DEVELOPING AN INTERACTIVE MULTIMEDIA CD FOR ENHANCING FIFTH GRADE STUDENTS' LISTENING COMPREHENSION

Arum Wulanjani ✉

Prodi Pendidikan Bahasa Inggris, Program Pascasarjana, Universitas Negeri Semarang, Indonesia

Abstrak

Penggunaan media sangat penting untuk mendukung proses belajar mengajar. Guru membutuhkan media yang sesuai untuk merangsang siswa menjadi aktif dan kreatif. Penggunaan media akan membantu guru dalam pencapaian hasil yang lebih baik. Studi ini menggambarkan langkah dalam pengembangan CD multimedia interaktif untuk meningkatkan listening comperhensi dan pengaruhnya pada proses belajar mengajar. Dari data dapat disimpulkan bahwa guru harus membangun materi yang digunakan pada proses mengajar karena tidak adanya materi yang sesuai, serta guru seharusnya belajar umntuk tau bagaimana mendesain dan mengembangkan materi multimedia menggunakan computer yang bervariasi karena akan member pengaruh pada proses belajar mengajar.

Abstract

The use of media is important to support the listening teaching and learning process. The teacher needs an appropriate media in order to make the students to be active and creative in the learning process. The use of media in the teaching and learning process will help the teacher and the students engage together to get the achievements much better and also help the students to learn by themselves. This study presents the steps in developing the interactive multimedia CD for enhancing fifth grade students' listening comprehension and its influences on the listening teaching and learning process. The data presented suggests that teachers need to develop the material used in teaching process since not all the materials are provided and suitable with the students' need and need to learn how to design and develop multimedia material by using various computer programs since the use of multimedia can increase students' interest and motivation in learning process. Besides, it also can influence students' awareness, attention, inquiry and discovery, and communication ability in the listening teaching and learning process

✉ Alamat korespondensi:
  Kampus Unnes Bendan Ngisor, Semarang 50233
  E-mail: jurnalpps@unnes.ac.id

INTRODUCTION

Listening has important role in communication. To sustain the conversation, people need to understand what other says by listening before they respond to the speaker. Listening is an active skill which means when people are listening, they are also creating meaning in their mind about what the speaker says. Therefore, language learners need to develop their listening competence.

Teaching listening in school, however, still encounters some problems. Listening is considered as difficult skill in teaching and learning process. Harmer (2008:12) groups four general categories of listening difficulties. They are characteristics of the message, the delivery, the listener, and the environment. In line with the importance of listening, School Based Curriculum has been designed to develop students' listening competence. For Elementary School, the fifth grade students need to be able to respond instructions in their daily context. Besides, they also need to be able to respond instructions and in their daily context verbally. As a matter of fact, most students get difficulties in listening English as their foreign language.

The use of media is important to support the teaching and learning process. The teacher needs an appropriate media in order to make the students to be active and creative in the learning process. The use of media in teaching and learning process will help the teacher and the students engage together to get the achievements much better and also help the students to learn by themselves. Furthermore, Harceleroad (1977:17) states that educational media off all types play increasingly important roles in enabling students to reap benefits from individualized learning. It is fortunate that the potentialities of modern technology may be combined with educational planning to provide resources needed for this purpose. Murcia (2001:461) also assists media help teachers to motivate students by bringing a slice of real life into classroom and by presenting language in its more complete communicative context.

This study aims to develop an interactive multimedia CD for enhancing fifth grade students' listening comprehension. The material development is related to the students' textbook, curriculum and it involves them to learn actively.

In language learning, there are four skills that should be mastered. They are listening, speaking, reading, and writing. Mentioning those four skills must be in order. Listening is always in first order because in the first language acquisition, listening is skill that the children acquire first before the three other skills and so in learning foreign language.

Rubin (1995) stated that listening is conceived of as an active process in which listeners select and interpret information which comes from auditory and visual clues in order to define what is going on, what the speaker is trying to express (quoted in Helgesen and Brown, 2007:3).

From the explanation above, it can be concluded that listening is an active process that needs an effort to hear something. Listeners are actively paying attention and working on understanding and interpreting what they have heard.

Listening comprehension does not only play role as understanding process, but also as psychological process in learning language. According to Ma Lihua (2002) cited by Guo (2005:5), listening comprehension is a complex psychological process of listeners' understanding language by sense of hearing. It is an interactive process of language knowledge and psychological activities. However, this process is not simply decoding the message; it also involves the combination of decoding the message with its reconstruction as meaning. Listening comprehension is the process of understanding speech in a first or second language.

