Developing Interactive English Learning Media Based ICT for Elementary Student

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Abstract: The implementation of information and communication technology (ICT) curriculum at elementary school is the educational sector development. ICT subject is a practical subject which requires a direct practice to make easier in elementary student understanding the material. Founding many problems in understanding their English material especially reading comprehension a teacher is demanded to make a learning media which helps the student to understand the material of study. This research is aimed at describing the model of ICT in elementary school and using of learning media. Moreover, the description can be bocome one of the basic from the development of interactive study model base on student self learning. Designing material for elementary student and giving media learning can motivate them in teaching learning English better. Concerning these problems, a set of suitable instructional elementary student material and media learning for elementary student. Besides, the arranging of this study model is hoped to make habitual and self-learning.

Keywords: Information and Communication Technology (ICT), Learning, Learning Media, Interactive Media

INTRODUCTION

Education technology is an important role, especially after the development of information and communication technology (ICT). In which the computer is an integral part in it. Education technology and many other education alternatives to the present and the future encourage teachers making the most use of the computer in education.

Education technology is the development, application and evaluation of system, techniques and aids to improve the process of human learning. Education Technology is the application of scientific knowledge about learning, and the condition of learning, to improve the effectiveness and efficiency of teaching and learning.

The implementation of information and communication technology curriculum at elementary school level is one of the effort to improve the quality of education in Indonesia. Basically, the curriculum of information and communication technology makes student in order to be involved in the rapid changes not only in the world work but also the another activities that have additional and changes in the variation of the using of technology.[1]

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[1] Pusat Kurikulum Badan Penelitian dan Pengembangan, *Kompetensi Dasar Mata Pelajaran Teknologi Informasi*

Technology is needed in the development of education in Indonesia. Moreover, the Indonesian government is responsive to the needs of ICT based education. For example, in education, the increasingly widespread availability of the internet, video technology became available, all of which provide reinforcement on teaching and learning process. Similarly, in the primary, secondary and vocational, the government has established an e-learning site that is a real form of government step in building e-education in the world of education in the country.

Today computers in schools are both a focus of study in them (technology education) and a support for learning and teaching (educational technology). Schools provide ICT capacity to ensure that all teachers and students have immediate access to all software that is required to support the curriculum framework and adequate support in teaching, studying and learning in order to achieve specific, well-defined educational objectives and goals. In other words, ICT is used to support pedagogic practices that provide learning environments that are more Learner-centered, Knowledge-centered, Assessment-centered, and Community-centered. It means that ICT is used to encourage students to be active as participants in their own learning, to provide more motivating and challenging learning experiences that encourage them to be more engaged with their individual learning and provide various assessment instruments.

Almost all of the ICT study in the school is still rely on textbooks and teacher profiles as the source of information.[2] Whereas, there are many elementary school students, especially in grade 1 and 2 that still learn at the level of reading. Thus, it becomes the contrary when the students are forced to read a computer learning modules while they are still in the stage of reading. the study should become a friendly learning, entertaining and motivating to the children.

While teaching method is an important thing in conducting a classroom activities and learning styles also constributes to get a successful classroom in achieving the students' creativity through teaching language. In learning English, the students should master four main language skills which are writing, speaking, reading and listening. These four skills are very important to support the students' abilities in mastering English. This the learning background is how to make a media in studying ICT becomes a friendly study, entertaining and motivating to children so that students can be motivated to have a habit and self learning.

The material can be a form at media that can operate a comfortable atmosphere to interest and stimulate the students in the classroom learning process. It is very essential for the teacher to create a good classroom atmosphere and to avoid the student from getting bored. Teaching must be learned in such a way that learning becomes interesting. Making the best way to use of technology (ICT) becomes a challenge for language teachers.

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dan Komunikasi SD & MI (Jakarta: Departemen Pendidikan Nasional, 2003).
   [2] Sri Huning A, "Pengaruh Penggunaan Tutorial Interaktif dan Kamus TIK Terhadap Hasil Belajar Siswa Kelas 2 SD Yang Mempunyai Tingkat Intelejensia dan Frekuensi Latihan Yang Berbeda (Studi Kasus SDN Paulan Colomadu Karanganyar)" (Karanganyar: 2007)

LITERATURE REVIEW

Learning Process

One of the main components of education is the learning context. Context of study includes various physical and social environment factors which is arranged base on necessity of the educational activity.[3] The learning context is designed for the educational purpose. Context of learning related to teaching and learning strategies. Teaching and learning strategies is the way how to organize potency (the learner, educator) and resources (facilities, costs, and infrastructure) so that a program can be used optimally, or any subject can achieve its goal.

