

DEVELOPMENT OF MEDIA MIND MAP WITH FREEMIND APPLICATIONS ON ENGLISH LANGUAGE COURSE IN ENGLISH EDUCATION STUDIES PROGRAM UNIVERSITY OF PALEMBANG

Nelya Juita, Dian Eka Putra
Fakultas Teknik Universitas Palembang
nelya0807@gmail.com

Abstract

This research aims to develop instructional media with application of FreeMind on English course in order to produce a valid, practical, and potential effect. Before tested the product first be validated by experts on two aspects: the material and the design aspects of the media which score of 3.65 on a valid category in media and material aspect. Results obtained from the development stage to be obtained that the media mind map with FreeMind application developed otherwise proven its practicality, is seen from the results of the evaluation of a small group of filling the questionnaire given to the students obtained a value of 81,94with a practical category. Supported the observation of the average activity of students is 78.472%which means that the media used by students in learning activities in the classroom in a practical category (71-85). To determine the potential effect on the media mind map by using the Freemind application indicated by a score of learning outcomes English course in the category, it is based on the results of the calculation of the value of N gain on the material 1 equal to 0.403/Effective in medium category.

Keywords: Development Media Mind Map

Chapter 1. Introduction

1.1 Background

The selection of media in the classroom learning process is the responsibility of the lecturer to determine what media is appropriate to use so that the learning process becomes maximal(in Sadiman et al, 2009) states that the media is a component that can stimulate students to learn.

Based on researcher observations during the learning process, many students looking bored. This resulted in students' understanding to the concepts that are given are not satisfactory as seen from still there are students who got a C (at 50%). Students' understanding of the concept is the cornerstone in doing analyzing the issue to the creativity in solving problems in course activities.

The Learning media is a useful tool to facilitate learners in understanding the subject matter (Aha, 2005: 125). In effect the media is one component of the learning system. Use of media education can improve the teaching and learning process, which in turn can provide a satisfactory learning outcomes.

Mind map is a way to organize and present concepts, ideas, tasks, or other information in the form of diagrams (Fathurrohman, 2015: 206). Mind Maps can transform information into knowledge, insight, and action. The information presented focus on the important parts so as to encourage people to explore and to collaborate.

An application that can be used to create a mind map is FreeMind. Freemind is an application that is simple and easy to use. With this application media mind map becomes more interesting because it comes with images, colors and hyperlinks to different types of files.

Chapter 2. Formulation of the problem

2.1. Formulation of the problem

Based on the background research suggested, then the problem in this research are:

- 1) How to develop media applications Freemind mind map with the english course that valid ?
- 2) How to develop media applications Freemind mind map with the english course to practical of uses ?
- 3) How the potential effects of media mind map with FreeMind application to the understanding of the students in the english course?

Chapter 3. Review of Literature

3.1. Instructional Media

Learning media is anything that is used to distribute messages and can stimulate the mind, feelings, concerns, and the willingness to learn so as to encourage the process of learning a deliberate, purposeful and controlled.

There are many types of media that can be used in the learning process. Arsyad (2009) classifies media into four groups: 1) media printing technology, 2) media audio-visual technology results, 3) media technology based on the results of the computer, and 4) the combined results of media printing technology and computers. Media that will be developed in this research is a form of computer-based media mind map with FreeMind application.

3.2. Mind Map

Mind map was first introduced by Tony Buzan a psychologist from the UK. Buzan (2008: 68) argues that the mind map is a way of summarizing the material to be studied to a map or graphical techniques making it easier to understand. Buzan believes that the use of mind mapping is not only able to jump-start the process of memory, but also enhances creativity and skills to analyze and optimize the function of the cerebral hemispheres.

Meanwhile, according to Legowo (2009: 5) mind map is the easiest way to put the information into the brain and take information out of the brain. Mind map is a way of noting a creative, effective, which maps simply mind-thoughts.