With a greater understanding of language quality and the development of teaching theory, there has been recognition of the process of listening comprehension as needing greater emphasis. It is explained by Rost (2002:8) that listening comprehension in its broadest sense; as a process of receiving what the speaker actually says (receptive orientation); constructing and representing meaning (constructive orientation); negotiating meaning and responding (collaborative orientation); and creating meaning through involvement, imagination, and empathy (transformative orientation).

Therefore, listening comprehension tends to be an interactive, interpretive process in which listeners use prior knowledge and linguistic knowledge in understanding messages.

A school based curriculum is an operational curriculum which is developed by each school and implemented in that school (Depdiknas,2006). According to government regulation number 20 year 2006 article 36, a school, teachers, and school committee develop a school based curriculum and a syllabus based on the curriculum framework and the graduate's Standard of Content. Feez and Helen (2002:2) state that a syllabus is constructed by selecting and sequencing content, based on explicit objectives. Whi-

te (1989:45) also stresses that syllabus is a form of support for teaching activity in the classroom and a form of guidance in the construction of appropriate teaching materials.

National Education Department says that a syllabus has nine competencies: syllabus identity, standard competence, basic standard, material, teaching and learning process, indicator, assessment, time allocation, and the source of learning. Thus, basically a syllabus answers the questions of: (1) what competence do the students have to achieve pertinent to the one formulated in the Standard of Content, both standard competence and basic competence, (2) what instructional materials need to be discussed and learned by the students to achieve the standard of content, (3) what instructional activities does the teacher have to design in order that the students are able to interact with the learning sources, (4) what indicators have to be formulated to find out whether the standard competence are achieved by the students, (5) how is the students' achievement measured, (6) how long a certain standard of content need to be achieved, and (7) what learning sources can be used to achieve a certain standard of content.

Each grade has different standard competence and basic standard. The standard competence and basic standard are based on the students' context. In teaching listening for fifth grade students, the standard content is to understand simple instruction by doing action in students' context. While the basic standards are to: 1) respond very simple instruction by doing action acceptably in students' context, and 2) respond very simple instruction verbally.

The integration of technology into the teaching and learning process has been reported by many studies. Noblet (2008:2) reported that a recent study at University of Pensylvania showed that attention and engagement is dramatically affected when technology is used to enhance curriculum.

Along with the dramatically expansion of computers, teachers now are demanded to think about the implications. One of the implications may be the existing of computer-based presentation media that tend to be referred to as multiple media or multimedia. Multimedia technology frees the students to direct their own learning. It may also decrease the students' over-reliance toward the teachers that makes the learning to be more students-centered and more active processing resulting in higher-order thinking skills.

Additionally, Warschauer (1996) satted that what makes multimedia even more powerful is that it also entails "hypermedia". It makes multimedia possible to link all of its resources together, which serves the students an ease to navigate their own path simply by pointing and clicking a mouse. Considering the benefits served by multimedia above therefore the writer decide to develop the interactive multimedia CD of listening as a form of today's multimedia technology.

Some models of developing instructional material are proposed by some experts on instruction design, namely Thiagarajan, Semmel, and Semmel (1974), Harold (1979), Barlett (1993), Richard (1999), and Borg and Gall (2003). According to Thiagarajan et all (1974:5), there are four stages in developing materials of teaching, called 'Four D Model', they are: define (learner, task, and concept analysis), design (media and format selection), develop (expert's appraisal or validation), and disseminate (developmental testing and diffusion and adaption).

All models may be applicable and well employed in developing language instructional materials. However, it is possible to make some modifications in the models of syllabus or materials development to suit particular instructional needs, purposes, and available resources. This study uses the development material model proposed by Thiagarajan et all and uses the Four D instructional development model.

METHODS

In developing an interactive multimedia CD of listening for the fifth grade students, research and development approach by Thiagarajan et all was used. The major purpose of research and development was not to formulate or to test, but to develop a product for its use in classroom. Gay (1981:1) stated that research and development was not only to make or test a theory but also to develop the effective products that could be used in teaching and learning activity.

The research and development by Thiagarajan, Semmel, and Semmel (1974: 5) was conducted in four steps, they are: 1) define, 2) design, 3) develop, 4) dissemination. However, the study limited the steps into the first three steps; define, design, and develop. The study omitted the dissemination stage because it consisted of packaging, diffusion, and adoption. The distribution of material widely, in this case is CD, was not necessary yet in this study. The omission of the fourth step, dissemination, would not reduce the quality of the product significantly as the quality control had been performed by the distribution of questionnaire to obtain the users' perception toward the

multimedia developed.

