STUDENT TEACHER'S CHALLENGES IN DESIGNING MULTIMEDIA TEACHING MATERIAL FOR TEACHING ENGLIGH

THESIS

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By

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ABSTRACT

Ilmiyah, Bahrin (2020), *Student Teacher's Challenges in Designing Multimedia Teaching Material for Teaching English*. A Thesis. English Language Education Department, Faculty of Tarbiyah and Teacher Training, Universitas Islam Negeri Sunan Ampel Surabaya. Advisor I: Mokhamad Syaifudin, M.Ed, Ph.D, Advisor II: Siti Asmiyah M.TESOL

Keyword: Challenges, Designing multimedia, Teaching material, PPT

The use of multimedia teaching material can help teachers to make a deliver the materials to the students in a more interesting and easier way, therefore teachers need to develop their own multimedia teaching material to help them accomplish their teaching goals. Before becoming a real teacher, the student teachers of English Language Education Department UINSA also need to prepare their own multimedia teaching material for teaching English in their second teaching practice. This research is conducted to identify the student teachers' challenge in designing multimedia teaching material for teaching English and the way to overcome it. The participant of this research is the student teacher of English Language Education Department who develop their own multimedia teaching material for teaching English in the form of powerpoint in their teaching practice. The research method that was used in this research is case study research design. The data was collected using questionnaire and interview. Based on this research result, the student teachers faced challenges on the selecting and displaying the materials stage and integrating the materials stage. To overcome these challenges, the student teachers do the steps which is related to Mayer's 12 principles to design a good multimedia. Not only doing the steps which on the principles but the student teachers also doing an online referencing and asking their friends who has similar class level and teaching environment.
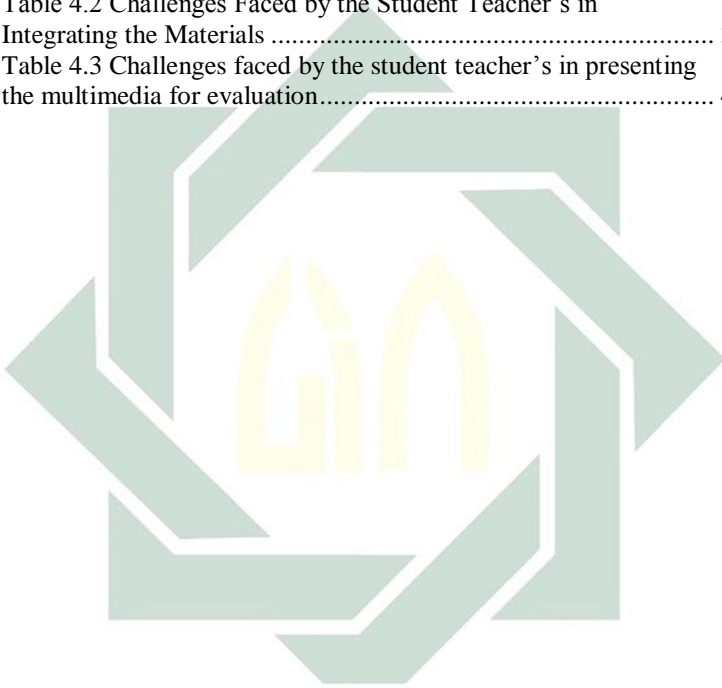
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ABSTRAK

Penggunaan bahan ajar multimedia dapat membantu guru untuk menyampaikan materi kepada siswa dengan cara yang lebih menarik dan mudah, sehingga guru perlu mengembangkan bahan ajar multimedia mereka sendiri agar dapat memenuhi tujuan mengajar mereka. Sebelum menjadi guru, para mahasiswa Jurusan Pendidikan Bahasa Inggris UINSA juga perlu menyiapkan bahan pengajaran multimedia mereka sendiri untuk mengajar bahasa Inggris pada praktik pengalaman lapangan kedua mereka. Penelitian ini diadakan untuk mengidentifikasi tantangan yang dihadapi oleh mahasiswa dalam mendesain materi ajar multimedia untuk mengajar bahasa Inggris dan cara mengatasinya. Partisipan dalam penelitian ini adalah mahasiswa Jurusan Pendidikan Bahasa Inggris yang mengembangkan materi pengajaran multimedia mereka sendiri untuk mengajar bahasa Inggris dalam bentuk powerpoint dalam praktik pengalaman lapangan kedua (PPL 2) mereka. Metode penelitian yang digunakan dalam penelitian ini adalah desain penelitian studi kasus. Data dikumpulkan dengan menggunakan kuesioner dan wawancara. Berdasarkan hasil penelitian ini, para mahasiswa menghadapi tantangan dalam memilih dan menampilkan tahap materi dan mengintegrasikan tahap materi. Untuk mengatasi tantangan ini, para mahasiswa melakukan langkah-langkah yang terkait dengan 12 prinsip Mayer untuk merancang multimedia yang baik. Tidak hanya melakukan langkah-langkah yang berdasarkan prinsip tetapi mahasiswa juga melakukan referensi online dan bertanya kepada teman-teman mereka yang memiliki tingkat kelas dan lingkungan pengajaran yang sama.
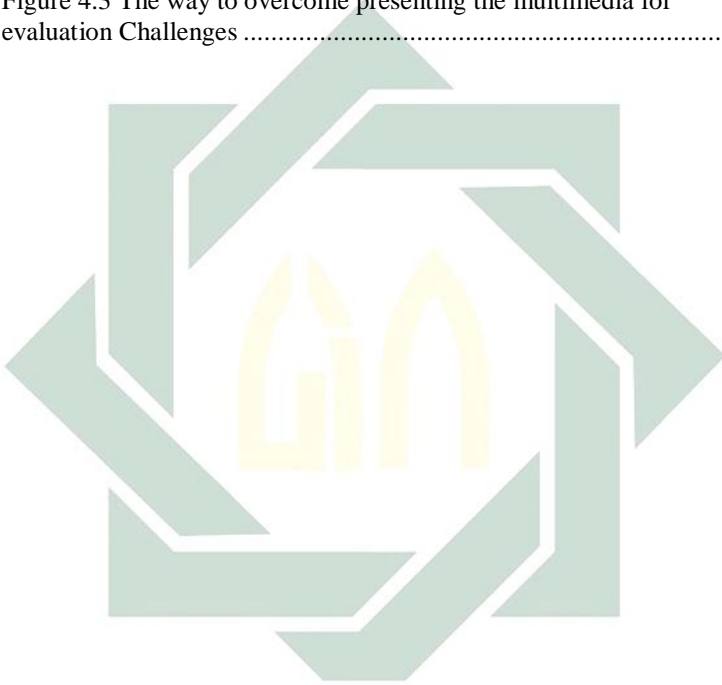
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A. Background of Research

   The use of media for the students has been helpful in the teaching and learning process. Dr. Jameel Ahmad said in his journal entitled English Language Teaching (ELT) and Integration of Media Technology that the students excitement and and enthusiasm is increasing by utilizing the media in the teaching process[1]. But choosing a media for teaching is necessary. As Richard E. Clark stated in his journal entitled Media in Teaching that new technologies tend to give a better impact in the learning process such as providing a better prepared instructional material and engaging students in new experience[2]. Therefore teachers can utilize new technologies as their media to help them in the teaching process.

   Computer technology as new technology can be considered as a good choice. As the computer makes the designing and delivering material to be much more easier in the teaching process, most of the teachers in the 21 Century have been using computer based media for their teaching media. Based on Journal entitled Developing Computer Assisted Instruction Multimedia by Husni Idris et al, by using computer assisted instruction, students can do better in the learning process such as better prepared, better at writing, better doing the exam, better in understanding and get more meaningful material[3]. This data tell us that computer supports to improve education into a better state.

   One of the benefit of using computer is that we can run some differents format files or type at the same time. Not only by running it, we can also design and colaborate some different files into single media. While having this, teacher can make a

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[1] Ahmad, Jameel. (2012). *"English Language Teaching (ELT) and Integration of Media Technology. Elsevier"*

[2] Clark, Richard E. Media in Teaching. University of Shouthern Australia

[3] Idris, Husni et al. (2017). "*Developing Computer-Assisted Instruction Multimedia for Educational Technology Course of Coastal Area Students"*. IOP Publishing, doi :10.1088/1755-1315/156/1/012049

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good use of computer technology to make a media teaching which including few or some different format type files into a good combination to make a better learning environment. According to Heinich, this type of media teaching can be called multimedia[4]. Multimedia media teaching has a great help in conducting an interesting and creative teaching learning process. For instance by using multimedia, students can develop a higher order thinking skill[5] and be able to develop an interactive and communicative students centered learning process[6].

There are already a lot of research which brought up a topic of using multimedia. Most of them was about the implication or the benefit from using multimedia for teaching a certain subject. Kusumadewi said in her journal that the student's mastery on English vocabulary is higher when using a multimedia rather than using traditional lecture or textbook[7]. This statement was proved in her journal that when using duolingo, student's progress in studying English is better than studying using traditional learning style. Meanwhile Prasetyo stated that students prefer to use multimedia as their learning material because it is easier and more practical to use[8]. Based on

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[4] Heinich, Robert et al. (2002). *Instructional Media and the new Technologies of Instruction 7th ed.* Pearson Ed Inc, Ohio

[5] Sabu, Norsaliza. (2018). "*The Effect of using Interactive Multimedia Courseware with Pedagogical Agent in Learning Nutrition towards Higher Order Thinking Skills*". Hrmars publishing, DOI: 10.6007/IJARBSS/v8-i2/3971

[6] Rachmadtullah, Reza. (2018). "*Interactive Multimedia Development Based on Scientific Approach on Civic Education Subjects in Elementary School*". ISSN: 0378-1844

[7] Kusumadewi, H. (2018)."*The Effects of Using Duolingo Towards Student's Vocabulary Mastery (An Experiment of Junior High School Students at Omega Sains Institute*)", IJET (Indonesian Journal of English Teaching), 7(2), pp. 172-186. doi: 10.15642/ijet2.2018.7.2.172-186.

