MULTIMEDIA-BASED PRESENTATION: EXPLORING INTERACTIVITY EMERGENCE IN ACADEMIC SPEAKING CLASSROOM

Denty Marga Sukma[1], Joko Nurkamto[2], Nur Arifah Drajati[3]
dentymarga@gmail.com[1]
Master Degree of Universitas Sebelas Maret[1,2,3]

ABSTRACT

The understanding of knowledge transfer and information delivery is recently in the broader scope due to the development of educational technology. The information delivery is not merely done using verbal message; however, multiple modes of presentation such as verbal and auditory representation can also be the alternative of material delivery. The studies featuring the use of multimedia-based presentation are mostly administered to determine its effectiveness to be implemented in the learning process. In contrast, the exploration of the use of multimedia-based presentation toward the way how it can be a means of interaction seems underexplored. Therefore, to make it be more precise, the present study attempts to explore the practice of multimedia-based presentation in academic speaking classroom and to investigate the interactivity emerged during the presentation process. This study deployed qualitative case study design due to the purpose of gaining the in-depth investigation of the use of multimedia-based presentation and its interactivity emergence in academic speaking classroom. The study was conducted in one of the universities in Surakarta majoring English Education where academic speaking becomes one of the subjects. The presentation document along with the presentation process were analyzed in this study. The results of the analysis show that multimedia-based presentation is designed to visualize the material being conveyed through the icons, pictures, and illustrations that are able to represent the information or knowledge in a more concrete way. Moreover, the interactivity is also emerged through the use of multimedia-based presentation as it simplifies the presenter to do the following: gesturing, dialoguing, and describing. The results implies the opportunity for both teachers and academic speaking presenters to innovate how they present the material by using multimedia-based presentation. In practice, multimedia-based presentation along with its interactivity can clarify the materials, grab the audience attention, and stimulate the audience responses.

Keywords: educational technology, interactivity, material delivery, multimedia-based presentation

INTRODUCTION

As the development of technology is widely spread throughout the educational field, the demand to create the significance impact of technology is also getting increased. The educational technology has successfully brought the digital media into the classroom. The researchers, practitioners, and the included stakeholders must take into account for how well technology contributes to the improvement of teaching and learning process. The learning environment is traditionally based on the verbal representation in which the

Science, Engineering, Education, and Development Studies (SEEDs): Conference Series
Faculty Of Teacher Training And Education Sebelas Maret University
Volume 2 Issue 1 June 2018 eISSN : 2615-4382

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teacher needs to present all of the material verbally. However, as the technology develops, using the literary text as the instructional media seems ineffective since technological tools are preferred to be the appropriate ones like PCs, laptops, projectors, etc (Oommen, 2012). This one-mode teaching instruction has also been argued by Moreno and Mayer (2007) by stating that this mode of instruction has been long dominated the education and it needs to be revolutionalized. They propose the theory of multimedia principle stating that adding non-verbal representation to the verbal explanation will enhance the learning process since the students will more comprehend the materials as well as memorize the vocabulary (Moreno & Mayer, 2007; Fletcher & Tobias, 2005, Dubois & Vial, 2001).

The transition of material delivery in the classroom becomes one of the demands in educational field. As a result, multimedia learning is emerged as the innovation of material delivery method in the classroom nowadays. Multimedia learning is viewed as the combination of more than one mode in terms of the way how the learning is carried out. The modes are served in visual representation such as pictures, icons, graphic, etc and the auditory representation such as music, verbal message etc. The use of multimedia learning without any doubt affects the area of education (Campbell, 1997). As it was also mentioned by Mayer (1997), multimedia presentation is synthesized as the way to create meaningful learning by providing the learners the multiple representations.