In principle, the media mind map consists of three main components: 1) the central topic: Focus your mind or issues to be developed and placed as a tree; 2) The main topic of the second-tier level of thinking as part of the central topics and put the branches encircling the tree; 3) sub-topics: the third tier level of thinking as part of caang placed as twigs (Fathurrohman, 2015: 206). Currently mind map can be created manually or by using computer applications. One of the applications that can be used to create a mind map that FreeMind application.

3.3. Freemind

The development of information technology has resulted in applications that facilitate in making the mind map are: FreeMind application. Freemind by Jorg Muller (Legowo, 2009: 21) is a tool for mind maps in the form of hierarchy diagram using nodes and lines are displayed graphically.

Freemind is a simple application that is easy to use and understand. Freemind has a set of features, including the following:

- a) folding
Folding is FreeMind ability to hide or display the information under the selected objects with easy control.
- b) Navigation with a click
Examples of navigation to the many features are just a click away, including opening / closing folds (fold) and unfolded (Unfold) and then link (link) with one click at the same time. HTML Links can be stored in the nodes, including a link to the World Wide Web or a local file
- c) using Undo
Undo feature is used to eliminate the effects of the previous menu option.
- d) Smart Dragging and Dropping
Eg copy (copy) a node or nodes style; drag and drop to the selected node, put a text or a list of files from the outside.
- e) Smart Copying and Pasting
This feature helps paste links from HTML or organize the content that were pasted on the front or top of the line; or paste a list of files selected.
- f) Export map as HTML
This feature converts a mind map to a standard text hierarchical structure.
- g) Using Find Facilities
This feature can be searched in a map based on a keyword and then displays the items found one by one by selecting the find next choice.
- h) Using icons Built-in
The icons in the default (built-in) FreeMind can be used with colors and different fonts to decorate nodes.
- i) Save maps in XML format
Freemind exhibit low cost of risk moved to the mind mapping application to another, because FreeMind stores maps (map) in XML format.
- j) Using File Mode
File Mode can be used to surf (browse) files on your computer, see the folder structure as a mind map as shown in the following figure:

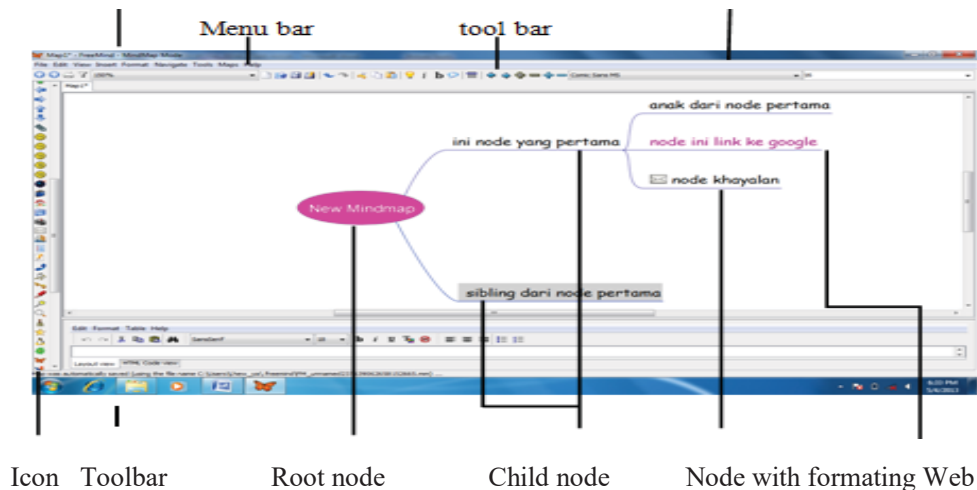


Figure 1. Display of FreeMind

3.4. English course

English courses weigh 2 credits taken by first semester students. This course learns about Grammar, Vocabulary and reading in the field of Engineering.

This course contains material about Noun, Subject pronoun, complement pronoun, possessive pronoun and reflexive, tenses, sentences, electricity, how to mix concrete by hand and how to use tools in the technical field. In this course there are many concepts that are memory to understanding that can make it difficult for students who have poor skills in English. The use of mind map media with the freemind application is expected to increase students' understanding of English language material.