In developing multimedia Thiagarajan (1974:5) stated that there were some stages which should be fulfilled. There were some stages developing multimedia of listening which were used in this study. The first stage was defining. The purpose of this stage was to stipulate and define instructional requirements. The initial phase was mainly analytical. Through analysis, the writer would prescribe objectives and constraints for the instructional materials. There were five steps on this stage, they were: front-end analysis, learner analysis, task analysis, concept analysis, and specifying instructional objectives. The second stage was designing. The purpose of this stage was to design instructional materials. The three steps were put forward in this stage were: media selection, format selection, and initial design. The third stage was developing. This stage was to modify the prototype instructional materials. There were two steps in this stage, they were: expert appraisal and developmental testing

This study used qualitative approach to present the data and the research result. Qualitative presented data and research result as the form of qualitative description. Mujiyanto (2009:25) stated that qualitative research tries to uncover the indication comprehensively and appropriate to the context through collecting data from the real setting by making the researcher as the key of instrument. The qualitative research was chosen because it was good method for this study.

Each person or participant in this study was considered as a subject (Brown,1993:48). In this study, the sources of data were the English laboratory teacher and the fifth grade students of C class of Hj. Isriati Baiturrahman 2 Elementary School Semarang. There were 34 students in C class.

Further, validation process was conducted toward each of the interactive multimedia aspects. Totally four experts were asked to validate each of the substance material aspect, multimedia design aspect, visual communication aspect, and multimedia quality aspect. The three experts; Dr. Dwi Anggani. L B, M. Pd, a lecturer of English graduate program of UNNES, and Dewi Amalia, S. Pd, the English teacher of YPI MI Al-Khoiriyyah 02 Semarang were asked to validate the substance material aspect, the multimedia design aspect, and the multimedia quality aspect.

The other two experts, they were Dra. Cahyo Kismurwanti, S.Kom, an ICT teacher of SMPN 2 Semarang and Drs. Kukuh Santosa, a lecturer of UNNES, were asked to validate the visual communication aspect.

The purpose of the questionnaire as a whole is measurement (Oppenheim,1966:223). This method was utilized in the process of administering in the validation and piloting process in order to provide evaluation and feedback upon the interactive multimedia developed. Finally, it was applied in order to reveal the users' perception toward the multimedia. It covered validation questionnaire of the substance material, validation questionnaire of the multimedia design aspect, validation questionnaire of the visual communication aspect, the media quality aspect, and the questionnaire of the users' opinion.

Furthermore, the questionnaires used in this study were closed question and opened question. For the closed question, the combination of rating scale proposed by Dornyei (2010) and Oppenheim (1966). In the other hand, the specific open question was used for the opened question.

FINDINGS AND DISCUSSION

The development of the interactive multimedia CD was preceded by the effort to find out the profile of the listening teaching and learning process in the English laboratory class. Such effort was intended to make an analysis whether the proposed material was significantly matched to their needs. Even such analysis might be deeply conducted in the define stage; the first stage of R and D research method, it served an early information to determine whether the media developed had promising prospect to develop for the intended subject of the study.

However, referring to the interview that further administered to the teacher it was revealed that most of the students got difficulty in understanding the instructions from the teacher. Besides, the students only got few sources for the listening activity. They did not get the authentic source for the listening activity. They only listened to what the teacher said without getting the other additional source for the listening activity. It seemed that the teacher did not equip with an appropriate media to support the listening teaching and learning process. It simultaneously arouses the spirit to continue developing the proposed media.

Meanwhile, from the learner analysis there was found that the students' awareness and attention during the teaching and learning process was only 57.65%, their inquiry and discovery was 44.70%, and their ability in communication was 32.35%. It can be concluded that the students need some listening activities which can increase their awareness and attention, their inquiry and

discovery, and also their encouragement to communicate in English.

The interactive multimedia CD is basically a media composed by two or more media formats of text, image, animation, audio and video which interactively functions as the self-learning software intended for the fifth grade students. The development of the interactive multimedia CD had been conducted through three stages of: the define stage, design stage, and development stage. The define and design stages were intended to produce the initial product (prototype) of the proposed media whereas the development stage was intended to try out and improve the quality of the media developed.

The define and design stages involved front-end analysis, learner analysis, task and concept analysis, specifying instructional objectives, media selection, format selection, and initial design. The development stage included the validation of the media, first revision, and try out the media. The experts of substance of the material, media design aspect, quality of media, and visual communication aspect conducted validation toward the relevant aspects.