The concept of combining more than one mode in the medium as the channel of communication (Heinich et al., 2002) was firstly coined by Paivio (1986). He mentions that multimodal or multimedia are combining different modes such as non-verbal and verbal into one learning environment to represent the knowledge. Heinich et al. (2002) also found that the term 'multimedia' has been used in the late 1950s as the attempt to combine still and motion media for heightening educational effect. Further in the early years, the term multimedia is widely known as the rich media where multiple representation are served at once (Kamatchi & Stanley, 2016).

However, in the current educational situation, the term multimedia is not simply combining more than one mode into one; whereas it turns to be more complexed. Refering to the trend of instructional technology in education, multimedia tend to synchronize the modes instead of merely to combine more than one mode. Synchronizing means that those modes must be integrated each other and has the structured form so that the information within each mode can be well-delivered to the learner as a whole.

Therefore, the concept of multimedia learning is now incorporated with the interaction occured in the learning process where the transfer of knowledge and information delivery take place. Heinich et al (1999) support the argument by stating that learning is producing and receiving information through communication. Thus, it is impossible to attain the information without any interaction. Due to the rich amount of information (in multimedia-based presentation, the interaction is considered to be the most important thing to bridge the infomation transfer. It is also mentioned by Goto and Kashihara (2016) which believe the notion of 'content transfer' to the audience in a precise way.

However, the literature is limited only in the discussion of how technology is used and how it enables the learners to increase their learning performance. Moreover, the study about the process of multimedia-based presentation is mostly underexplored. In fact, the process of how the students get along with multimedia-based presentation is essential

dealing with the interactivity. Therefore, this study concerns on the practice of multimedia-based presentation as well as the interactivity pattern occured in the classroom between the presenter and the audience. The research question proposed to guide the research is how do the students practice the interactivity through multimedia-based presentation in academic speaking classroom.

LITERATURE REVIEW

Basically, Mayer (2001) has already defined multimedia as the combination of several modes received in human sensory channels to convey the messages to the audience. The modes which are included are audio, video, graphic, image, and so on. Ivers and Baron (2010) state the similar modes in which according to them, they are text, image, video, animation, sound, interactivity, and user control. In relation with the use of multimedia-based presentation, the interactivity between the presenters and the audience becomes the concern of this study. Based on the literature focusing on the interactivity in the classroom, the theories of interactivity are intertwined each other. Mayer and Moreno (2007) focus on the interactivity that may emerge during multimedia-based input which can be formulated as follows: (1) Dialoguing, in which the presenter receives the questions or feedback for the audience, (2) Controlling, in which the presenter determines the pace of presentation; (3) Manipulating, in which the learner sets parameters for simulations by zooming in or out or moving objects; (4) Searching, in which the learner seeks information and find the content material during presentation; (5) Navigating, in which the learner moves to different content areas.

Previously, Shepherd (2006) proposes the similar form of interactivity, they are concerning on the presenter's attitude in delivering professional style of presentation (stance or gestures); attracting the audience attention (eye contact); engaging the audience which help them assimilate what has been explained (pace); the object movement controlled by the presenters (navigation); how the presenters describe the visual aids (description); how the presenter encourages the audience to be involved in the presentation (encouragement); and how the presenters clarifies the audience's response or feedback (clarification). Meanwhile, Ivers and Baron (2010) also include the interactivity to their point of their research. They define that interactivity in presentation as the action which stimulates other reaction in terms of multimedia learning in the classroom.

Berk (2009) in his research about using multimedia in learning states that there are several steps to do before using multimedia in the classroom. He mentions about the use of icon or illustration to present the concept as he believes they are effective to visualize the concept in the simpler form or representation. In line with the previous theories proposed by many researchers, Berk (2009) also inserts the discussion about the activities followed after the multimedia-based presentation is used. According to him, serving the stimulus for the learning activities can be done by asking the students' reaction in an open discussion, directing the students to answer the spesific questions, asking the students about the clips, requesting the students to write down their responses, and engaging the students with or without the leading questions.