[8] Prasetiyo, M. (2017). "*ICT-Based Instructional Material Development: A Study of Communication Department Students*", IJET (Indonesian Journal of English Teaching), 6(2), pp. 229-247. doi: 10.15642/ijet2.2017.6.2.229-247.

the research result, the students can learn more effectively and conquer the language skill easily through multimedia teaching material which provided them with various media learning in various format. Thus they can easily learn through audio, visual, and audiovisual learning material.

One of the recent research which has similar topic is the analysis on CALL class which discussed about what is learned and the learning process by Musliadi Bakri[9] and preservice teacher's computer literacy skill which discuss about the preservice computer literacy level by Fuad Habib[10]. In Musliadi research, he found that during the CALL class, the student teachers had studied how to create a multimedia teaching material for teaching English. In the research result, it is shown that the student teachers had an excelent mastery of technological pedagogical content knowledge which is a support knowledge to build a good multimedia teaching material. Meanwhile in Fuad's research result, the student teacher's computer literacy skill is also shown in proficient level, in which the student teachers are mostly able to create their own multimedia teaching material.

Teachers who use multimedia for teaching still have some difficulties by utilizing it. Based on Zahra Hosseini on a journal entitled How to Design Effective Multimedia Presentation, it is explained that there is still lots of teacher that failed to utilize or design the multimedia presentation which lead into the students failure on getting interested in the teaching process instead[11]. Therefore, further discussion on her journal is to provide the teachers how to make an effective multimedia presentation.

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[9] Bakri, Musliadi. (2018). "*Analysis on Computer Assisted Language Learning (CALL) Class in Developing Students Technological Pedagogical Content Knowledge*". UIN Sunan Ampel

[10] Rozi, Fuad Habib. (2018). "*Pre-Service Teachers Computer Literacy Skills on Teaching Practice 1 Class In English Teacher Education Department at UIN Sunan Ampel Surabaya*"

[11] Hosseini, Zahra and Anand Kamal. (2013). "*How to Design Effective Multimedia Presentation*". University of Tampere. Paper Reference Number: 07-21-6895

Another difficulties on the designing multimedia was also explained by Shamsul in his conference paper[12]. It was explained that trainers mostly have difficulties in the skill in designing instructional multimedia, multimedia authoring and the resources. That means, before the trainers develop their own multimedia they should have had the skill first. If the trainers does not have the skill, they will have difficulties later when desigining their instructional multimedia. Other than skill, they also have difficulties in utilizing the multimedia authoring and selecting the resources to be used in their instructional multimedia.

Although students still have difficulties in developing their own multimedia teaching materials, some of ways can be done to help them to develop their multimedia teaching materials effectively. Based on Sidhu and Ramesh in their journal, the students was applied a technology-assisted problem solving (TAPS) to develop their multimedia teaching materials for engineering education[13]. The TAPS was helpful for students who is a slow learners. Moreover it promotes the use of authoring software so they can easily utilize it to develop their multimedia even with minimum knowledge of programming language.

Those previous research already show the result on the benefit and the importance on using multimedia for teaching. Meanwhile, the last study giving an overview on that the teachers still had failed on using the mulimedia nor utilizing it. The difficulties on the developing of multimedia teaching aids by trainers had already discussed. There is also a discussion on the way to overcome some difficulties on the developing the multimedia teaching aids. In the other hand, the difficulties that the teacher have on designing the multimedia presentation for teaching is the topic which is the least discussed. Therefore this

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[12] Rizal, Shamsul. (2008). "*Challenges in Developing Interactive Multimedia Learning Materials: Some Considerations for Alam Trainers*".

[13] Sidhu, Manjit S and S. Ramesh. (2006). "Multimedia Learning Packages: Design Issues and Implementation Problems". *Malaysian Online Journal of Instructional Technology (MOJIT).* Vol. 3, No.1, pp 43-56. ISSN 1823:1144

research will discuss about the student teachers challenge on designing multimedia presentation for teaching english, as it will be conducted for English Language Education Department Students.

B. Research Question

1. What are the challenges faced by student teachers in designing multimedia teaching material for teaching English?
2. How do the student teachers overcome those challenges?

C. Objectives of Research

1. to identify kinds of difficulties that the most student teachers had

2. to explore the way to overcome difficulties are different, thus this question will answer the strategies that student teachers did.

D. Significance of Research

1. Theoritical Significance

By conducting this research, the first target that might be helped by this research result is giving a broader knowledge on the way to solve difficulties in designing the multimedia teaching material. Karen[14] has already given the sequence to create multimedia, and Mayer[15] gave 12 principles which can be used as a good start to develop teachers multimedia teaching material. The finding in this research can be used to extend the best use of those principles in more specific obstacles during the designing of the multimedia itself.

2. Practical Significance

After studying this research, the lecturers will have a vision to the core problem of the difficulties which the student teachers faced. Giving the situation, the lecturers can design a class in which the material can be adjusted on what is urgent dealing with the difficulties when designing the multimedia. This way, the class on developing media teaching will be more meaningful.

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[14] Ivers, Karen S and Ann E.Barron. (2002). *Multimedia Projects in Education 2nd ed*. Greenwood Publishing Group Inc, America

[15] Mayer, RE. (2009). *Multimedia Learning second edition*. Cambridge University Press; Cambridge

3. Significance for future research

The result in this research is mostly focused on the implementing of the 12 principles to create multimedia which is used to make the multimedia easier. The section in the designing multimedia which is covered in this research are the choosing and integrating the materials for the multimedia presentation. Future researcher can use different topic in the same multimedia scope such as designing multimedia with different application, difficulties in presenting multimedia teaching material, or choosing the most appropiate multimedia application for teaching English.

E. Scope and Limitation of Research

1. Scope of the Research

As there was limited time, place, and human resource, a scope and limitation was needed. There was a lot of kinds of media teaching materials for teaching English. Therefore, this research was only focused on multimedia teaching material in the form of powerpoint which is developed by the student teachers of English Language Education Department. While there was also a lot of multimedia powerpoint that was developed by the student teachers, this research only focused on the multimedia powerpoint that was used to teach English in the second teaching practice into the discussion.

2. Limitation of the Research

The limitation of this research was the challenges in designing multimedia teaching materials for teaching english and the way to overcome it by the student teachers of English Language Education Department. As there were a lot of stages in the designing process, the research was focused on the challenges and the way to overcome the challenges in 'selecting and displaying the materials', 'integrating the materials', and 'presenting the multimedia for evaluation'. Those data on the challenges and the way to overcome it was collected through survey and interview. This research was conducted at 6th semester student teachers of English Language Education Department in their second teaching practice academic year 2019/2020.

F. Definition of Key Term

1. Challenge

    A challenge is a difficult thing which need an effort, skill, and power that later can lead into success[16]. In this study, challenge is the difficulties in designing multimedia teaching material for teaching English that is faced by the student teachers of English Language Education Department of UINSA.

2. Student Teacher

    In this research, the student teacher is the 6th semester student of English Teacher Education Department of UINSA who are doing a teaching in a school for a limited period of time and in under a supervision to qualify being a teacher. Therefore, the student teacher of English Language Education Department of UINSA who is undergoing their second teaching practice is the student teachers who is meant in this research.

3. Multimedia

    Using a different format type of media in a single presentation corncerning with the use of advanced technology is what is called as multimedia[17]. When a teacher give a material by using media which including different format type such as words and picture, or words with audio, or such of the sort it is already called a multimedia. A computer is a media which can accomodate various kind of format files to be integrated into a single media. Therefore a computer based media can be in a form of multimedia presentation, multimedia flash player, web based multimedia or other type of multimedia teaching materials. In this research, the multimedia is the computer based media teaching practice that being used by the student teacher in the form of power point presentation.

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[16] Turner, Derick. (2017). "*Problem Vs Challenge: The Real Meaning Behind Your Words*". https://www.huffpost.com/entry/problems-vs-challenges-th_b_10465200

[17] Mayer, RE. (2009). *Multimedia Learning second edition*. Cambridge University Press; Cambridge. Page 17

4. Teaching Material

Any object which is used to deliver instruction and material by teacher in the teaching process is called teaching material[18]. Teaching material in this research is the resource that the student teachers utilize to deliver the English instruction to their students in the form of multimedia.

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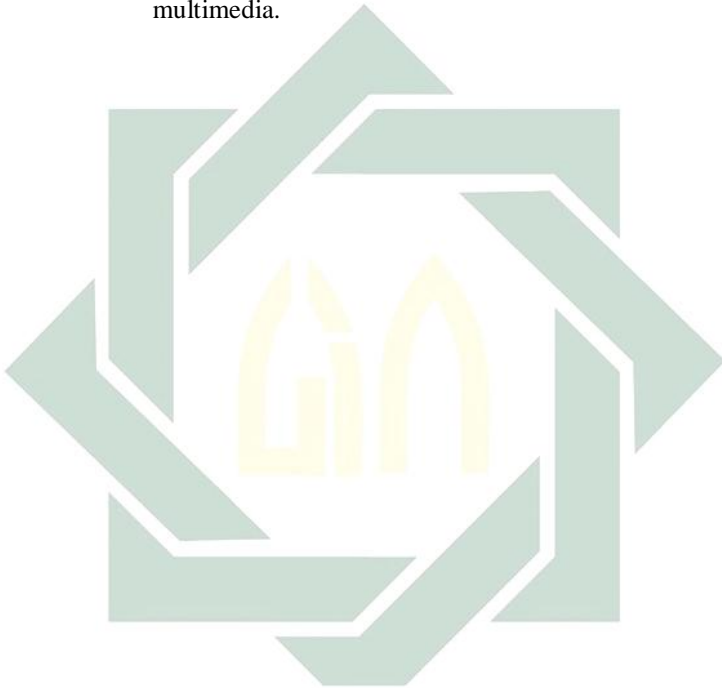
[18] Kumar, Shravan. (2017). "*Teaching materials and teaching aids - 1 (teaching material)*". ePGPathshala. 12. 2016.

