monica, 2011) picture the ID into six content domains; learners and learning processes, learning and performance contexts, content structure and sequence, instructional and non-instructional strategies, media and delivery systems, and designers and design processes (Richey, Klein and Monica, 2011). These domains encompass a broad array of specific elements that play a role in ID. These domains, however, are not distinct unto themselves, and in many cases they overlap. From this case, learning theory is commonly used as the basis of designing an instruction.

The primary purpose of instructional design (ID) is to facilitate learning and improve performance. Facilitate means to give way or facilities in the process of teaching and learning in order to enhance the performance of the students. As a result, theories which explain learning are extremely relevant to designers and the field of knowledge base. Learning theory includes understanding the role of human

behaviour and mental function of the mind. In education field, there some learning theories such as behavioural, cognitive and social learning theories that commonly used in ID.

The most important aspect of cognitive learning psychology for instructional designers relates to promoting retention of learned material. Therefore, there are two concepts in the implication of cognitive concept for instructional- the role of practice and specific techniques for storing and retrieving information (Richey, 1986). Furthermore, in ID we know three main models in designing an instruction; conceptual model, procedural model and mathematical model. (Richey, 1986) presents a conceptual model of instructional design that draws to a considerable extent on cognitive theory and which requires the considerations of such factors as students' intelligence, cognitive style, cognitive development, and information processing skills.

In brief, cognitive learning theory provides a large part of the theoretical base of instructional design. Learning theory remains a significant element in ID practice, especially as it guides designers in the selection of instructional solutions.

Principle is defined as a relationship that is always true under appropriate conditions regardless of the methods or models which implement this principle. The effectiveness, efficiency, and engagement of a particular model or method of instructions are functioned of the degree to which these principles are implemented. In this paper, the writer focuses on the principles use in designing cognitive instructional design for English proficiency oriented. Among the existed principles, the four-phase cycle of instruction is considered to be the most suitable principles on it. The four-phase cycle consists of principles of activation, demonstration, application, and integration.

Activation principle states that learning is promoted when learners activate relevant cognitive structures by being directed to recall, describe, or demonstrate relevant prior knowledge or experience. Learning from activation is enhanced when learners recall or acquire a structure of organizing the new knowledge, when the structure is the basis for guidance during demonstration, is the basis for coaching during application, and is the basis for reflection during integration.

Demonstration principle implies that learning is promoted when learners observe a demonstration of the skills to be learned that is consistent with the type of content being taught. Learning from demonstrations is enhanced when learners are guided

to relate general information or an organizing structure to specific instances. Moreover, learning from demonstration is enhanced when learners observe media that is relevant to the content.

Application principle explains that learning is promoted when learners engage in application of their newly acquired knowledge or skill that is consistent with the type of content to be taught. Besides, learning is effective only when learners receive intrinsic or corrective feedback. Then, learning from an application is enhanced when learners are coached and when this coaching is gradually withdrawn for each subsequent task.

Integration principle states that learning is promoted when learners integrate their new knowledge into their everyday life by being directed to reflect-on, discuss, or defend their new knowledge or skill. Learning from integration is enhanced by peer critique and when learners create, invent, or explore personal ways to use their new knowledge or skill. Furthermore, learning from integration is enhanced when learners publicly demonstrate their new knowledge or skill.

In CID for English proficiency oriented, those four-phase principle can be implemented in order to design the instruction in the classroom and also strengthen it by giving more tasks outside the classroom. The following is the example of the implementation of the four-phase cycle in English proficiency oriented instruction adopting TOEFL as the most popular proficiency test in Indonesia.

Table 1 explains that in every section of English proficiency test (listening, structure and written expression, and reading) can be implemented in the four-phase cycle. TOEFL, as proficiency test, consists of listening comprehension, structure & written expression, and reading comprehension. In listening, there are three parts of the learners can start it by knowing the concept of every part as the activation phase then listen to common expression as the demonstration phase. While in application phase, the learners have exercises in listening and relate the topic of the listening exercises with the daily activities as the integration phase.

In structure and written expression, in activation principle the learner can start by recalling the pattern of sentence for simple and also complex sentence. Practice the pattern sentence by identifying and analysing sentences can be done in demonstration phase. While in application phase, students can implement the knowledge of pattern in finding the appropriate word or phrase in doing structure and written expression exercises. Furthermore, in

Table 1: Example of the four-phase cycle in proficiency oriented instruction.

	Activation	Demonstration	Application	Integration
Listening	Recall the concept of conversation	Listen to the common expressions	Do exercises in listening section	Relate the topic of the listening section
Structure & written Expression	Recall pattern or structure of sentence	Practice the sentence structure	Do exercises in sentence analysis	Relate to the Structure of sentence used
Reading	Theory of reading	Practice the theory	Do reading exercises	Relate the topic of reading passage
TASK Review of the learned materials do exercises				

structure and written expressions section, the activities of recognizing the error of sentence can be practiced by relating the structure or pattern of sentence in any English sources. This activity belongs to integration phase.

In reading comprehension, remembering theory of reading such as scanning and skimming can be done in activation phase. This activity must be supported by learners' vocabulary mastery as language component. After knowing the theory, the students must be active in using the theory in analysing text or passage. This activity is a part of demonstrating theory. Since the TOEFL, paper and pencil based TOEFL, all exercises are in form of multiple choices. The students ought to practice more and more in reading comprehension exercise as the application phase. The topic of reading passages or text can be related to daily activities or trending issues to have integration phase of reading comprehension.

All the phases in four-phase principle must be followed by tasks. The tasks can be in form of reviewing the material and doing the exercises. To strengthen the students' proficiency, teacher can design online learning to overcome time allocation problem in face-to-face classroom instruction. The four-phase principles can be implemented to improve the quality of proficiency oriented English instruction.

4 CONCLUSION

Learning theory is intricately tied to Instructional Design (ID) in which it can be seen from the elements that branch from learning theory and fit into the ID. Cognitive as one of early theories commonly uses as the approach in English proficiency oriented teaching. Through the use cognitive theories, designers can construct

appropriate design. The four-phase cycle of instruction can be implemented in designing a Cognitive Instructional Design (CID) in proficiency oriented English instruction. The four-phase cycle of instruction consists of demonstration principle, application principle, activation principle and integration principle.

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