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Volume 2 Issue 1 June 2018 eISSN : 2615-4382

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METHODOLOGY

The present study employed qualitative case study as it has been suggested by Yin (2009) in order to investigate the in-depth phenomenon within its real-life context. For the purpose of investigation, the presentation processes from three groups in Academic Speaking classroom were observed to obtain the detailed information about how the presenters practice the interactivity using multimedia-based presentation. In addition, the documents of presentation was also used to know how they design and prepare the presentation. They were instructed to present their abstract, theories, and references using Canva as one of the presentation tools. The population comprised in this study was 28 graduate students majoring English Education in one of the universities in Surakarta Central Java. Of the total number, 8 students were chosen to be the samples consisting of both audiences and presenters. The purposive random sampling was used as the technique since the distinct presentation type should be represented. For analysis, the data generated from the interview were transcribed verbatim and coded to simplify the data verification. The data were validated using triangulation and member-checking.
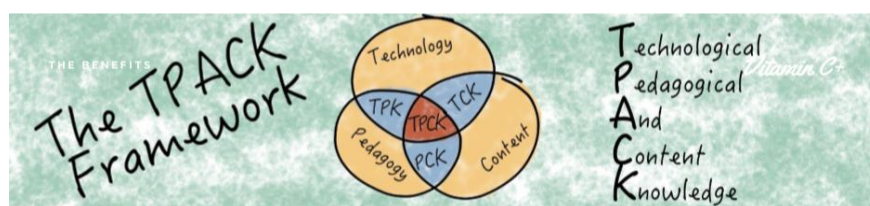
RESULT AND DISCUSSION

In multimedia-based presentation, the use of any visual object is essential to be considered since the audience also concerns on the visualization of the presentation other than the presenter's explanation. Based on the observation that has been carried out in Academic Speaking classroom, it was found that all of the students used Canva as instructed by the lecturer. Canva is the online-based presentation tool that enables the user to choose the provided layout and background. The user can download various formats of presentation, such as Pdf or Jpeg to make them easier to have offline presentation. In multimedia-based presentation, the modes that possibly emerge are the visual and verbal mode. The visual mode can be divided into visual object and on-screen text, while the auditory mode is in the form of verbal explanation. The result and finding are categorized into two points of discussion, they are 1) Designing Multimedia-based Presentation to attract the audience; and 2) Emerging the GDD interactivity through Multimedia-based Presentation.

Designing Multimedia-based Presentation to Attract the Audience

The visualization of multimedia-based presentation can be seen in the following table that shows how the presenters design their multimedia-based presenters by inserting several visual objects as picture, icon, and illustration. All of the informants of this study which consisted of 6 students used Canva as their presentation tools. ME, one of them, stated that Canva is the insightful presentation tools since it provides free presentation design and template. She added that in using the presentation tools that has provided the basic design, the presenter only needs to make the suitable design to present their materials.

Figure 1. Visual Object
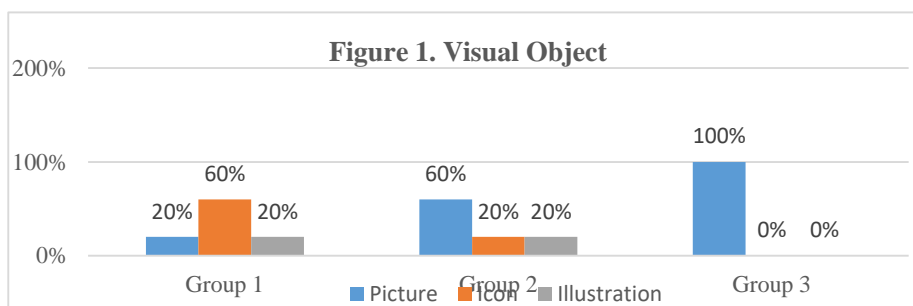
The fig.1 above shows that three groups used various style of presentation design. Group 1 tends to optimize the features available in the app to make the material look more attractive. Group 2 tends to emphasize on the picture rather than other visual object, while group 3 tends to have the simpler background which focused on the text rather than the visual objects. Group 1 used the highest portion to insert the icon. NA and HL as the members of Group 1 stated that the use of visual object such as picture, icon, and illustration makes her find it easy to remember the points on what she wants to talk about. She emphasized that remembering the points of the material is essential to make the audience understand what she wants to convey. The slides feature the iconic background and NA agreed that the designs are able to attract more attention. She stated that"Visual objects definitely can describe the information that I want to deliver to the audience. Hence, we need to carefully design and insert the appropriate visual objects to avoid the misunderstanding". It can be assumed that the visual objects as the form of multimedia-based presentation assists the material delivery to the audience without neglecting the presenter's roles in preparing the objects, material, text, and presentation to make the presentation be well-delivered. As seen in their presentation document, they used the illustration showing the mind-mapping of TPACK as the topic of their presentation. The result corresponds to the findings revealed by Berk (2009). Berk (2009) states that the icon and illustration is able to simplify the concept that will be delivered.