CHAPTER II
LITERATURE REVIEW

A. **Theoritical Framework**

1. Competency of Teacher

A competency is the set of knowledge, skills, and experience necessary for future, which manifest in action[19]. Selvi said that teacher competence is divided into nine dimension, one of them is information and communication technologies competencies (ICT)[20]. ICT competencies are about the use of technologies in managing and processing the information for communication purpuse in teaching. Olga stated in his journal that one of modern teachers' competencies is knowing when and how to utilize the current technology to conduct a learning process in order to maximize the student's learning[21]. Therefore, teachers should upgrade their usage of technology to provide a better learning environment in the current era.

2. Teaching material

Teaching material can be defined as anything which can be used to facilitate the learning[22]. Teaching material is being used in the learning process to help the students to gain more motivation and giving a better way to deliver the students' need[23]. Therefore, utilizing teaching material in the teaching process is necessary for teacher.

The use of teaching material in the teaching process also needs to consider the development of the students needs[24]. Teaching material development need to

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[19] Katane, Irena et al. "*Teacher competence and further education as priorities for sustainable development of rural school in Latvia.*" Journal of Teacher Education and Training. 6. 2006:41-59

[20] Selvi, Kiymet. (2016)". DOI: 10.5840/cultura20107133

[21] Nessipbayeva, Olga. "*THE COMPETENCIES OF THE MODERN TEACHER*". Suleyman Demirel University

[22] Tomlinson, B. (2003). "*Development Materials for Language Teaching*. London: Continuum

[23] Hassan, Zana. (2014)". DOI: 10.5923/j.edu.20140402.03

[24] Aydin, Abdullah and Cahit Aytekin. (2018). "*Teaching Materials Development and Meeting the Needs of the Subject: A Sample*

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consider the use of technology, practicality, saving time, visualization, permanent learning, professional development, concretization, necessity, common effect, awareness, an entertaining learning environment, conceptual understanding, attention, and motivation[25]. The use of computer technology can be taken as an alternative to be a medium to develop the material as in fact computer technology can accomplish the goal of the development of material which has been mentioned before. Thus, the teachers are encouraged to improve their materials through computer technologies.

3. Multimedia

Using a different format type of media in a single presentation is what is called as multimedias[26]. When a teacher give a material by using media which including different format type such as words and picture, or words with audio, or such of the sort it is already called a multimedia. Heinich also stated about multi media kits in his books. The meaning by multimedia kits is materials that is used for teaching which in various form but also arranged into single topics. This can be in a form of pictures, maps, graphs, tables and such.

4. Multimedia for English Teaching

The use of multimedia in the teaching process can help the teachers in many ways. This includes the use multimedia in English teaching. The goals of using multimedia for teaching are to promote interaction between teacher and students, to help teachers to help suitably, to promote student's study capacity, and to blend the

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Application". Canadian Center of Science and Education; doi:10.5539/ies.v11n8p27

[25] Koparan, Timur. (2017). "*Analysis of Teaching Materials Developed by Prospective Mathematics Teachers and Their Views on Material Development*". Malaysian Online Journal of Educational Technology; 2017(Vol.5 – Issue 4)

[26] Heinich, Robert et al. (2002). *Instructional Media and the new Technologies of Instruction 7th ed.* Pearson Ed Inc, Ohio.

multimedia design with diverse teaching materials[27]. In the language teaching, the prominent goal of using multimedia is to promote the students motivation and learning process. in addition, traditional way teaching may be able to use in the teaching process, but it is better to utilize modern way of teaching such as using the multimedia to emphasize the main point of the materials. Moreover when using the multimedia in teaching, teacher should consider that the multimedia is used as an assistance to their teaching[28]. Therefore teachers can not leave their duty to give direction and controling the teaching process on the multimedia alone.

5. Designing Multimedia Teaching Material

On the designing multimedia, Karen has proposed a theory on how to design the multimedia by DDD-E model. Based on Karen, the DDD-E model help us to create a multimedia using the step as: Decide, Design, Develop, and Evaluate[29]. In the Deciding process, teachers need to set the instructional goal and deciding a project theme. These ways is being done to achieve the desired learning's outcome. In the Designing process, teachers will need to make a rubric to sort out the material which will be displayed. After creating the rubric, teachers then can make a flowchart to illustrate the sequence of the material presentation. The last time to do in the designing process is deciding the screen design. Developing process is naturally being done afterward. In this phase teachers need to choose and integrate text, grapichs, audio, animation, and video which being used to deliver the material. The last process is to evaluate the multimedia by testing it out before doing

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[27] Pandey, Meenu. *"Use of Multimedia in English Language Teaching"*. https://www.academia.edu/5649523/Use_of_Multimedia_in_English_Language_Teaching

[28] Zhen, Zhang. (2016). "*The Use of Multimedia in English Teaching"*. US-China Foreign Language, March 2016, Vol. 14, No. 3, 182-189. doi:10.17265/1539-8080/2016.03.002

[29] Ivers, Karen S and Ann E.Barron. (2002). *Multimedia Projects in Education 2nd ed*. Greenwood Publishing Group Inc, America.

the real presentation. This is needed in order to make sure that the multimedia is ready to be presented and the teachers also ready to perform a presentation.

In designing the media, other than Karen who proposed a DDD-E model, Mayer also proposed 12 principal on designing a good multimedia by which can help teacher to design a good multimedia[30]. Those twelve principles are presented in the table below:

Table 2.1 the 12 principles on designing a good multimedia by R.E. Mayer

Material selection	• Coherence • Signaling • Redundancy
Graphic and Text placement	• Spatial Contiguity • Temporal contiguity • Modality • Multimedia • Personalization
Presentation method	• Segmenting • Pre-training • Voice • Image

When teachers in the stage of material selection, they should consider the materials that they want to use, wether the extraneous material is exclluded or included (coherence). Teachers also need to highlight the essential material (signaling). The other thing to consider when choosing material is to use non redundant material such as only equipping animation and narration at a time (redundancy).

The next stage which the teachers need to pay attention is Graphic and Text placement. Teachers should consider that graphic and printed text are placed near each

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[30] Mayer, R.E. (2009). *Multimedia Learning 2nd ed.* Cambridge Uni Press, Cambridge. Page 52

(spatial contiguity) other while graphic and spoken text are presented at the same time (temporal contiguity). In addition teacher also need to highlight when is graphics and narration are needed and when is graphics and printed text are needed (modality). Lastly, teachers need to consider when to use words and pictures or words alone (multimedia) and wether to use conversational words or formal style words (personalization).

The final stage is the Presentation method. In this stage, when presenting the multimedia, teachers need to pay attention to if the learner will be better learning in learner-paced segments or as continuous presentation (segmenting). Other thing to consider are when to use pre-training in the names and characteristic of key components (pre-training), when the words need to be spoken by human or machine voice (voice), and when to present the image while narrating (image).

Not only the principle method that Mayer provided in his book, but also a way to create a meaningful learning based five cognitive theory[31]. The five cognitive theories are 1.) Selecting relevant words for processing in verbal working memory, 2.) Selecting relevant images for processing in visual working memory, 3,) Organizing selected words into a verbal mental model, 4.) Organizing selected images into a visual mental model, and 5.) Integrating verbal and visual representations. These can be used to start designing teachers own multimedia media teaching.

All the theory above will be considered to evaluate the students teacher's difficulties while designing the multimedia. The difficulties that they have will be analyzed based on which step they are stuck or feel the difficult part occured during the designing process.

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[31] Mayer, R.E. (2009). *Multimedia Learning 2nd ed.* Cambridge Uni Press, Cambridge. Page 52

B. Previous Study

There are some previous study with same topic on computer based media or multimedia. Kusumadewi in her journal entitled The Effect of Using Duolingo Towards Student Mastery (An Experiment of Junior High School Students at Omega Sains Institute) stated that the students which learn the vocabulary through duolingo application has a higher mastery on English vocabulary rather than those students which learn the vocabulary through traditional lecture or textbook[32]. Therefore it proved that the use of multimedia when teaching English can enhance the students' ability on learning. While using the multimedia, teachers have benefit from utilizing it to help them providing a better learning experience for the students. Thus teachers are supposed to develop their multimedia effectively in order to meet their teaching requirements such as what kind of class that they will teach, the students' need, and the goal of the study.

In addition from Prasetyo in his journal entitled ICT-Based Instructional Material Development: A Study of Communication Department Students stated that even when the students had to learn other language skill through practice and doing teamwork, when receiving the materials, the students prefer to learn by utilizing an instructional multimedia because it is easier and more practical to usage[33]. Although the when the design is monotone and boring. Therefore, before teacher utilize their multimedia teaching material, teachers should know the students need in order to acquire the goal of the learning process. Thus it is encouraged for the teachers to do a need analysis before

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[32] Kusumadewi, H. (2018). "*The Effects of Using Duolingo Towards Student's Vocabulary Mastery (An Experiment of Junior High School Students at Omega Sains Institute)*", *IJET (Indonesian Journal of English Teaching)*, 7(2), pp. 172-186. doi: 10.15642/ijet2.2018.7.2.172-186.

[33] Prasetiyo, M. (2017). "*ICT-Based Instructional Material Development: A Study of Communication Department Students*", *IJET (Indonesian Journal of English Teaching)*, 6(2), pp. 229-247. doi: 10.15642/ijet2.2017.6.2.229-247

they develop a supporting multimedia teaching material. After doing the need analysis, teachers then can move to the next step that is designing the multimedia. When designing the multimedia teachers should note that their multimedia should be related to the syllabus that was designed after the need analysis. After designing the multimedia then teachers can start to prepare their materials' selection. When the multimedia teaching material is finally done, teachers can validate and evaluate it before they use it in the real teaching activity.

