

Developing supplementary listening materials for vocational high school students using technology, education, and design (ted) online media

Andree Rivan Kurniawan^{1,*}

¹University of Muhammadiyah Malang, Indonesia

*Corresponding author: andreerivan@yahoo.co.uk

KEYWORDS

developing material
listening skills
distance learning
TED
supplementary material

ABSTRACT This study used an adapted the research and development designed by Hyland (2003) (1), which consisted of eight stages, namely (1) Need analysis, (2) Carrying Out Survey, (3) Developing the Product, (4) Experts Validation, (5) Revision I, (6) Product Try Out, (7) Revision II, and (8) Final Product. The instruments used in the need analysis were a questionnaire, an interview guide, and a classroom observation sheet. The students' data were calculated in percentages, and those from the teacher interview and classroom observation were described qualitatively. The data from the need analysis were used as a basic consideration for material development. The story of "Golden Cucumber" was chosen based on the result of need analysis which most of the students did not know about the "Golden Cucumber" story because moreover, they like to read foreign folktales. From "Golden Cucumber" story, the students can learn to keep survive when they meet problems and not give up. Questionnaires were provided for the validation of language and the validation of the media. The result of these questionnaires was used to revise the product before the try-out. Some revisions are based on the expert's validation stage, such as grammatical errors in the narration of the story, worksheet, and unsuitable between text with some pictures. The expert and teacher data were analysed qualitatively, while data from the try-out were analysed qualitatively and quantitatively. The try-out was conducted once on Thursday, 9 October 2020. It was carried out in Class X Networking 4 that consisted of thirty-nine students. The result from the questionnaires showed that the students liked the video animation and could answer the questions. That been showed with the average score of all the students was 86.6. They were interested in watching the video animation entitled Golden Cucumber. The data obtained from the questionnaires also showed that 55% of students said that the media really helped them, and 45% students said that the video animation quite helped them to understand the story and answer the questions.

© The Author(s) 2021. CC BY-NC 4.0 International license

1. INTRODUCTION

Listening is one of the four skills that plays a crucial role in the success of communication. Adler (2001, cited in Hans, 2019). Brown (2015) states that "adults spend an average of 70% of their time engaged in some sort of communication, of this an average of 45% is spent listening compared to 30% speaking, 16% reading and 9% writing." Students who learn English need to have good skills in listening. However, students face many obstacles while practising English listening due to the limited time and limited strategy. Besides, the condition of pandemic makes all students unable to get regular teaching and learning process at school. They need to have a lot of time studying at home. Computer-Assisted Language Learning (CALL) and Information Communication of Technology (ICT) have potential benefits for learners as one of the ways to overcome the issues mentioned before. In view of this, this paper aims to carry out develop listening material using the media of Technology, Education and Design (TED) online media. According to

the developer of www.ted.com, this website is intended for people to engage in or create dynamic lessons around the hundreds of thousands of educational videos on YouTube.

A study conducted by James (Heinich et al., 2012) found out that the audiovisual learning style is the most preferable. It is also supported by Dale's Cone of Experience (Davis & Summers, 2015), which stated that in learning to listen, students tend to remember only 20 per cent of what they listen to, while they will remember better if they watch and see, which is 50 per cent (Figure 1).

By using this supplementary material, the researcher hopes the teacher could have an alternative media which is familiar for students that is the internet. Also, this is user friendly for teachers who has limited capacity in term of computer usage since there is concrete and clear guideline for composing materials using this application. This research also expected students to increase their motivation in learning English especially can enhance listening comprehension. For long purpose, students are expected to be



FIGURE 1. Dale's Cone of Experience

independent learners that can use this media as the source to study listening.

2. LITERATURE REVIEW

2.1 Listening Comprehension Skills

There are several definitions of listening comprehension. Listening is the comprehension of spoken message either through isolated word recognition within the sound stream, phrase or formula recognition, clause or sentence, and extended speech comprehension (Oxford, 1995).

Listening skill consists of two sub-skills, that is, Micro and Macro comprehension skills. The macro-skills cover those skills which relate to the discourse of organisation, while those that focus on sentence-level belongs to the micro-skills. Brown (Brown, 2015) listed several criteria in listening comprehension, the details can be seen in Table 2.