Figure 2. Mind Mapping in Multimedia-Based Presentation

Science, Engineering, Education, and Development Studies (SEEDs): Conference Series
Faculty Of Teacher Training And Education Sebelas Maret University
Volume 2 Issue 1 June 2018 eISSN : 2615-4382

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HL, as the partner of the group, highlighted the use of illustration in their presentation design. She stressed that illustration enables the audience to focus on their presentation since they can comprehend the material by paying to the illustration. HL stated that "Illustration is another term to visualization so I put the illustration to visualize and describe the materials." They also agree that the visual object in the form of figure needs to be assisted by the on-screen text as well as the explanation from the speakers. This statement is also supported by VR which prefers to explain the figure using her own words rather than simply read the on-screen text. HL and NA, the members of Group 1, stated that inserting the on-screen text was used to give the complete description of the figure. They find that it is more effective to present the material as a whole using illustration, on-screen text description, and verbal explanation. In this case, the finding is in line with Norhayati and Siew (2004), they believe that the combination of on-screen text, graphics, and verbal explanation enables the presenter to project the materials clearly as the combination creates the positive values.

Meanwhile, VR and IM as the members of Group 2, prefer to put only the keywords instead of the complete description of the figure or illustration. They believe that putting the illustration, on-screen text, and verbal explanation at once will cause redundant transfer of information. Therefore, they only put the keywords or phrase below the illustration or figure and explain verbally the further information using their own words. IM emphasized than giving the description and the illustration in one slide is ineffective. However, he highlighted another point by stating "Putting the keywords is more effective because it can facilitate us to deploy our presentation and to give hint when we forget what we want to convey."

Moreover, another finding was found in the presentation design of Group 3 regarding to their views about multimedia-based presentation. DS and RY, the members of Group 3, tended to use the simple background and only inserted less visual objects than others. Based on the interview that has been conducted, DS stated that "We intentionally designed the simple background to control the audience focus. They need to pay attention only to our material which were shown in on-screen text rather than concerning on the design of our presentation". However, it can be assumed that Group 3 prioritized the verbal explanation in multimedia-based presentation and used the visual object in their presentation to assist the audience in visualizing the materials.

As one of the audience stated the similar point of view, SC stated that "The presentation without illustration or any additional picture is boring. By providing the illustration, our background knowledge is getting increased because I can imagine what the presenters want to deliver." It can be assumed that the illustration used by the presenters does not only facilitate the presenters but also the audience. By using illustration, the presenters find it easier to grab the audience attention and make them focus, while the audience find it easier to imagine the topic of discussion since they also can activate their background knowledge. The similar concept is also proposed by Berk (2009) since he explains multimedia is used to grab the audience attention and interest. Meanwhile, the audience understanding should remain the focus.

Therefore, the finding and the concept of Berk (2009) is intertwined each other as the finding can be concluded that giving too many information can also distract the

audience's concentration. The use of multimedia that has been done by the presenters reflect on the theory proposed by Shepherd (2006). He highlights the point that high-quality presentation design can be viewed from the way the presenters combine and manage their multimedia objects.