In a research entitled Analysis On Computer Assisted Language Learning (Call) Class In Developing Students' Technological Pedagogical Content Knowledge by Musliadi Bakri submitted on 2018, the problem that's highlighted is about what is being learned in CALL class and the process throughout the class[34]. Further discussion provided is about the measurement on students Technological Pedagogical Content Knowledge after joining the class. When designing multimedia, teachers should have the requirements to develop a good multimedia for their students. The requirements to develop a good multimedia are having a good technological knowledge, content knowledge, and pedagogical knowledge. As developing the multimedia is also developing the materials that will be delivered, teachers should have at least good at all the three knowledge. The technological knowledge is about the teachers' background knowledge on how to utilize a technology for teaching, this include how to choose and operate the technology. Content knowledge is definitely needed by the teachers because it is a knowledge on how to utilize the language skill, especially when learning a language. Meanwhile the pedagogical knowledge let the teachers design a class or a course which is suitable for their students' need. The combination of these knowledge will help the teachers to achieve a good result in designing their own multimedia teaching materials.

In addition in a similiar content, a research entitled Pre-Service Teachers' Computer Literacy Skills On Teaching

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[34] Bakri, Musliadi. (2018). "*Analysis on Computer Assisted Language Learning (CALL) Class in Developing Students Technological Pedagogical Content Knowledge*". UIN Sunan Ampel

Practice 1 Class In English Teacher Education Department At Uin Sunan Ampel Surabaya by Fuad Habib Ar Rozy submitted on 2018 provide a result dealing with the pre service teacher's computer literacy skill based on their multimedia teaching[35]. This result give a good start to look up into for this research that will be done, the result itself shows that most of preservice teachers have a data on the importance and the need of developing multimedia by teacher for their teaching media. When developing a multimedia, teachers also need a skill to use the computer effectively. Computer literacy skill helps the teachers to be able to manage their multimedia effectively. Another skill which supports the computer literacy skill is visual literacy skill. When teachers have good skill on both the computer literacy skill and visual literacy skill, it will help the teachers to develop a better and effective multimedia teaching material.

Moreover in a journal entitled How to Design Effective Multimedia Prsentation by Zahra Hosseini provide an overview about the challenge that's faced by teachers while designing multimedia presentation for their teaching process[36]. In the discussion session, it provide information about the effective process of designing a multimedia presentation. When in fact the teachers had difficulties on utilizing a multimedia presentation, it is actually because of the lack of knowledge and the misuse of the multimedia presentation by the teachers itself. Thus the multimedia not only failed to enhance the students' learnings' outcome but also giving a bad impact when the multimedia presentation used incorrectly. Therefore, to avoid these challenges teachers should prepare their multimedia presentation in advance. Teachers can start preparing the multimedia developing by making a plan on what and how they will utilize the multimedia later. After that teachers can make a scenario

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[35] Rozi, Fuad Habib.(2018). "*Pre-Service Teachers Computer Literacy Skills on Teaching Practice 1 Class In English Teacher Education Department at UIN Sunan Ampel Surabaya*". UIN Sunan Ampel

[36] Hosseini, Zahra and Anand Kamal. (2013). "*How to Design Effective Multimedia Presentation*". University of Tampere. Paper Reference Number: 07-21-6895

is a slow learners. Moreover it promotes the use of authoring software so they can easily utilize it to develop their multimedia even with minimum knowledge of programming language.

Considering the first and two previous study, it give data that utilizing a multimedia can give more benefits rather than that traditional lecture and textbook. The third and fourth previous study indicates that the subject of research in the future already have a good computer literacy skill to develop and design a multimedia presentation for teaching. While the fifth previous study give an information dealing with designing an effective multimedia presentation based on the difficulties from literature review of the journal. The last two previous study discussed about the challenges that was faced generally in designing multimedia teaching materials and way to overcome the challenges. Therefore, this research was conducted to identify the challenges in more specific ways.

CHAPTER III
METHODOLOGY

A. Approach and Research Design

        The method that was used in this research was qualitative reseach. As this reasearch meant to search an understanding a meaning of human ascribe to a social problem[39]. This research emphasized on the detail of the description of the challenge in designing multimedia teaching material which faced by the student tecahers of English Language Education Department UINSA who are doing their teaching practice. Therefore this research utilized a case study research design[40], whereas case study research design will emphasis on the detail in the description of the data analysis that is for theme or issues.

B. Setting of Research

        Based on the scope that has been mentioned in the first chapter, the setting of this research was at English Language Education Department, Tarbiyah and Teachers Training Faculty of UIN Sunan Ampel Surabaya, where the teaching practice course going to be held.

C. Subject of Research

        To answer both of the research question, the subject of the research was also chosen for all of the student teachers who are in their 6th semester. Further qualification was only the student teachers that used multimedia for their media teaching in their teaching practice. For those student teachers which did not use multimedia as their teaching practice will not be considered as the subject of this research.

D. Data and Source of Data

        The data in this research was the challenge which was faced by the student teachers in designing their multimedia teaching materials. Therefore the source of the data was the student teachers itself.

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[39] Creswell, John W. (2009). *Research design qualitative quantitave and mixed methods approaches third edition*.California: SAGE Publication

[40] Creswell, John W. (2009). *Research design qualitative quantitave and mixed methods approaches third edition*.California: SAGE Publication

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E. **Data Collection Technique**

1. To collect data about the challenge in designing the multimedia teaching material, a survey in the form of questionnaire will be distributed to the participants. The question in the questionnaire will be about the stages in the designing process which later will be led into drawing the difficulties. Not only asking about the difficulties that might occur, but also asking about the possible way to overcome the difficulties.

2. To collect data about the way to overcome the challenges, an interview will be held. It can also give an additional information which will strenghten the answer on the previous data.

F. **Research Instrument**

In order to conduct the collection of the data, instruments are used. The instruments that will be used later on are

1. Questionnaire: The questionnaire is provided to survey the process in designing the multimedia teaching material and to find out which process indicating difficulties and possible ways to overcome it. The questions on the questionnaire were adapted from Karen's theory on how to design multimedia presentation using DDDE model. Another theory which was adapted into the questions of the questionnaire was Mayers' theory, that is the 12 principle to make a good multimedia. These two theories were used to construct the questions to identify the student teachers' challenges on designing multimedia teaching materials and to identify the ways to overcome those challenges. The questionnaire sheet can be looked at Appendix I.

2. Interview Guide: The Interview guide is constructed as a semi guided questions. These questions later will be used as a basic question which later can be developed regarding the situation that will happened later. The questions guide in the interview guide was adapted from Karens' theory on how to design a multimedia presentation, the DDDE model. The questions which was adapted from Karens' theory was to ask about the interviewees' challenges on designing their multimedia presentation. The questions were about the

steps of designing a multimedia presentation based on DDDE model, which was later being asked wether those steps are difficult to do or not. The interview guide can be looked at Appendix II.

G. Data Analysis Technique

According to Donald Ari, the analyzation of the data can be done in three stages: 1) organizing and familiarizing, 2) coding and reducing, 3) interpreting and representing[41]. Therefore, the analyzing stage in this research will be as follow:

1. Questionnaire data
    a. Familiarizing and organizing

    The familiarizing stages were included when the responses which was collected through questionnaire were collected in the form of online survey using google form. The questions on the questionnaire were being put together based on the stages of designing the multimedia teaching material. After that all the responses was counted based on each questions. All the responses was being put together so that the answer on each question could be counted. After the answer on each question being put together, the number of answer was being counted. The counted number then being put according to the difficulty level the same as on which was presented on the questionnaire. Because the answer on each question has been put together then the number which has been calculated can be analyzed into the next step.

    b. Coding and reducing

    The next stage that being done was coding and reducing. On the coding process, each answer on each question was categorized based on the difficulty level which was being questioned on the questionnaire. Because each respondent only allowed to choose one difficulty level to measure their difficulty on each stage, the answer of each stages was being put

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[41] Ary, Donald et.al. (2010). *Introduction to Research in Education 8th edition*. Wadsworth, Cengage Learning

together based on each question. The answer of each of the question which had been put together was being calculated and being sorted into the difficulty level. The difficulty level which was used to measure the student teachers' difficulty level, wether the stages on question was difficult or not. The number which was presented on each difficulty level was the number of the student teachers who answered the stages based on each level which suited to their condition.

c. Interpreting and representing

After getting the data which represented the total number of the student teachers who answered on each questions and each difficulties, the data of the same difficulty level was calculated in the form of percentage and was presented in the form of graphs and table.

2. Interview data

a. Familiarizing and organizing

The first step that was being done was familiarizing the data. Familiarizing the data process was started from transcripting the recording from the interview. While doing the transcription, notes was added to help straighten what the response possibly means to avoid bias. After the transcription done, the data will be organized based on the question and the content being questioned. On each question, the answer from each interviewee was added. After organizing the answers from all of the interviewees into each questions, the answers were analyzed to determine which of the answer that reflects the interviewees' difficulties and which of the answers that reflects the way to overcome the difficulties. After being organized, the data is ready to be treated into the next step.

b. Coding and reducing

The data that has been categorized will be highlighted. The highlight was divided into the stages in the designing process which later was treated as coding process. All the highlighted data will be put

together in the same highlight that they had as in the same designing stage, wether it was in the decide stage, design stage, develop stage, or in the evaluate stage. After that the highlighted data was divided into which one was expressing the difficulties and which one was reflecting the ways to overcome the difficulties.

c. Interpreting and representing

In the interpreting and representing stage, the data of the same code will be analyzed in the form of description and will be presented in the form of graphs or framework. After the data was divided into each stage and divided into which one was the difficulties and which one was the way to overcome the difficulties, the data then being interpreted into the closer meaning towards the questions which being asked during the interview and the explanation from the interviewee. The interpreted data was later being explained in the form of description.

H. Validation

The validation of this research instruments was done with several steps. The first step was structuring the questions for each type of the research instruments. The structuring process was done by making a blue print. The blueprint was made due to the questions that was distributed were adapted from theories on designing multimedia teaching material by Ivers Karen and R.E. Mayer. The finished blueprint then being examined by expert and then validated.

CHAPTER IV
FINDING AND DISCUSSION

A. Research Finding

The objectives of this research are to identify the chalenges when designing multimedia teaching material for teaching English faced by the student teachers of English Language Education Department UINSA and the way to overcome those chalenges. Data collected from nine questionnaire's respondents and four interviewees highlighted the findings below.