Learning Media

Learning media is an instrument in the learning process both inside and outside class. The word "media" comes from the Latin medius meaning 'middle', 'intermediate' or 'introduction'. The media is human, material, or events that make conditions in creating student enables to acquire knowledge, skills or attitudes. If the media carries messages or information which has instructional aimed or teaching objective, so the media is called a media of learning.[4]

There are some benefits of learning media in the learning process, namely: (1) teaching methods will be more varieties through verbal communication from the teacher explanation. (2) Learning process will be more interesting and material learning will be easily to understand. (3) Allowing to the students to control and achieve the learning goals.

Student is more doing activities in learning not only listening to the teacher description but also doing other activities such as observing, performing, demonstrating, acting, and others. In The Selection of Learning Media, Heinich In Arsyad.[5] Proposed The Use Of Effective Planning Model Which Is Known As Assure (Analyze Learner Characteristics, State Objectives, Select Or Modify Media, Utilize, Require Learner Response, And Evaluate), Namely: (a) analyzing the general characteristics of the target group or subject that follows learning. (s) Formulating learning objectives that is behavior and abilities expected by the subject after attending lessons. Capabilities include knowledge, skills and attitudes. (s) Selecting, modifying, or designing and developing appropriate material and media. In the selection of media, it should be able to raise student interest and to provide opportunities for students in participating. (u) Preparing all the things that support the implementation of media in teaching, so it becomes effectively because of the enough preparation. (r) Asking student responses regarding the effectiveness of the teaching process after using learning media. (e) Evaluating the learning process to determine the level of student achievement on the learning objectives, the effectiveness of media, approaches, and teachers. Arsyad divides types of media based on technological developments into 2 forms:

1. Traditional Media
   a. operated visual quietly, eg: slides, filmstrips.

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[3] Muhadjir, Noeng, *Ilmu Pendidikan dan Perubahan Sosial: Teori Pendidikan Pelaku Sosial Kreatif.* Edisi V. (Yogyakarta: Rake Sarasin, 2003).

[4] Azhar Arsyad, *Media Pembelajaran* (Jakarta: Rajawali Press, 2006).

[5] Ibid.

     b. unprojected visual, eg: image, posters, photo, charts, graphs, etc.

     c. Audio, eg: tape, disk recording, etc.

     d. Print, eg: textbooks, modules, handouts, etc.

     e. Games, eg: puzzles, simulation, board games.

     f. Realia, for example maps, dolls, and the specimen.

2. Modern Media Technology

     a. Media based telecommunications, including teleconferencing and distance learning.

     b. Media based Microprocessor, eg: computer-assisted instruction, computer games, intelligent tutoring systems, hypermedia, interactive video, video compact disc.

Interactive Media

Interactive media is a method of communication in which the output from the media comes from the input of the users.[6] Interactive media works with the user's participation. The media still has the same purpose, but the user's input adds interaction and brings interesting features to the system for better enjoyment.

Interactive media is helpful in the four development dimensions in which young children learn: social and emotional, language development, cognitive and general knowledge, and approaches toward learning. Using computers and educational computer software in a learning environment helps children increase communication skills and their attitudes about learning. Children who use educational computer software are often found using more complex speech patterns and higher levels of verbal communication. A study found that basic interactive books that simply read a story aloud and highlighted words and phrases as they were spoken were beneficial for children with lower reading abilities. Children have different styles of learning, and interactive media helps children with visual, verbal, auditory, and tactile learning styles.[7]

The use of computers as a learning media has several advantages, there are: (1) provide a more affective condition so it can accommodate students who are slow in accepting the lesson, (2) stimulate students in doing exercises, (3) the absolute student control of learning so that the level of learning speed of the student can be matched to the level of control, and (4) development of students can be monitored by looking at the records of student activity through exercise files which is stored in the computer.