The validation result toward the aspect of substance of the material indicates that the media developed has corresponded positively toward all of the indicators under the intended aspect. It indicates that the multimedia developed is already relevant toward the instructional objectives; the topic proposed is already relevant toward the material content, truth and concept, the terms used is considered appropriate, the material thoroughness is considered good, and the ideas' actuality and originality is adequately maintained.

Following the validation of this aspect, the revision had further been made. It included replacing the indicators. Next, revision was adding the objectives of the learning.

In general, all revisions had been conducted by referring to the experts' comments and suggestions. Hence, according to the aspect of substance of the material, the media developed has been met the required qualification.

Generally, the validation result toward the instructional design aspect indicates satisfying result. Overall, the instructional design aspect is categorized as "somewhat well". The revision had been carried out. It covered changing some pictures in the "Vocabularies" menu with more appropriate pictures for the fifth grade students and simplifying the monologue text in the "Choose It" menu.

To sum up, all revisions had been conducted by referring to the experts' comments and suggestions. Hence, according to the instructional design aspect, the media developed has been met the required qualification after doing the revision.

The validation result toward the aspect of media quality indicates that the media developed has corresponded positively toward all of the indicators under the intended aspect. It indicates that the proposed multimedia is already relevant toward the media quality; the media developed had already fulfilled the qualification of the easy understanding of the program objective, the simplicity of the multimedia operation, the clear and directed learning instruction, the sufficient thoroughness of the material, the easy understanding of the material presentation, the helpful and complete navigation, the clear and readable text, the interesting color choice, the narration facilitates understanding, the audio facilitates learning concentration, the easy understanding of the language used, the sufficient interactivity of the multimedia, the exercise facilitates understanding, the sufficient quality and quantity of the exercise.

Generally, the validation result toward the media quality aspect indicates satisfying result. Overall, the instructional design aspect is categorized as "somewhat well". The revision had been carried out. It covered completing the instructions for every menu in the media developed.

In line with the validation result of the questionnaires above, the validation result of the questionnaire of the visual communication aspect also shows a positive respond. It indicates that the proposed multimedia had already fulfilled the qualification of the communicativeness, creativity, simplicity, unity, illustrating the object in the form of representative image, the appropriate choice of color, typography (font and letter orders), lay out and familiar and consistent navigation (icon).

Generally, the validation result toward the visual communication aspect indicates satisfying result. Overall, the instructional design aspect is categorized as "somewhat well". The revision had been carried out. It covered completing the instructions and guideline, changing the color of the letters, adding some related pictures in the "Dialogues" menu, and also changing the instruction using English only.

In order to find out the influence of the use of the Interactive Multimedia CD in the listening teaching and learning process, a questionnaire was distributed to the students. It aimed to know the students' opinion during the use of the CD. The questionnaire covered five aspects, which were students' interest, students' motivation, the advantage of the use of the interactive multime-

dia CD, the relevancy between the material in the interactive multimedia CD and the material given by the teacher, and the sustainability. The result indicates a positive respond form the students. It shows the high interest of the students in learning by using the CD, high motivation of the students in learning English by using the CD, and the CD could help the students in understanding the learning materials. It seems that the use of the CD influenced the students' motivation in the listening teaching and learning process.

Besides, the use of the CD also influenced the students' awareness, attention, inquiry and discovery, and communication ability in the listening teaching and learning process. It is proved by the observation result. The observation conducted twice, it was conducted before the use of the CD and during the use of the CD. The result shows that there are an improvement from the students in their awareness, attention, inquiry and discovery, and communication ability in the listening teaching and learning process. It shows that their awareness and attention increased from 57.65% to 70.58%, their inquiry and discovery increased from 44.70% to 57.64%, and their communication ability increased from 32.35% to 39.41%.

CONCLUSION

Referring to the development and implementation of the interactive multimedia CD, four points are taken as the conclusion.

First, in the need analysis of the define stage, the result of interview between the teacher and the writer shows that the teacher has difficulty in conducting the listening teaching and learning process because the teacher is only equipped with a book with limited source for listening such as multimedia source. The existence of the English laboratory class; which is equipped with multimedia devices, should also be equipped with multimedia listening source so it can support the listening teaching and listening process. Besides, the result of interview shows that the students have difficulty in understanding the materials given by the teacher. It is caused by their lack in understanding the instructions giving by the teacher. This condition makes the students difficult in giving respond to the instructions.