1. Challenges in Selecting and Displaying the Material

The first stage that was done when designing a multimedia was selecting and displaying the materials. Based on the data collected through questionnaires and interviews, it was indicated that the student teachers of English Language Education Department UINSA had difficulties in the selecting and displaying the material for their multimedia teaching material for teaching English. It was stated in the data from questionnaire that 33,3% of the student teachers had difficulty on chooing the animation which is in accordance with the material. This was just as student B stated,

> "*it's difficult on selecting the background, animation pictures which can move by downloading on the internet, audio for the slide, because teaching also need an interesting design for the students, especially for junior high school*".

Based on the statement above it can be concluded that student B challenges on selecting material is including selecting the background and animation from the internet. Not only selecting the animation it self but also selecting which animation which would be fit for her presentattion was difficult. Another thing that was considered difficult by the student teachers was selecting graphics and videos which are in accordance with their material. It was stated in the questionnaire result that 22,2% of the student teachers have difficulty in this matter. Meanwhile there were 11,1% questionnaire respondents that have difficulty on selecting an audio which is relevant to the material. This data

was also supported by all of the interviewees' responses. For example, student A stated,

> "*Also about the material selecting, sometimes it's difficult. Because we need to know the student's understanding level, from then on we will know the appropriate material in order for the students to understand our material*"

From the statement above it can be highlighted that selecting the material could be considered hard because teachers also need to consider the student's need and interest. Another statement from student D was,

> "*more difficult into integrating and ordering the files. But if the material itself is a bit difficult, searching the material itself is hard*"

Student D confirmed that selecting the material was hard when the material that would be given to the students is hard or complex.

Meanwhile another difficulty that was stated in the questionnaire result was 55,6 % student teachers have difficulties on making rubric to display the material. The data shows a higher percentage of difficulty because the student teacher had not been familiar with this step before. This data was confirmed by student A, student C, and student D during interview. Student A stated, "*never once for the rubric because I've never known of it.*" It means that student A had never once made rubric because she had not heard about it. Meanwhile student C and student D only stated that they had never made it.

Although it was not stated in the questionnaire result, the interviewees also stated that they mostly had difficulties on the designing process. Therefore all of the interviewees had agreed that this stage was difficult. For example, student B stated that

> "*it's difficult on selecting the background, animation pictures which can move by downloading on the internet, audio for the slide, because teaching also need an interesting design for the students, especially for junior high school.*"

Based on the statement from Student B, the selection of material process itself is indeed difficult, but teachers should also consider making a good design in order to catch the students interest. When the student levels are in a lower class, the presentation design is important so the teacher can utilize the multimedia presentation effectively, but according to student B, designing it was difficult to do. Meanwhile student C stated her difficulty as stated below,

> "*more into deciding the display of the layout which is in accordance with the material and is good to look at, and also deciding the most appropriate picture which should be put in the PPT.*"

Designing the display of a powerpoint presentation need to consider some other stuff other than placing the material here and there. As Student C stated, deciding the layout, pictures and the likes for visual support is also a challenge itself because teachers need to consider the appropiateness of it with the material that will be taught. Student D on the other hand, stated

> "*as for myself, I have difficulties on designing the PPT because I don't have a good designing skill for making PPT, that's why it's always turned ordinary.*"

Based on that statement, Student D was challenged with the designing stage because she purely did not have skill nor experience with designing a powerpoint multimedia. Another stages which still included in the material selecting, there were three stages that had been considered not difficult. Based on data both from questionnaire and interview, it was stated that deciding goal, project theme and making flowchart to illustrate the sequence of material presentation had no respondents which had dificulties on one of these. And this statement was agreed by the data from interviewee, for example student D stated, "*deciding the goal from the PPT is not difficult when you understand the point of the material.*" The statement higlighted that if the teacher already got the grip of what they want to deliver to the students he/ she will not have any difficulties when deciding the goal of the multimedia

teaching material. Meanwhile making a flowchart or rubric before designing the multimedia teaching material was already done by student B by looking at the interview result, when the interviewer asked wether she had ever made a rubric to display her material, student B stated, "*yes I do, but it's a simple one such as the points which will be explained in each slide.*"

For further information about the data percentage on the challenges, it is shown on the table 4.1 below
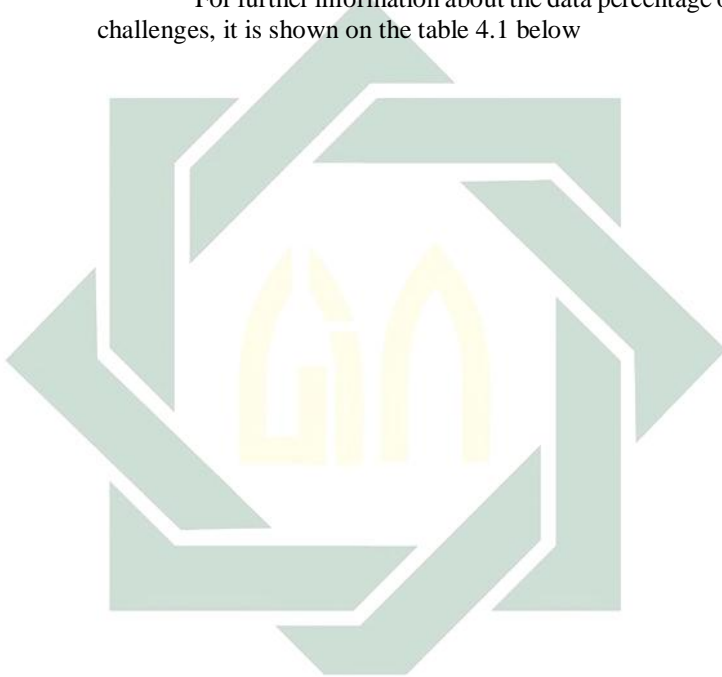
Table 4.1 Challenges faced by the student teachers in selecting and
displaying the material

	Stages	∑ Respondents answered (%)				
		Very easy	Easy	Neither easy nor difficult	Difficult	Very Difficult
Selecting and displaying material	Setting instructional goal	22,2%	55,6%	22,2%	0%	0%
	Deciding a project theme	11,1%	44,4%	44,4%	0%	0%
	Creating rubric to display the material	11,1%	11,1%	22,2%	55,6%	0%
	Making flowchart to illustrate the sequence of material presentation	0%	22,2%	77,8%	0%	0%
	Deciding screen design (layout/ template screen)	0%	33,3%	66,7%	0%	0%
	Selecting graphics which are in accordance with the material	0%	44,4%	33,3%	22,2%	0%
	Selecting animation which are in accordance with the material	11,1%	33,3%	22,2%	33,3%	0%
	Selecting audio which are in accordance with the material	0%	33,3%	55,6%	11,1%	0%
	Selecting video which are in accordance with the material	11,1%	22,2%	44,4%	22,2%	0%

Table 4.1 above explained the respondent's difficulty level on each designing multimedia stage, especially when selecting and displaying the material. It was stated on table 4.1 that the student teachers had challenge mostly on creating rubric to display the material. In this stage, 55,6% respondents answered this stages was difficult. The other challenges were selecting animation which are in accordance with the material which had 33,3% respondents answered this stage as difficult and selecting graphics which are in accordance with the material which had 22,2% respondents answered this stage as difficult. The last was 11,1% respondents stated that selecting audio which are in accordance with the material as difficult. Based on the explanation above it could be concluded that the challenges faced by the student teachers were creating rubric to display the material, selecting animation, graphics, video, and audio which are in accordance with the material.

There were some ways that can be done by the student teachers to overcome the challenges in selecting and displaying the materials. Therefore, this research had recorded the student teacher's ways to overcome the challenges on selecting and displaying the materials through questionnaire and interview. Figure 4.1 below summarized the result of questionnaire in the way to overcome the difficulties on selecting and displaying the materials through questionnaire. There were 77,8% respondents of the questionnaire agreed to match the material with the goal which is set before. About 44,4% respondents of the questionnaire agreed to delete unnecessary words, give hint words or graphics which will guide the student's attention. 33,3% of them do sorting the material to match it with the theme, while 11,1% of them do deleting redundant caption from narrated animation.
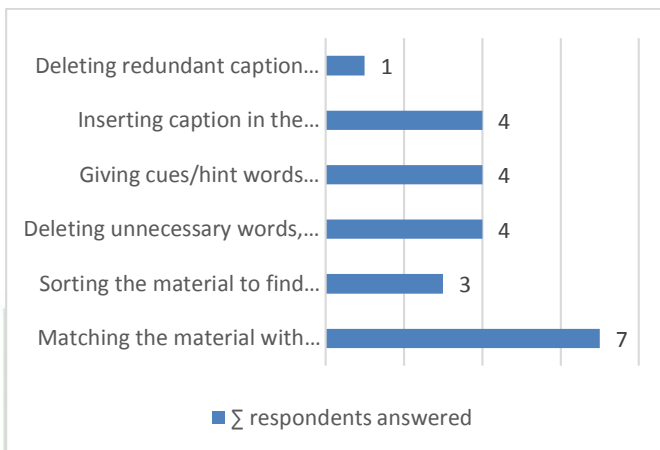
Figure 4.1 Ways to overcome selecting and displaying the material challenges

Eventhough the response that was given from questionnaire stated those ways, interviewees gave responses which had not been stated in the questionnaire yet in case of the way they overcome the challenges on selecting and displaying the material. All of the interviewees agreed that they usually overcome the challenges by searching for reference on the net and or asking their friend. For example student A and B stated that they were referencing on the book and internet when they had difficulty on selecting and displaying the materials,

> Student A   : when I faced with the difficulties, I looked up on the chapter again, if the book doesn't give enough info, I'll look into the internet, according to the material which I am in need and is simple enough for the students

> *Student B   : "that, doing a very detailed*
> *searching on the background and others so it*
> *may took quite of time, that's why before doing*
> *a teaching, we must prepare the material either*
> *form internet or book, background for every*
> *slide, and the animation pictures right from two*
> *days ahead. When it's all done, just put the*
> *points of the material to the PPT."*

Based on that statements, it can be concluded that both student A and student B did referencing on the internet after they searched it on the book first. When they did not find the materials on the book, they searched up their materials on the internet. Moreover student B also did preparing her multimedia presentation in advance in order to prepare for a better result. Another similar statement made by student C and student D, they stated that they did an online referencing through google or youtube.,

> *Student C   : sharing to internship friends*
> *who have same material and on the same class*
> *level. In addition, I also referenced on youtube*
> *about the material along with how to present it,*
> *in other words the tips*

> *Student D   : searching more reference*
> *about how to order interesting PPT layout in*
> *google. Then I also ask to a friend who is better*
> *on PPT design than me*

While student A and student B only stated that they did an online referencing, student C stated that she did searching the materials on *youtube*. By referencing on *youtube*, student C can also take a reference on how to use the materials or how to present the materials that is being referenced. Not only she did searching on *youtube*, she also ask her friends who teach on the same class level dealing with the materials that they should use to teach in the class. Meanwhile student D did searching on *google* for her layout, in other word how to display her materials on her multimedia presentation. Not only referencing the layout for displaying the materials on google, student C also asked her

friends who is better on PPT design to help her manage her materials display on the multimedia presentation.