Suntoro ahmad[8] also recognize the effectiveness of the use of computers as a learning media and state that computer media can make students become "active" play with information. The software can also be made interactive too. Besides, computer media allows students to develop base on their condition and background capabilities. Students who are capable in learning at high speed do not need to his/her colleagues who need more time to understand the subject matter.

Interactive learning media has a stimulus that is conducive to the development of the child independence, especially in terms of the development of competence, creativity, self-

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[6] "Interactive media". *Investopedia.* Retrieved 3 December 2014.

[7] Glaucoma, Christina R., M.A. T*he Effects of Interactive Media on Preschoolers' Learning: A Review of the Research and Recommendations for the Future.* P. 13-17. Ed. Eileen Espresso, Patti Miller, and Christine Cordoba.

[8] Ahmad Suntoro, Dkk, (2000) *Komputer untuk Pendidikan.* www.ilmukomputer.com. Retrieved 3 Maret 2017.

control, consistency, and commitment both to themselves and to others[9]. The use of computer as learning media has a significant influence on the attractiveness of students to learn the teaching of competencies.

RESEARCH METHOD

The research was conducted using Research and Development principles as stated in Borg and Gall (1989, p.789) According to them, R&D is a model of research and development. The process used to develop and validate educational product in this study Research and Development was used to develop material product using material for the third elementary student.

The observations stage was done by direct observation aimed in collecting data as early information that will be used as input in the development stage. In this stage, the data collection included students basic skills of reading and writing processes and the introduction of computer, competence and educational qualifications of teacher who teachs ICT subjects, and also the presence of ICT infrastructure to support the implementation of ICT lessons.

Researcher followed some steps of Research and Development as follow: 1) Gathering set of information relevant, 2) Needs assessment, 3) selecting and sequencing the material 4) Expert validation, 5) Revising, 6) the main-field testing or try out, 7) Evaluating and revising, 8) Finishing Subjects of the Study

The involved for the subject of this research is 30 students or 1 class the third grade in MIN 2 Nganjuk. Researcher chosen involve the process of obtaining information, needs assessment and try out. Beside that an English teacher in this school also involved in the needs assessment conducted in the interview stage and questionnaire.
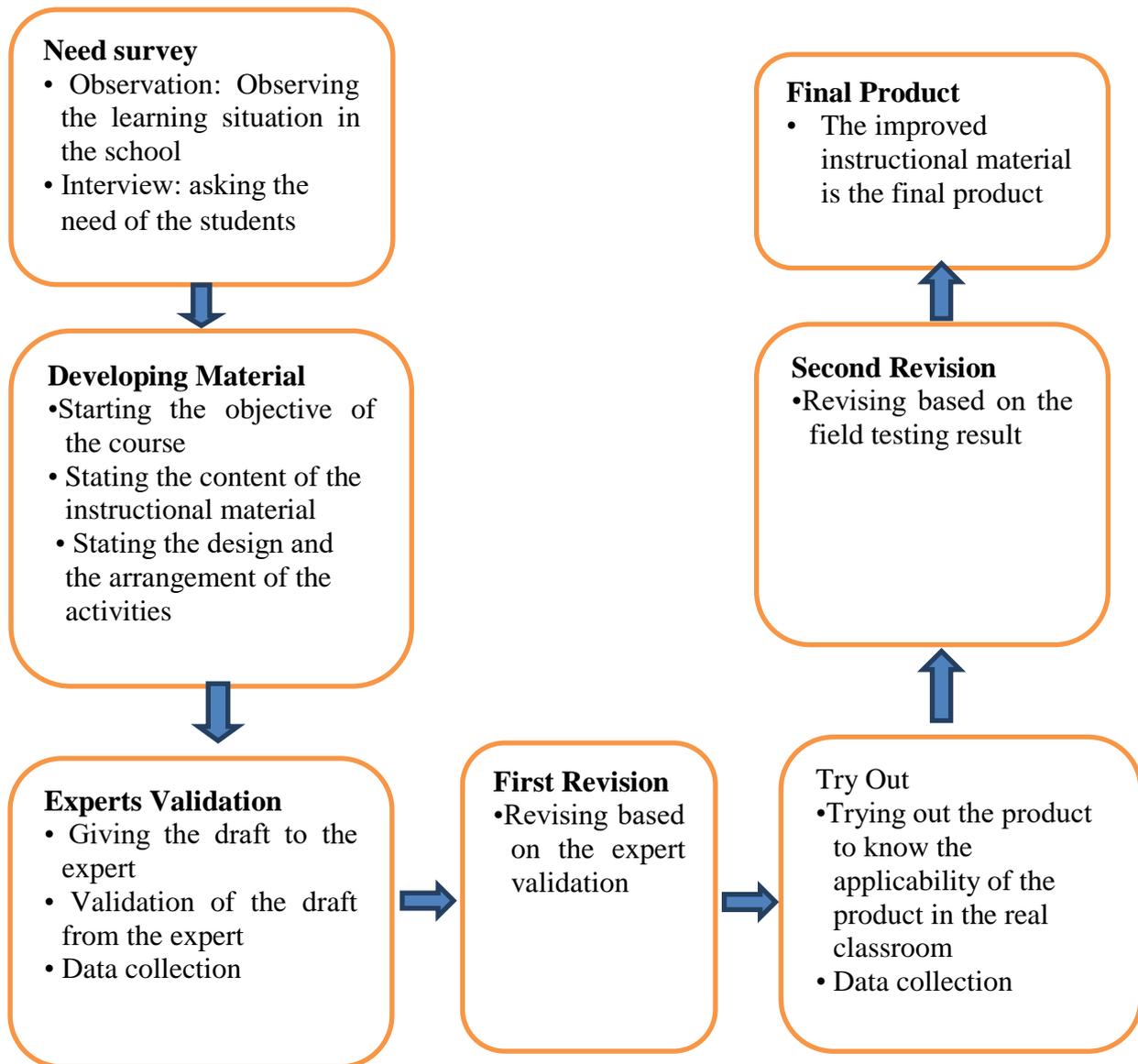
The purpose of need assessment in the study is follow: 1) identify the student's English Background, 2) identify student's achievement, 3) identify the students interest when they studied English in the class room, 4) identify their motivation to learn English material, 5) identify what topic of learning can motivate the students to learn English.