Chapter 4. Research Goal

4.1. Research purposes

Based on the formulation of the problem posed, then the purpose of this study are:

- 1) Producing media mind map with FreeMind application in the english course that valid
- 2) Producing media mind map with FreeMind application in the english course which practical
- 3) Knowing the potential effects of media mind map with FreeMind application to the understanding of the students in the english course .

Chapter 5. Research Methods

This research is a form of research and development aimed at producing prototype instructional media course on english course. Research and development (Research and Development) This refers to the R & D cycle Borg and Gall (in Sukmadinata, 2007).

5.1. Research procedure

Prosedur research covered in this study followed the steps in the development of research which is adapted from Sukmadinata modification based on her research.

Steps by step that media development research with application FreeMind mind map is described as follows:

1. Preliminary studies

Pilot study was conducted to obtain preliminary information on the media used in teaching the English course. Including analysis of needs, then identify basic competencies and indicators, the latter is put through the analysis of teaching materials that will be included in the media mind map developed.

2. Product development

At this stage, to determine the validity of the products is done twice validation experts, namely matter experts and media experts. At the stage of expert review, the products have been designed to be observed, and evaluated by experts. The experts had been studying the material aspects (content) and media (layout) of each prototype. The suggestions of the experts used to revise a device developed.

3. Products Testing

In this phase media mind map development, researchers implement media mind map that has been prepared. At the time of trial test observations to obtain data to improve media mind map. The results of the trial observation then discussed between researcher and teacher. Implementation of the trials carried out in several stages, namely the trial one to one, small group and field evaluation.

4. Data collection technique

Collecting data in this study include: validation experts, interviews, observations, student feedback questionnaires and tests. The data collection techniques can be seen in the table below:

Table1. Data Collection Techniques

No	Data Techniques	Collection Instrument	Data
1	Validation	Validation sheet	Advice and criticism
2	Interview	interviews sheet	Students response
3	Observation	Observation sheet	Observation result
4	Questionnaires	Questionnaires sheet	Students response
5	Test	Questions	Students Understanding

5. Data analysis technique

Data that have been obtained from the data collection process will be analyzed with the following steps:

1). Analysis of Data Validation

Validation test given to experts is in the form of a questionnaire using the scale Linkert with the technique of scoring is Very Good (SB) score of 5, Good (B) score of 4, Enough (C) score of 3, No Good (TS) score of 2 and Strongly good (STB) score of 1 is given to each indicator shows the level of validity.

Furthermore, the average obtained adjusted to the category as shown in Table below:

Table 2. The Category level of validity Media Learning

Scores	Category
4,21 - 5,00	Very Good / Very
3,41 – 4,20	Good / Valid
2,61 – 3,40	Pretty Good / Fair Valid
1,81 – 2,60	No Good / Invalid
1,00 – 1,80	Very Not Good / Very Invalid

2). Observation Data Analysis

Data on the observation will be analyzed descriptively by determining the magnitude of the frequency of each activity are then calculated the percentage. Then calculate the percentage shown in the following table:

Table 3. Category of Score Results observations

Scores	Category
81 – 100	Very Active
61 - 80	Active
41 - 60	Quite Active
21 - 40	Not Active
≤ 20	Very Inactive

Sugiyono (2010)

3). Data Analysis Questionnaire

Questionnaire data obtained by calculating the scores of students who answered all items contained in the questionnaire statement. To determine whether the media mind map used in learning practical English course, this data is then interpreted by the criteria of practicality by Djaali and Mulyono (2008) which is in the following table.