Based on both result from the questionnaire and interview, it can be concluded that the student teacher can overcome the challenges on selecting and displaying the materials by matching the material with the goal which is set before, deleting the unnecessary word, giving hint words or graphic which will guide the student's attention, sorting the material to match it with the theme, deleting redundant caption, referencing on book and internet, and asking their friend.

2. Challenges in Integrating the Materials

Another challenges when designing multimedia teaching material is on the integrating the materials stage. Based on the data collected from questionnaire, there were some difficulties which is faced by the respondents of the questionnaire. There were 33,3% respondents which stated that they have difficulties on integrating graphic and audio into a slide, and integrating more than two format files. Another scale is 22,2% from respondents of questionnaire stated that integrating text and grapic into a slide, and integrating text and video into a slide were difficult. The last is only 11,1% respondents stated that integrating text and animation into a slide is difficult.

The responses from the questionnaire above is reflected on table 4.2 below.

Table 4.2 Challenges faced by the student teachers

	Stages	∑ Respondents answered (%)				
		Very easy	Easy	Neither easy nor difficult	Difficult	Very Difficult
Integrating the material	Integrating text and graphic into a slide	0%	77,8%	0%	22,2%	0%
	Integrating text and animation into a slide	11,1%	44,4%	33,3%	11,1%	0%
	Integrating text and video into a slide	11,1%	44,4%	22,2%	22,2%	0%
	Integrating graphic and audio into a slide	11,1%	33,3%	22,2%	33,3%	0%
	Integrating more than two format files(text, graphic, audio) into a slide	11,1%	33,3%	22,2%	33,3%	0%

From Table 4.2 it can be seen that most of the student teachers did not overcome any difficulties as at most there were 33,3% of the respondent give an answer that they had difficulties on integrating graphic and audio into a slide, and integrating more than two format files into a slide. Meanwhile there were 77,8% of the respondents stated that integrating text and graphic into a slide is easy. There were also 44,4% respondents that stated integrating text and animation into a slide and integrating text and video into a slide is easy. 33,3% of the respondents stated easy on both integrating graphic and audio into a slide and integrating more than two format into a slide.

Aside from the respondents who stated the stages as easy and difficult, the responses also vary to neither easy nor difficult and very easy. There were 11,1% respondents who stated the stages were very easy when integrating text and

animation into a slide, integrating text and video into a slide, integrating graphic and audio into a slide, and integrating more than two format files into a slide. There were 33,3% respondents who stated that integrating text and animation into a slide was neither easy nor difficult. The last was 22,2% respondents stated that integrating text and video into a slide, integrating graphic and audio into a slide, and integrating more than two format files into a slide were neither easy nor difficult.

Meanwhile, based on data from interviewees, most of them stated that integrating the file materials is not a difficult task. For example student A stated, "*I don't find ordering the files hard, the material already has definite structure.*" It means that integrating the files was not a problem at all because the material itself already had a definite structure. In addition, student C stated,

> "*more into deciding the display of the layout which is in accordance with the material and is good to look at, and also deciding the most appropriate picture which should be put in the PPT*"

Her statement means that she had more of a hard time when deciding the design of the layout or display rather than integrating the files. Eventhough most of the interviewees stated that integrating the files is not difficult, sometimes they still find it difficult. For example student D stated, "*more difficult into integrating and ordering the files.*" It means that she had a hard time when integrating the file materials into a slide.

There had been ways to overcome the challenges in integrating the materials which is already stated previously. Based on the response from the questionnaire, 55,6% of them present graphics and text into a slide. 44,4 % of them were giving keywords or table of contents before the material slide, placing graphic and text in a slide rather than text only, giving sort explanation next to coresponding graphic, placing only picture on the slide while the explanation is being done by talking. The last is 33,3% of the respondents of the questionnaire are dividing the content material into several slide.
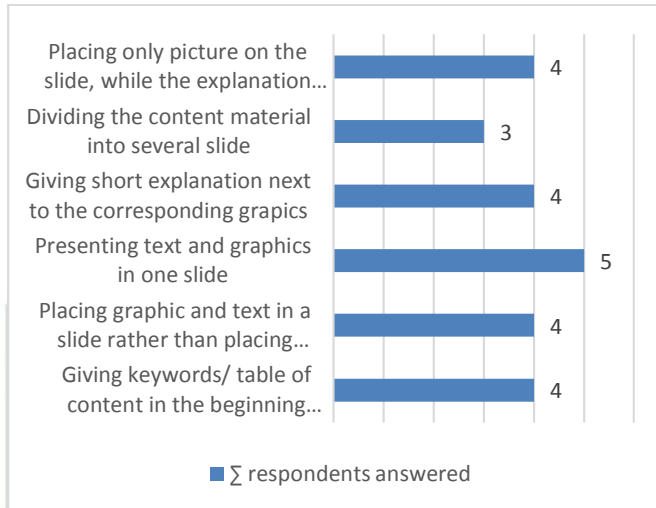
Figure 4.2 The way to overcome integrating different format files
challenges

As for the interviewees, they had different answers
from the responses collected through questionnaire. This was
because most of the interviewees gave a statement that
integrating the file materials was not a difficut task, they did not
have to search a special way to treat this stages. For example
Student A confirmed that she did not find integrating the
materials difficult when being asked during the interview. "*I
don't find ordering the files hard, the material already has
definite structure.*" Based on Student A response, she believed
that the material already had a definite structure, thus the best
way to design the powerpoint multimedia was through following
the material's structure. Student B also gave a similar answer
towards the similar question that she basically had no difficulties
when integrating the materials on her powerpoint multimedia
teaching material. Student C was giving similar answer, however
her statement emphasized that her difficulties was on the
designing process, not when integrating the materials. According
to Student C, online referencing could help her to design and
integrate the materials through the tips given by other online
user. Therefore student D still stated that she also uses reference

from youtube to make this stages easier, "*it's not just whatever, but also searching more on google or youtube.*" Thus, based on Student D answer when facing difficulties on integrating the materials, online referencing using google or youtube might help the student teachers to overcome this difficulty.

3. Challenges in Presenting the Material for Design Evaluation

The last stage on designing multimedia teaching material is evaluation. The evaluation stages was done by presenting the multimedia teaching material to test out the quality of the multimedia and the presenter performance when delivering it. Based on the data collected through questionnaire, there were no difficulties faced by the respondets on this stages. 44,4% respondents of questonnaire stated that presenting the material was neither easy nor difficult, while the other 44,4% respondents of questionnaire stated that it was easy. The last 11,1% respondents of questionnaire stated that this stages was very easy.

Table 4.3 Challenges faced by the student teachers in Presenting the Materials

Presenting the material	Stages	∑ Respondents answered (%)				
		Very easy	Easy	Neither easy nor diffi-cult	Diffi-cult	Very Diffi-cult
	Presenting the multimedia	11,1%	44,4%	44,4%	0%	0%

Table 4.3 above had clearly shown that there was no challenges faced by the student teachers. Similiar statement was collected from the interviewees. They stated that they have no problem while presenting the PPT. Just like student A stated that she usually have a smooth presentation. The same statement also stated by student B who has a similar circumtance.

While it was not a difficult task, 88,9% respondents of questionaire present pictures to help them visualize their material. 55,6% respondents of quetionnaire is also pesenting their presentation using a friendly tone. The last is only 44,4 %

respondents of the questionnaire that inserting conversation during the presentation.
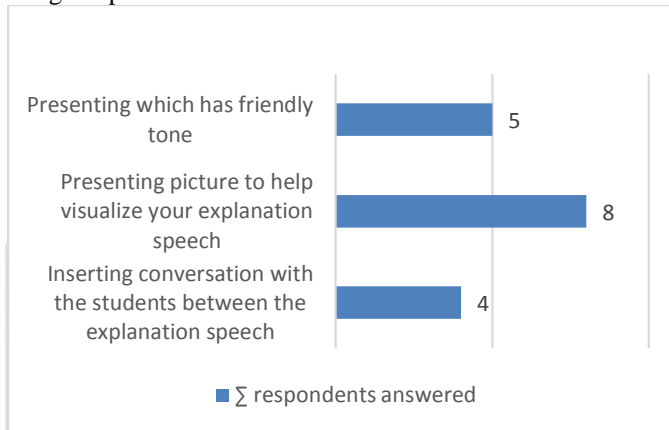
Figure 4.3 The way to overcome presenting the materials challenges

Eventhough the data from the questionnaire stated that, most of the interviewees stated that it all because of the plot or flowchart which they made to illustrate the sequence of the material. For example student A stated, "*If the plot, yes I've ever made one, it is also in order I can present the material smoothly, so I don't feel nervous.*" It can be concluded that she made a flowchart in order so that her presentation will go smoothly and not being nervous. While student B being asked if she had any difficulties when presenting the material she stated, "*Alhamdulillah none happened, it's thanks to the sketch*" that eventhough she made a simple flowchart, but it helped her a lot when doing the presentation.