2.2 Computer-Assisted Language Learning (CALL)

One of the approaches used here named Computer Assisted Language Learning (CALL) is well known as an approach to language teaching and learning. The computer is used as an aid to the presentation, reinforcement, and assessment of material to be learned, usually including with interactive element. Levy (Levy, 1997) defines CALL more succinctly and more broadly as "the search for and study of applications of the computer in language teaching and learning." There are several model of CALL which

are developed. Those are CALL-specific software, Generic software, Web-based learning programs, and computer-mediated communication (CMC) programs (Brown, 2015).

2.3 CALL for Listening

There are several compilations of medium taken based on the book entitled "Learning and Teaching with the New Media" (Markee, 1993). First, Audacity software which used to create listening material related to theme or specific purpose. There are several features that teacher can use to make material using this program. Second, videos and movies which used the combination between audio and visual. Third, a mobile application called "hot potatoes" which is very useful in making media for listening activities since the teacher could use it on their own and produce material based on basic competence that they want to deliver. Fourth, English podcast for students that have so many benefits for students since there are three levels provided for students, those are level 1, 2 and 3. Fifth, Randall's ESL Cyber Listening Lab develops different web sites for people who have problems in understanding native English speakers. Last but not least, a web page called English Listening lounge this platform has the main advantage in listening to all podcast freely.

3. METHOD

3.1 The Research and Development Model

This study is using research and development (R&D) procedures. According to Latief (1), research and development design is a research design aimed at developing educational products such as curriculum, syllabus, textbook, instructional media, modules, and assessment instruments. One model that is commonly used in Educational Research and Development (R&D) is designed by Hyland [1]. Hyland's model consists of a number of stages, that (1) need analysis, (2) doing survey, (3) developing material, (4) experts and teacher's validation, (5) doing first revision, (6) trying out, (7) doing second revision and (8) producing the final product. The stages are illustrated in Figure 2.

3.2 The Research Instrument

In collecting the data, the choice of instruments would be essential since it determined the quality of data taken. Here the researcher used three instruments, 1) students'

TABLE 1. Micro and Macro Skills in Listening Comprehension.

No.	Micro Skills	Macro Skills
1.	Retain chunks of the language of different lengths in short-term memory.	Recognise cohesive devices in spoken discourse.
2.	Discriminate among the distinctive sounds of English.	Recognise the communicative function of utterances, according to situations, participants, and goals.
3.	Recognise English Stress patterns, words in stressed and unstressed positions, rhythmic structure, intonational contours, and their role in signalling information.	Infer situations, participants, goals using real-world knowledge.
4.	Recognise reduced forms of words.	Distinguish between literal and implied meanings.
5.	Use an adequate number of lexical units to accomplish pragmatic purposes.	Use facial features, kinetics, body language, and other nonverbal cues to decipher meanings.
6.	Process speech at a different rate of delivery.	Develop and use a battery of listening strategies, such as detecting key words, guessing the meaning of words from context, appealing for help, and signalling comprehension or lack thereof.

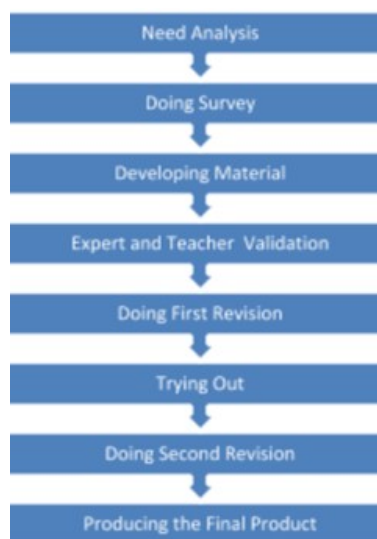


FIGURE 2. Hyland's model of Development

questionnaire for need analysis as well as try out stage, 2) teacher's interview guide, 3) expert validation form.

At first, the researcher conducted need analysis; the questionnaire would be the first instrument to know the background of students in learning English. The second step was the teacher interview guide to know the perspective of what happened in the teaching and learning process. It included questions on students' proficiency to match with level of difficulty in the product and students' mastery in English. The third step was expert validation form, this form contained some aspects to be examined before doing try-out stage. The last step was another questionnaire which was used in try-out stage. This questionnaire distributed to students to know student's response toward the product.