Second, from the front-end analysis, it shows that the students have difficulty in responding the instructions from the teacher. It seems that they did not get what the teacher said. They are lack in responding any short texts of spoken language such as instruction or command. It can be concluded that the listening skill that is needed by the students is responsive listening. So, in conducting the listening teaching and learning process or in developing a multimedia of listening, the skill should be a consideration as the students' need to fulfill.

Third, an interactive multimedia CD has been developed, in which already relevant to the material substance, media design, visual communication design, and media quality. The three stages have been conducted, they are the define stage, design stage, and development stage. It begins with define stage in which the writer does the need analysis, learner analysis, task and concept analysis, and specifying instructional objectives. Conducting an interview and an observation are two activities in collecting the data related to the need of the students and teacher in the listening teaching and learning process. The next stage is the design stage. In this stage, the process of making the prototype of the multimedia is begun. The media selection, media selection, format selection, and initial design are the three phases in conducting the design stage. In this stage, the multimedia material is developed by combining various types of media format. It provides the material by combining audio, pictures, animation, video, and text. In develop stage, the product then is evaluated by some experts until it has reached the final revision. The experts of the aspect of substance of the material, media design aspect, visual communication aspect, and media quality aspect have been asked to conduct validation toward the relevant aspects.

Fourth, the use of the interactive multimedia CD of listening gives some positive influences for the students in the listening teaching and learning process. It is proved by the result of the questionnaire given to the students. It shows that the use of the CD can increase their interest and motivation in learning English. Besides, the use of the CD also influences the students' awareness, attention, inquiry and discovery, and communication ability in the listening teaching and learning process.

REFERENCES

Akcay, Husamettin, Ash Durmaz, Cengiz Tuysuz, & Burak Feyzioglu. 2006. *Effects of Computer Based Learning on Students' Attitudes and Achievements Toward Analytical Chemistry.* Retrieved from http://www.tojet.net. [Accessed on 09/06/12].

Anderson, Orin W, & David R, Krathwohl. 2001. *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Ob-*

jectives. New York: Longman.

Andrade, estela Lizbeth Munoz. Carlos Argelio Arevalo Mercado & Juan Manuel Gomez Reynoso. 2008. *Learning Data Structures Using Multimedia-Interactive System.* Retrieved from http://www.iima.org. [Accessed on 09/06/12].

Arikunto, S. 2006. *Prosedur Penelitian: Suatu Pendekatan Praktik (Edisi Revisi VI).* Jakarta: PT. Rineka Cipta.

Borg, W. R & Gall, M. D, Gall. J. P. 2003. *Educational Research: An Introduction (7th edition).* New York: Longman, Inc.

Brown, H. D. 2004. *Language Assessment: Principles and Classroom Practices.* New York: Longman.

Brown, H. Douglas. 2001. *Teaching by Principles: An Interactive Approach to Language Pedagogy.* New York: Longman.

Butler-Pascoe, Marry Ellen & Wiburg, Karin M. 2003. *Technology and Teaching English Language Learners.* Boston: Pearson Education, Inc.

Cohen, L, L. Manion & K. Morrison. 2007. *Research Methods in Education.* New York: Routledge.

Creswell, John. W. 2007. *Qualitative Inquiry and Research Design: Choosing Amomg Five Approaches.* California: Sage Publication.

Depdiknas. 2006. *Kurikulum Tingkat Satuan Pendidikan (KTSP).* Jakarta:Depdiknas.

Dewi, Riyana. 2011. *Developing Interactive Multimedia of the Contextual Vocabulary for the Third Grade Students of Elementary School.* Unpublished S2 Thesis of Semarang State University.

Dornyei, Zoltan & Taguchi, Tatsuya. 2010. *Questionnaires in Second Language Research: Construction, Administration, and Processing.* Routledge:New York.

EMMUS. 1999. *Multimedia and Usability Principles.* Retrieved from http://www.uce.ie/hfrg/emmus/guidelines/d11what.html. [Accessed on 09/06/12].

Engelbrecht, Kathie. 2003. *The Impact of Color on Learning.* Retrieved from http://www.coe.uga.edu/sdpl/W305.pdf. [Accessed on 09/06/12].

Feez, S. 2002. *Text-Based Syllabus Design.* Sydney: Macquire University.

Graf, Winfried. 1996. *Towards a Reference Model for Intelligent Multimedia Layout.* Retrieved from http://citeseerx.ist.psu.edu.[Accessed on 9/06/12].