B. Discussion

Based on the research finding which is already being presented, in this section the researcher will associate the findings with the theories which are explained in the previous chapter.

1.   Challenges in Selecting and Displaying the Materials

Based on Karen's theory in designing multimedia, there are some stages that need to be done[42]. In those stages, selecting and displaying the material were included in th decide and design process which is divided into several steps[43]. Based on the steps on Karen's theory, this reasearch found out wether the step is difficult or not. After collecting the data it was found that in the stages of selecting and displaying the material did not really difficult to do for the respondents. It was shown that the highest percentage is 55,6% respondents of questionnaire stated that creating rubric was difficult. This phenomenon later confirmed by interviewing some of the respondents. By the response given, it was known that most of the respondents does not know about this step, thus they didn't make rubric to display the material. Therefore making the rubric was considered difficult by the student teachers because of the lack of knowledge on how to make them.

The other stages were mostly considered as neither easy not difficult by the student teachers with the highest answer's percentage 77,8% respondents answered making flowchart to illustrate the sequence of material and 66,7% respondents answered deciding screen design as neither easy or difficult. This is confirmed during the interview that the student teacher had usually been making a flowchart before they make their own multimedia teaching material. Therefore, the process of making flowchart is considered as neither easy nor difficult because they used to make it. When the student teachers did not make flowchart, it would make them hard to develop their design later just like what Karen said that to help the students to visualize the sequence of material is important[44]. Therefore, making flowchart is

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[42] Ivers, Karen S and Ann E.Barron. (2002). *Multimedia Projects in Education 2nd ed*. Greenwood Publishing Group Inc, America.

[43] Ivers, Karen S and Ann E.Barron. (2002). *Multimedia Projects in Education 2nd ed*. Greenwood Publishing Group Inc, America

[44] Ibid

actually needed when designing the multimedia teaching material.

The process of deciding the screen design was considered as neither easy nor difficult by the student teacher was relevant with the result of the previous study that had been done by Fuad[45]. In the result on the previous study stated that the student teacher of English Language Education Department showed that the student teachers had a good visual literacy skill. While the student teachers had a good visual literacy skill, it helps assist the student teachers to make a good development on their multimedia teaching material. Moreover if the visual literacy skill being utilized often, it can develop with the student teachers progress on getting better at making their own multimedia teaching material.

The other steps can be considered as an easy task where most response collected from questionnaire stated that most of the repondents of questionnaire answered between easy and neither easy nor difficult. The data from questionnaire were further confirmed by the result of the interview where the student teachers were not having any difficulties particularly in selecting and displaying the materials. This result was relevant to the previous study conducted by Musliadi[46] in his research in CALL class. The student teachers tecnological pedagogical content knowledge indicated as excelent. The result meant that the student teachers are already had a good knowledge on how to make a multimedia teaching material for their use in teaching English. Therefore the student teachers did not find the selecting and displaying the material as a difficult task.

Eventhough the selecting and displaying materials in the results of this research showed that it was not a difficult

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[45] Rozi, Fuad Habib. (2018). "*Pre-Service Teachers Computer Literacy Skills on Teaching Practice 1 Class In English Teacher Education Department at UIN Sunan Ampel Surabaya*"

[46] Bakri, Musliadi. (2018). "*Analysis on Computer Assisted Language Learning (CALL) Class in Developing Students Technological Pedagogical Content Knowledge*". UIN Sunan Ampel

task, it is opposite from the result of the previous study which was done by Shamsul[47]. It was expalained that the selecting of the materials become difficult when the trainers develop their own cuztomized multimedia resorce because it needs a high cost. In the other hand, the student teachers of English Language Education Department have been taking their resource from the internet, thus the cost of collecting these resource was not as high when they try to make it themshelves. Therefore, the selecting material was not considered as a difficult task by the student teachers.

Aside from Karen's theory of designing the multimedia[48], there was also Mayer's principle to help the student teachers to develop their multimedia. Based on Mayer, there are 12 principle to make a good multimedia[49]. These principles are of course being a great help on designing the multimedia to become easier. Based on these principles, most of the respondents have already been applying coherence and signality principle, where in coherence principle they should delete unnecessary word, graphic or sound and in signality they should give hints to guide the students attention. The data collected has already shown that there are already a lot of respondents following this principle in average of 44,4% respondents of questionnaire.

While the data from questionnaire shown that the student teachers already followed Mayer's principals of selecting and displaying the material, the data from interview shown a slighty different answer. Most of the interviewee stated that they faced the diffulties by referencing online and or asking their friend for advice.

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[47] Rizal, Shamsul. (2008). "*Challenges in Developing Interactive Multimedia Learning Materials: Some Considerations for Alam Trainers"*.

[48] Ivers, Karen S and Ann E.Barron. (2002). *Multimedia Projects in Education 2nd ed*. Greenwood Publishing Group Inc, America

[49] Mayer, R.E. (2009). *Multimedia Learning 2nd ed.* Cambridge Uni Press, Cambridge

2. Challenges in Integrating the Materials

Based on Karen's theory, the stage of integrating the materials was included in the developing stages[50]. In the developing stages, not only the teacher to choose the file material, but they also need to integrate them into a slide. Based on the data collected from questionnaire, there has been no particular difficulties as the respondents who have difficulties in it only ranged from 11,1% - 33,3% respondents of questionnaire. The result from the interviewees are also showing that there was no significant difficulties on this stage.

This result of this research was in accordance with the result in the previous study by Musliadi Bakri. It was stated in his research that the technological knowledge of the student teacher of English Language Education Department UINSA is good, which means most of the student teacher was capable of designing and developing their multimedia teaching[51]. Therefore it helped the student teachers to develop their multimedia when integrating different format files.

Another skill which supports the student teachers while designing the multimedia is the computer literacy skill. Based on Fuad in his research it was stated that the student teachers of English Language Education Department UINSA's computer literacy skill is mostly on intermediate level[52]. The high computer literacy skill means that the student teachers are able to operate or utilize their computer especially when integrating different format files in designing multimedia teaching material.

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[50] Ivers, Karen S and Ann E.Barron. (2002). *Multimedia Projects in Education 2nd ed*. Greenwood Publishing Group Inc, America.

[51] Bakri, Musliadi. (2018). "*Analysis on Computer Assisted Language Learning (CALL) Class in Developing Students Technological Pedagogical Content Knowledge*". UIN Sunan Ampel

[52] Rozi, Fuad Habib. (2018). "*Pre-Service Teachers Computer Literacy Skills on Teaching Practice 1 Class In English Teacher Education Department at UIN Sunan Ampel Surabaya*"

It can be concluded from the result of Bakri's research result and Rozi's research result that when designing the multimedia teaching materials, the student teachers also need the knowledge and skill which can support them to help them develop their multimedia teaching material effectively. When the student teachers already have good the technological knowledge and computer literacy skill, it helped them to develop their multimedia teaching material, which they develop with computer, became easier.

It was also explained in Shamsul's study that a skill on developing instructional multimedia and multimedia authoring skill was required before one develop their own multimedia learning material[53]. If trainers did not have the both skill, it will result in having difficulties when they develop their own multimedia learning materials. In the other hand, the student teachers had already succeded in developing their own multimedia teaching materials, meaning that they had the skill in constructing instructional multimedia teaching material and multimedia authoring which they acquired in their previous courses.

On this stages of designing multimedia, Mayer's 12 principle also helps the teacher to do an easier task of designing[54]. There are some principles that can be applied in this stages as well such as temporal contiguity, pre-training, multimedia, spatial contiguity, and modality principle. In the temporal contiguity principal, teachers should present text and graphic in onle slide. Pre-training principle requires the teachers to give keywords/ table of content in the beginning slide before the content material slide. Multimedia pronciple requires teachers to place graphic and text in a slide rather than graphic only or text only. Spatial contiguity requires the teachers to give a short explanation next to thecorresponding graphic. Modality principle requires the teachers to place the

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[53] Rizal, Shamsul. (2008). "*Challenges in Developing Interactive Multimedia Learning Materials: Some Considerations for Alam Trainers*".

[54] Mayer, R.E. (2009). *Multimedia Learning 2nd ed.* Cambridge Uni Press, Cambridge

picture in a slide while the explanation should be done by speaking.

The principles of integrating the materials was further agreed by Zahra[55] in her research that when making a powerpoint multimedia teaching material, teachers should not make the slide into a complicated one with too much information or unrelated graphics placed together in a slide. Teachers should make their powerpoint multimedia teaching material's slide into one that is simple and has appropiate support file such as graphic, audio, or video which in accordance with the material that will be given to the students. Based on the questionnaire result, the student teachers had also did the principles of integrating the materials. Therefore, most of the student teachers did not find integrating the materials was difficult.

When Mayer's principles of integrating different format files is associated with the data collected in this research[56], the result will be, 55,6% respondents of questionnaire have already applied temporal contiguity principle, 44,4% respondents of questionnaire have already applied pre-training, multimedia, spatial contiguity, and modality principle, 33,3% respondents of questionnaire have already applied segmental principle. Meanwhile the data from interview stated that the student teachers did not any particular process to overcome the challenges when integrating the materials. Some of them only following the structure of the material in which the material itself already had a definite structure. The other answer is the student teachers did online referencing on *google* or *youtube* when they were faced by the difficulties.

As the student teacher did not particularly had any challenges during the interating the materials process, by looking at the results above it can be concluded that the

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[55] Hosseini, Zahra and Anand Kamal. (2013). "*How to Design Effective Multimedia Presentation*". University of Tampere. Paper Reference Number: 07-21-6895

[56] Mayer, R.E. (2009). *Multimedia Learning 2nd ed.* Cambridge Uni Press, Cambridge

student teachers were already be able to overcome the challenges on integrating the materials when they were faced by the difficulties and they were able to make a good multimedia teaching material by both applying Mayer's principals on integrating the materials and their own way to do the stage.