3.3 Data Analysis

Here the researcher would use qualitative data analysis, which was in the form of comments, opinions as well as suggestions of the product. There were also data in the form of the frequency of the coming up of certain answer. The data taken in a form of frequency would be converted into percentages and tables. This data would be used some formula, especially in analysing questionnaire and expert validation.

4. RESULTS & DISCUSSION

4.1 The Result of Data Analysis

There were two kinds of the result of need analysis that were described in this research. Those were from students' questionnaires and an interview with one of English teacher at SMKN 4 Malang. The purpose was to know more the needs of students and the school which can be described in a different perspective. The first perspective was the students' point of view in teaching and learning activity in English subject and their expectation for better and more interesting way in listening supplementary English material. The Second perspective was the teacher's point of view in teaching and learning condition and the students' ability in mastering English especially in listening skill.

At first of this research was conducted the need analysis in X graders of SMKN 4 Malang around August – October

2020. There were 55 students coming from 4 classes in different major. Questions list given for student in purpose to get the data about how many time students practising English listening, problems always appeared when practising English listening, media that teacher always used while doing English listening practice, what media that students interest while practising English listening, and what the interesting topic for students while practising English listening.

From the questionnaire given can adjust that students were occasionally to practise English listening, statistically, results gave about 30.9%. The next questions showed the result of difficulties that students faced when practising English listening. Most of them answered the quality of sound in recording as the main problem in practising English listening, it can be seen from the percentage result 41.8% of respondents answered this. Seeing from the perspective of students to know what the media is used by the teacher when practicing English listening. The graphic showed that computer was the media that commonly used by teacher while conducting English listening practice, around 69.09%. The fourth question aimed to know from students' perspective about the most interesting media for practising English listening. Most of the respondents chose the computer as the first option in conducting listening practice which was 63.63 % per cent from total 55 students.

Next, the result of interviewing one of teacher there, it showed that English mastery of students, especially X graders still has low achievement. She thought that students need a lot of improvement especially in listening practice because of limitation of media and time. From the teacher's perspective stated that supplementary material for listening practice was totally important, especially to cover the goal of basic competence in each chapter since this pandemic situation has minimised all the activity to cover basic competence in each chapter.

4.2 Product Development

Based on the result of need analysis, the researcher decided to make material using ed.ted.com, consisting of five phases: Watch, Think, Dig Deeper, Discuss, and Finally (WTDDF). The topic is also chosen based on the syllabus taken from the coursebook of X graders of Vocational High School; those are 1) Recount text, 2) Narrative text, 3) Song. In introducing the materials, the researcher joined the sound as the wellspring of listening practice, which was also added to make it more interesting, which was video. Below is the front page of the website containing an example of lesson made by ed.ted.com, option to make a lesson and a registration or sign in page. In this case students were not registering yet in this website (Figure 3)

Revision based on the Expert Validation There were two experts which gave suggestion to the product, those are coming from English lecturer and English teacher in the school. According to the validation form, the English lecturer gave 49 out of 52 or 92,3 %, in short, the product was valid. There were several comments and suggestion to make the product better. Also, the validation form score coming from English teacher showed significantly result which the product 43 out of 52 or 82.69%, in short the product was valid.

TABLE 2. Micro and Macro Skills in Listening Comprehension.

Watch	Think	Dig Deeper	Discuss	Finally
Chapter 12 (Biography of Michael Jackson) Video: https://youtu.be/3-7LYHMzUoQ	Multiple Questions (5 questions) and Open Answer (5 questions)	Arranging in the correct order and Matching words	The controversy of plastic surgery	Make summarise in the form of a paragraph
Chapter 15 (The Story of Golden Cucumber) Video: https://youtu.be/sNhoalPr7Io	Multiple Questions (5 questions) and Open Answer (5 questions)	Arranging in the correct order and Fill the blank	The controversy about asking something other than God	Make a paragraph about moral value in this story
Chapter 18 (Super Bowl Concert with Bruno Mars) Video: https://youtu.be/EHk2lvGueA	Multiple Questions (5 questions)	Example of poetic device in the song	Talking about the history of the Superbowl concert	Analysing song entitled "Just the Way You Are by Bruno Mars"