While, the stages of design and development of media used a model of software development through the stages shown in Figure 1. Evaluation stage aimed to evaluate the features and display from the interactive media. The results of this evaluation bacame the basis for redesign of the learning model. This stage involved several teachers, students, and lecturers.

In this study, the researcher did adaptation and adjustment from the R&D cycles design by Borg and Gall to meet the reality in the field and the sake of practicality. It is because of under consideration in adopting the steps and also the estimation of money, workers, and time to develop the product.

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[9] Ali M, "Pengembangan Bahan Pembelajaran Berbantuan Komputer Untuk Memfasilitasi Belajar Mandiri Dalam Mata Diklat Penerapan Konsep Dasar Listrik dan Elektronika di SMK", (Laporan Penelitian Research Grant PHK A2 Jurusan Pendidikan Teknik Elektro, Yogyakarta: UNY, 2005).

The following steps are the model taken after being adopted and adjusted.

Need survey
- Observation: Observing the learning situation in the school
- Interview: asking the need of the students

Developing Material
- Starting the objective of the course
- Stating the content of the instructional material
- Stating the design and the arrangement of the activities

Experts Validation
- Giving the draft to the expert
- Validation of the draft from the expert
- Data collection

First Revision
- Revising based on the expert validation

Try Out
- Trying out the product to know the applicability of the product in the real classroom
- Data collection

Second Revision
- Revising based on the field testing result

Final Product
- The improved instructional material is the final product

The first step is called need survey. It is like in Borg and Gall's modal of research and information collection. In this step, the researcher did observation, gave questionnaire to the students, interviews the English teacher and interviews the vice principle of curriculum. These are done to know the real condition of the students and to get some important information as the basic line to develop the materials. The second step is material development. In this step, the researcher does some steps; such as planning including making and modifying a standard competence and basic competence and developing the material. The third step is changing into the experts validations. The validations are aimed to see whether the product has already met the criteria or not. The fourth step is main product revision. The revision is based on the result of the expert's validation. The fifth step is main field try-out. After revising the product based on the result of the experts' validation, the product is then tried out to the students. The sixth step is the second revision. This revision is based on the result of the try out. The last step is the

production of new materials. The new material is called final product.