3. Challenges in Presenting the Materials for Design Evaluation

Presenting the material in Karen's theory is included in the evaluate stage[57]. In this stage, the teacher need to present their multimedia. Based on the data collected, there was no respondents nor interviewee who had any challenges in this steps.It was represented from no respondents of questionnaire answered this step difficult. This result indicated a good result.

Based on the previous study by Musliadi Bakri, it was stated that the pedagogical knowledge, which is related to how to teach language skill and classroom management, of English Language Education Department UINSA student was excellent[58]. This pedagogical knowledge helped the student teacher to maximize the utilization of their multimedia teaching material, especially when presenting the materials or delivering the materials to their students. Therefore in this research, the student teachers did not find presenting the materials for multimedia evaluation as difficult because they had already got pedagogical knowledge on their previous course which helped them to figure out to do the presentation better.

On the other hand, Mayer's 12 principle still able to make this step easier[59]. Personalization principal by Mayer requires the teacher to insert conversation between

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[57] Ivers, Karen S and Ann E.Barron. (2002). *Multimedia Projects in Education 2nd ed.* Greenwood Publishing Group Inc, America.

[58] Bakri, Musliadi. (2018). "*Analysis on Computer Assisted Language Learning (CALL) Class in Developing Students Technological Pedagogical Content Knowledge*". UIN Sunan Ampel

[59] Mayer, R.E. (2009). *Multimedia Learning 2nd ed.* Cambridge Uni Press, Cambridge

explanations. Image principle requires the teacher to present picture to visualize the material. While the voice principle requires teacher to use friendly tone. Based on the data collected, 88,9% respondents have already applied image principle, 55,6% respondents have already applied voice principle, and 44,4% respondents have already applied personalization principle.

When applying the principle which proposed by Mayer, the student teacher actually had succeed in presenting their multimedia. Zahra stated that the challenge when presenting multimedia teaching material, especially PPT, is that teacher failed in utilizing the multimedia effectively[60]. Students often distracted from the lesson because the lack of interaction during the explanation when teacher use powerpoint. The other ineffective use of multimedia based on Zahra is when teacher featuring image or supporting material which is not suitable with the powerpoint. Therefore the student teacher of English Language Education Department UINSA had already overcome this challenges by utilizing Mayer's principle of presenting the multimedia.

While the data from the questionnaire showed a result which is relevant with the principles proposed by Mayer, the interview data showed a slightly different answer. The student teachers stated that their success in presenting their multimedia teaching material was because they already make a flowchart to help them keeping the sequence of the material when doing the presentation. This result was relevant with the result in Zahra's research. Zahra stated that the teachers should also consider making a good scenario when developing the multimedia teaching material [61]. This is done in order to make the teachers have a better undersantanding on the material that they will deliver and to

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[60] Hosseini, Zahra and Anand Kamal. (2013). "*How to Design Effective Multimedia Presentation*". University of Tampere. Paper Reference Number: 07-21-6895

[61] Hosseini, Zahra and Anand Kamal. (2013). "*How to Design Effective Multimedia Presentation*". University of Tampere. Paper Reference Number: 07-21-6895

make the multimedia teaching material be better. Thus it helped the teachers later on when presenting the multimedia teaching material. Therefore the student teachers who made a flowchart before they present their multimedia can do the presentation smoothly and had a better experience with the difficulties when presenting the multimedia teaching material.

Overall, the student teachers of English Language Education Department faced challenges on selecting and displaying the materials stage and on the integrating the material stage. Some of the challenges was occurred because the student teachers were lacking in knowledge on how to do the steps, and some challenges was occurred based on what kind of situation and environment which they will use the multimedia on, such as the class level, students' background knowledge, and the subjects' difficulty. However, based on the findings on the previous section, the student teachers had already overcome it by doing the steps which is related to Mayer's 12 principle to design a good multimedia. Aside from doing what was related to the principle, the student teachers also do referencing and ask for help to their friend. It is good that the student teachers are able to overcome their challenges when designing their multimedia teaching materials, wether they did it according to expert theory or by their own way.

CHAPTER V
CONCLUSION AND SUGGESTION

A. Conclusion

This research objective is to identify the challenges that was faced by the student teachers of English Language Education Department UINSA while designing the multimedia teaching material for teaching English and how they overcome it. The designing process which was done by the student teachers was divided into several stages, there were selecting and displaying the materials, integrating the materials, and presenting the materials for design evaluation stages. Based on the findings which was presented in the previous chapter, there had been some conclusion made as follow:

1. The Student Teachers Challenges on Designing the Multimedia Teaching Material for Teaching English

Based on the finding and discussions on the previous chapter, it can be concluded that the challenges that the student teachers faced on the selecting and displaying the materials were selecting animation, graphics, video, and audio which related to the material, and creating rubric to display the materials. While the selecting the materials stages had only 11,1%-33,3% of the student teachers who found it difficult, creating the rubric to display the material had 55,6% of the student teachers who had it difficult. On the integrating the materials stage, there were only a few of the student teachers who were challenged. There were 11,1%- 33,3% of the student teachers who had challenges on integrating graphic and audio into a slide, integrating text and graphic into a slide, integrating text and video into a slide, and integrating text and animation into a slide. While the student teachers faced challenges on the selecting and displaying the materials stage and integrating the materials stage, they did not find any challenges on the presenting the materials for design evaluation stages.

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2. The Student Teachers Ways to Overcome the Challenges

Stating the challenges on each stages, the student teachers also have a way to overcome those challenges. Based on Mayer's theory about the twelve principles to make a good media, it is shown by the data collected that the student teachers have already used those principles to help them in designing their multimedia. During Selecting and displaying the material, the student teachers have already used coherence and signality principle. When integrating the materials, the student teachers have already used temporal contiguity, pre-training, multimedia, spatial contiguity, and modality principle. The last is the evaluating stages. Especially when presenting the multimedia, even though the student teachers have not mentioned that they had any challenges in this section, they have already used image, voice, and personalization principle from Mayer's theory[62]. Aside from Mayer's theory, the student teachers also perform online referencing and asking their friends when they faced by challenges in designing their multimedia.

B. Suggestion

After reading the result of this research, the researcher would like to give the following suggestion:

1. For the Lecturers

After reading the result of this researh, the lecturers have a vision to the core problem of the challenges which the student teachers faced. Therefore the lectures can design a course which the material can be adjusted on what is urgent dealing with the challenges when designing the multimedia teaching material. Lecturers can design a course which including Ivers' theory on how to design a good multimedia using DDD-E model, which the steps is easy to follow and helps the student teachers to make a

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[62] Mayer, R.E. (2009). *Multimedia Learning 2nd ed.* Cambridge Uni Press, Cambridge

meaningful multimedia teaching material[63]. Therefore the student teachers will not miss any step in the multimedia designing process which later can cause them to have difficulties in the middle of developing it. Another theory which can also be given to the student teachers' on their course is Mayers' 12 principle on how to design a good multimedia which can help them to design a good multimedia. When the student teachers have an insight on how to design a good multimedia, they will have an insight on how should they do when they are faced with a specific step on designing the multimedia such as when to selecting the materials, displaying the materials, integrating the materials, and presenting the materials to evaluate it. The 12 principles on how to design a good multimedia will also help the student teachers to have an insight on how to develop their multimedia teaching material depending on the class level, students' background knowledge, and the subjects' difficulty. This way, the course on developing media teaching will be more meaningful.

2. For the Student Teachers

Based on the result of this reasearch, the student teachers can have an overview on what usually become challenges when designing the multimedia teaching material and the way to overcome it. Therefore they can consider the result of this result especially the way to overcome the challenges when they found similiar challenges when designing their multimedia teaching multimedia in the future. The student teachers can reference on the theory which helps them to develop their multimedia teaching material or doing online referencing and asking their friend. For example, when the student teachers' have difficulties in the material selection and display they can look up on Mayer's principle of material selection and display. Another way to overcome this difficulty is to look up the internet for reference or asking their friends who had same experience.

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[63] Ivers, Karen S and Ann E.Barron. (2002). *Multimedia Projects in Education 2nd ed*. Greenwood Publishing Group Inc, America

3. For Future Research

As this research already presented the challenges on designing multimedia teaching material and the way to overcome it, the future researcher can consider a related topic in multimedia scope for future research such as designing multimedia with different applications, the most appropiate multimedia application for teaching English, or how to be better in presenting a multimedia.
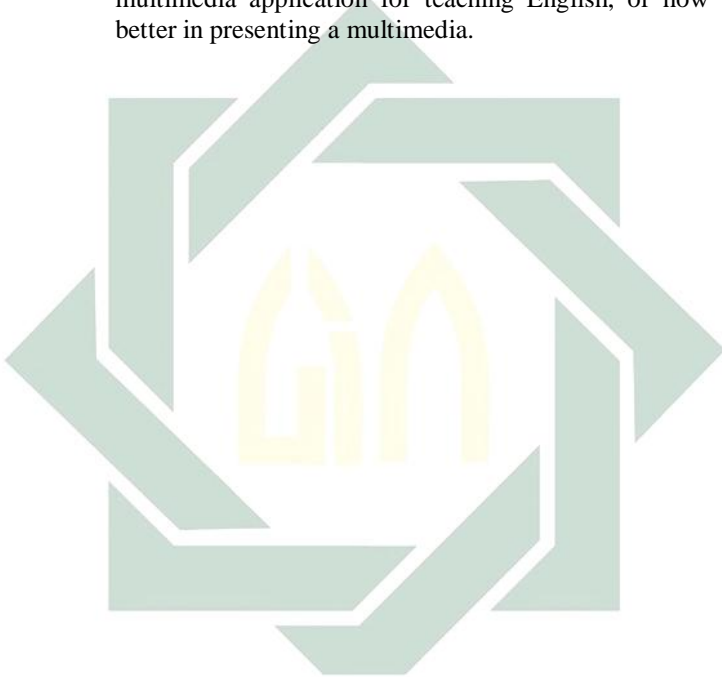
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