Table 4. Category level of practicality of use media

Skor	Kategori
86 - 100	Very Practical
71 - 85	Practical
56 - 75	Quite Practical
41 - 55	Not Practical
20 - 45	It is Not Practical

Sugiyono (2010)

4). Data Test Analysis

To see the difference in the results obtained student in pre-test and post-test used a score gain. To obtain N-gain formula is used:

$$N\ gain = \frac{Post\ Test - Pre\ test}{100 - Pre\ Test} \dots\dots\dots (1)$$

(Hake, 1999)

For criteria normalized high and low gain can N_gain which clasifications as contained in the following table:

Table 5. Category Rating Score Gain

Criteria <i>N_{gain}</i>	Category
Jika $N_{gain} \geq 0,7$	High
Jika $N_{gain} 0,7 > N_{gain} \geq 0,3$	Average
Jika $N_{gain} < 0,3$	Low

(Nasution, 2007)

Chapter 6. Results and Discussion

6.1. Research result

The results of research media development using an application FreeMind in english course for students of faculty engineering at university of Palembang includes the results of phase preliminary study, the results of the product development phase and the

results of the test phase of a product that aims to see the validity of the media, the level of practicality and potential effects of media developed. In detail described as follows:

A .Results Preliminary Study Phase

1. Analysis of Needs

The results obtained by researchers from observation and unstructured interviews with colleagues and students about the problems or obstacles encountered in the learning process. Problems on the course include:

- a) Need other instructional media that can support the delivery of learning materials in order to gain maximum learning outcomes (percentage value of C decreases).
- b) The lack of interest of students to participate in learning activities for active learning media used has not been able to provoke the enthusiasm of the students.

2. Identifying Basic Competencies and Indicators

Identification of interest is the first step in the development stage of learning materials including media development Freemind mind map using the application. In formulating the basic competencies and indicators should contain aspects of the ABCD (Audience, Behavior, Condition, Degree).

3. Material analysis

In this course, the researchers developed a media mind map with FreeMind application by selecting some material Syllabus meeting that had been developed previously. Some of the material is taken as the material tested is active and passive voice and modals.

B. Results of Product Development

At this stage the researchers conducting the preparation of teaching materials with the help of media applications FreeMind program to produce a valid practical teaching materials and has a potential effect. Validation by experts include media and content experts carried out before the media tested its use on student opinions and suggestions expert reviews on the inputs used to improve the media to be eligible tested.

C. Evaluation of the Formative Evaluation Tessermer

Products that have been developed before implemented into the field, the product first in the evaluation using the evaluation Tessermer. Tessermer evaluation consists of: expert review, one to one evaluation, small group and field evaluation test.

Furthermore, a more detailed media development process is performed as follows:

a) Expert review / Validation Expert

Evaluation by the expert review / validator that consists of 2 validator are validator validator validator media and material. Analysis of data on the assessment of the media mind map validator result score of 3.5 on a 3.7 aspect of the content and media aspects so that the mean score of 3.65 on a valid category.

b) Evaluation A-One (One-to-One Evaluation)

The evaluation was conducted on students who have been selected by the researchers for small-scale trials. At this stage the first prototype involves three students were considered to represent a group of high ability, medium, and low.

Observations and interviews at this stage in terms of look learner is like this and means learning multimedia learning multimedia can attract learners, motivating the students to learn and practice in learning. Thus the multimedia has been through a process of expert review and one to one then this learning multimedia declared valid and practical. Furthermore, learning multimedia was named prototype 2 and ready to process small group evaluation.

c). Evaluation Small Group (Small Group Evaluation)

Evaluation was conducted on a small group of 6 students who performed in the study. The results of the questionnaire responses of students in the evaluation phase of the group obtained a score of 82.17 categorized practical. the results of observations on the evaluation of the small group of 78,591%, it means that the media mind map in the category of practical use by students in the learning activities at english course .

d). Field Test Results (Field Test)

Revision of the results of the second prototype then conducted a field test (field test). To be able to derive conclusions from the results of post and pretest the learning outcomes were then converted using the formula N gain, the calculation results obtained are = 0.403(Effective medium category) , Based on these results it can be concluded that the potential effects of media mind map with FreeMind application at english course activity are effective at medium category.