RESULT AND DISCUSSION

The research used thirty Islamic elementary school as the object of study. Beside, the research also taken students in grade 1 until 3 from each elementary school as objects. The observations result shows that only 40% from elementary school in the district Terrace of Nganjuk has introduced ICT subjects even it is in form of extra-curricular. The limitation of infrastructure and the lack of teachers who have computer competence become the reason why the implemantation ICT subject has not been implemented.

Practicality media learning can stimulate students' interest and motivation. The media is also packaged in a form that is easy to learn anywhere and anytime without internet access. The students' will get the best opportunity to improve their skill easily. This media is very attractive and effective to improve the student achievement. *Autoplay* media learning is potential as an alternative medium for the students to learn as the researcher as independent groups. With the tasks and exercises that include the answered key and feedback help students their own learning outcomes.

Autoplay media learning is wonderful media learning. This media is very suitable to motivate the student in teaching learning process. Using this media learning the students can learn the material more often less understood in the classroom. There are a lot of materials, resources and links to enhance understanding of the material by using this media. *Autoplay* media learning is easy to learn where there is computer without internet connection, and the students can learn as they want. The student can learn used a lot of media interest that has been provided in the media.

Autoplay media learning is very helpful to equip the students in mastering English such as listening, speaking, reading and writing. After students gain adequate language models in listening and reading, students are then trained to speaking and writing. Giving example of this would be enough to help the process of language acquisition to produce language that is being studied. This product is easy to use without internet access. To operate Autoplay media is very easy. There are some steps must be done the first copy file *Autoplay* media learning to computer and save the data then double click the data *Autoplay* media learning after double click the researcher can see the display and you click the button of menu from competence, Material, Video, Quiz, Motivation, and Reference.

Figure 1: Menu of the Computer Introduction

Figure 2: Menu of the Computer Introduction

The researcher uses Contextual Teaching and Learning (CTL) to develop her instructional material with Communicative Language Teaching (CLT) as the approach. CTL is a form of evolution of behaviorism and constructivism.

As material should give what the student's need and the target language which the lecturer should reach in teaching learning process. The materials also provide some stimulus to learning the language.

There are seven principles of CTL, according to Suyanto (2002), as follows: constructivism, questioning, inquiry, modeling, learning community, authentic assessment and reflection. All of the principles are developed integratedly in the constructional material.

The material contains of several sections related to topic on each unit. The title of each section, it may be different from one unit to others. Questioning principle of CTL is shown here. In which, the researcher asks the students to read the material then give some comprehension questions relate to the reading material given. The students are encouraged to answeredthe questions. In this section, the students also need writing creativity to solve reading problem by using inquiry principle of CTL.

CONCLUSION

Learning using Autoplay media learning with sample of grade 3 MIN 2 Nganjuk according to the research objectives that is to develop learning media for teaching and learning English. Krashen (2000) proposed the concept that learning the language will be successful if it is supported by the relationship between the provision of adequate language model and the enabling environment for the language used.

Autoplay media learning is very helpful at answering the opinions of Krashen and Spolsky, where the students into *Autoplay* media learning is very helpful and will be easier to equip the students in mastering English. Learning language skills, such as listening, speaking, reading and writing. After students gain adequate language models in listening and reading, students are then trained to speaking and writing. Giving example of this would be enough to help the process of language acquisition because students are in a state of low anxiety (low anxiety) to produce language that is being studied. This product is easy to use, the first copy this product, and then paste into computer it doesn't need internet access. Then double click the object of *Autoplay* to operate it.

New learning paradigm emphasizes independent learning and putting teachers as facilitators. ICT lessons are in need of independent exercises of students. However, in grade 3 elementary schools still rely heavily on the teacher as a place to ask. Besides that, teachers are still many do not have a handbook. Teachers realy more self-taught capabilities when providing ICT material. *Autoplay* Media Learning is expected to help student's grades 3 to learn ICT independently. *Autoplay* Media Learning attempted prepared to accommodate students' literacy and supports the concept of learning fun so that students feel comfortable when learning..

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