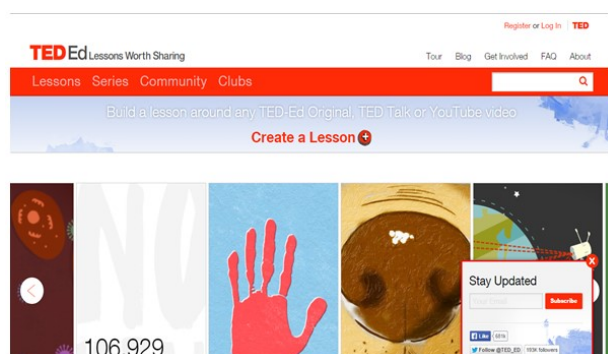


FIGURE 3. The Front Page of the Website

4.3 Try Out

The next phase was trying-out the product. It was held during October 2020 at SMKN 4 Malang. The researcher decided to choose 10 students of various level of proficiency as recommended by the English teacher to be the participant. According to the result, ten respondents who tried this product stated that most of them are interested in using this product (90%). Their comments showed the video in each chapter is interesting for them in terms of theme, quality of the video, and audio.

In conclusion, the result of try out gives four main aspects that students mark: the interesting of the product, the accessibility of the product, the videos' quality, and the questions' quality.

4.4 Revision Based on Try Out

There were several problems that the researcher found during try out of the product. Those were video buffering, unclear instruction, and error in the answer option. Then the researcher tried to fix the problems by giving several changes, and it came the new product based on validation from two experts and one try out phase.

4.5 Final Product

The final product was the supplementary listening materials in the form of web-based for 10th graders of Vocational High School. The product provides video materials and exercise that can be used as self-study materials for students in studying about English listening activity. The overview of the content of this supplementary English listening material made by ed.ted.com is presented below.

5. CONCLUSION

The final product in the Research and Development aimed to give students a lot of media to improve their English competence. Based on the findings, this objective seems to have been achieved to some extent. Several points contribute to this. The final product of this study is supplementary material made by ed.ted.com. Here, the products will cover three basic chapters for tenth graders of vocational high school: recount, narrative, and listening through songs. In each chapter provides with five steps that can be followed in sequence, are "Watch", "Think", "Dig Deeper", "Discuss", "and finally".

Some advantages of using this media are effective in doing distance learning because students can open it anytime and anywhere. Since it is using online media, students have good participation in fulfilling the supplementary material's questions. Jegede, et al [1] stated interactivity as components of distance learning. Some disadvantages are user limitation in changing the website's template because users only have limited access to editing the content at platform without having control to modify all template inside. Some suggestions based on this developing supplementary listening material considering the theme of computer and internet would be worthy solutions to explore students' potential in learning. Since the materials only cover for X graders of Vocational High School students, it is advisable for further development in making into more various chapters for X graders and can be applied in any level of English proficiency.

REFERENCES

- Brown, H. D. (2015). *Principles of language learning and Teaching, Fifth Edition*.
- Davis, B., & Summers, M. (2015). Applying Dale's Cone of Experience to increase learning and retention: A study of student learning in a foundational leadership course. *QScience Proceedings*. <https://doi.org/10.5339/qproc.2015.wcee2014.6>
- Heinich, R., Molenda, M., Russell, J., & Smaldino, S. (2012). Instructional Media and Technology for Learning. *International Journal of Distributed and Parallel Systems*.
- Levy, M. (1997). *Computer-Assisted Language Learning*. Oxford University Pers.
- Markee, N. P. (1993). ESP today: A practitioner's guide. Pauline Robinson. Hemel Hempstead, UK: Prentice Hall International (UK) Ltd, 1991, xii + 146 pp. In *English for Specific Purposes*. [https://doi.org/10.1016/0889-4906\(93\)90006-A](https://doi.org/10.1016/0889-4906(93)90006-A)

Oxford, R. C. S. & R. L. (1995). The Tapestry of Language Learning: The Individual in the Communicative Classroom. TESL-EJ, 1(3), 228.