Chapter 7. Conclusions And Suggestions

This research aims to develop instructional media with application of FreeMind on English course in order to produce a valid, practical, and potential effect. Before tested the product first be validated by experts on two aspects: the material and the design aspects of the media which score of 3.65 on a valid category in media and material aspect. Results obtained from the development stage to be obtained that the media mind map with FreeMind application developed otherwise proven its practicality, is seen from the results of the evaluation of a small group of filling the questionnaire given to the students obtained a value of 82,17with a practical category. Supported the observation of the average activity of students is 78.591%which means that the media used by students in learning activities in the classroom in a practical category (71-85). To determine the potential effect on the media mind map by using the Freemind application indicated by a score of learning outcomes English course in the category, it is based on the results of the calculation of the value of N gain on the material 1 equal to 0.403/Effective in medium category.

7.1. Conclusion

Based on the results of research and discussion in the previous chapter, some conclusions can be drawn as follows:

- 1) Validity of media mind map with Freemind applications developed can be declared valid after validation by experts / expert review in two aspects, after going through the stages of evaluation one by one (one to one evaluation). The media thus eligible for use in learning activities.
- 2) Practicality media mind map with FreeMind application developed otherwise proven its practicality, is seen from the results of the evaluation of a small group of filling

the questionnaire given to the students obtained a value of 82,17 with a practical category. Practicality modules developed can also be seen from the liveliness of the students shown in field tests, namely the observation of the average activity of students is 78.591% which means that the media used by students in learning activities in the classroom in a practical category (71-85).

- 3) Measurements on the potential effect on the media mind map with the application FreeMind use learning outcomes data show that the application of media mind map on English course has an effective rate in the medium category, this is based on the results of the calculation of the value of N gain in material 0.403 shows the results of effective medium category.

7.2. Suggestion

From the research that has been done, it is recommended to students, faculty, institutions and other researchers as follows:

- 1) Learners, can make the media mind map with FreeMind application as an alternative medium of learning interesting and fun to improve the understanding at English course in order to obtain satisfactory academic results.
- 2) Lecturers can use the media mind map with FreeMind application which has been developed as a selection of teaching materials that can be used to improve learning outcomes.
- 3) For other researchers, can be used as reference material in the development of better products and perfect.

References

- Arsayd, Azhari. 2009. *Media Pembelajaran*. Jakarta: PT. RajaGrafindo Persada.
- Aulia. 2014. Pengembangan Media Pembelajaran Menggunakan *Software Freemind* pada Pokok Bahasan Kebutuhan Manusia. Skripsi: Tidak diterbitkan.
- Buzan, Tony, 2008. *Buku Pintar Mind Map*. Jakarta : PT. Gramedia Pustaka Utama, Cet. VI.
- Djaali dan Muljono, P. (2008). *Pengukuran Dalam Bidang Pendidikan*. Jakarta: Program Pascasarjana Universitas Negeri Jakarta
- Fathurrrohman, Muhammad. 2015. *Model-Model Pembelajaran Inovatif*. Ar-Ruzzmedia.
- Legowo, Bagus Taruno. 2009. *FreeMind Mind Mapping Software*. Sidoarjo: Masmedia Buana Pustaka.
- Nasution, S. 2007. *Metode Research (Penelitian Ilmiah)*. Jakarta: Bumi Aksara.
- Rusman. 2012. *Belajar dan Pembelajaran Berbasis Komputer*. Bandung: Alfabeta.
- Sadiman, S. Arief, dkk. 2009. *Media Pendidikan Pengertian, (Pengembangan, dan Pemanfaatannya)*. Jakarta: PT Raja Grafindo Persada.
- Sugiyono. 2010. *Metode Penelitian Pendidikan, Pendekatan Kuantitatif, Kualitatif, dan R & D*. Bandung: Alfabeta.
- Sukmadinata, Nana Syaodih. 2007. *Metode Penelitian Pendidikan*. Bandung: PT Remaja Rosdakarya.