The finding shows how the presenters pay attention to the design of the background. It corresponds to the the theory proposed by Tenri (2013) that background color is one of the requirements to designing multimedia presentation. As DS and RY tended to used the simple background, Tenri (2013) also states that the main point of designing background is by using it consistently. Another requirement is also related to what being stated by DS and RY that they straightly go to the points while explaining the materials. Tenri (2013) believes that multimedia have been explained the whole materials visually and auditory; therefore, explaining only the main points is essential.

Emergence of GDD (Gesturing, Describing, Dialoguing) Interactivity

The interactivity in multimedia-based presentation was investigated through the observations in which the audience attitude in interacting with the audience becomes the focus of this discussion. Three groups presented in Academic speaking spent 10 minutes in average in which there are two presenters for each group. The interactivity forms emerged in multimedia-based presentation are varied. Below are the forms of interactivity emerged in the implementation of multimedia-based presentation.

Gesturing

Based on the observation, most of the presenters used the visual objects to simplify their presentation by pointing those objects. HL, in the interview, stated that pointing the visual objects is done to emphasize which point that the audience must know. She explained further by saying "We sometimes need to point the objects to show the audience which material that they have to focus on." Therefore, in the practice, HL who spent 3:55 minutes to present her material was observed that she manipulated the visual objects along with the on-screen text several times. There were two gestures that she did to present the visual objects, they are pointing the objects and making the signs using her hands.

In average, HL gave the bigger portion to make the sign using her hands instead of to point the objects during the presentation. HL gave the reason regarding to the gesture she made during the presentation by stating "Doing hand gestures helps me to deliver the parts which I might forget. Moreover, I believe that hand gestures during presentation can somewhat convince the audience about what we deliver because sometimes it increases my self-confidence." The same point of view was also addressed by VR who agreed that hand gestures can increase her confidence as well as reduce her anxiety and nervousness.

However, NA as the HL's partner in presentation, preferred to point the illustration one by one while explaining the materials. She believed that pointing the visual objects while explaining the materials is neccesary since she wanted the audience to focus on the topic that she pointed. SC, one of the audience, stated the similar opinion by saying that "Sometimes the presenters show us which part or illustration they are now explaining. It really helps me to be back on track because in some cases we do not really pay attention to

the presenters." SC explained that when the presenters point the part that is being explained, she can easily follow the topic of discussion. SC also mentioned that the pointing the objects on screen can also make the audience involved in the presentation.

Based on the result of interview and observation, it can be concluded that there are two gestures used by the presenters while explaining, they are making hand gestures and point the visual objects. Both of the gestures assist the presenters and the audience. There are several functions of hand gestures while the presenters explain the on-screen text or illustration, they are used to 1) assist the presenter to give the cue when they forget the material; 2) increase self-confidence or to reduce anxiety; 3) convince the audience that the presenters know well about the materials. Meanwhile, pointing the visual object is also used to 1) make the audience focus on what being discussed; 2) attract the audience. Therefore, the highlighted point in this result is that the interactivity can be built using multimedia-based presentation. The finding above is in line with the theory proposed by Shepherd (2006) that mentions one point about gestures. He insert gestures as the form of interactivity that concerns on the presenter's attitude in delivering the presentation using the professional style.

Describing

In this context, describing is defined as the presenter's attitude in explaining the multimedia-based presentation verbally to the audience. The presenters mostly agree that multimedia objects must be assisted with the verbal explanation. IM stated that the illustration should be explained by the presenters by using their own words. IM explained that he used the keywords in explaining the multimedia-objects to make him easier in presenting the material. He further mentioned the strategy that he used in delivering the materials even though he only put the keywords in the slide. "In the end of the explanation, I summarize the content of the visual objects that I have delivered. It is effective to make the audience recall what topic that has been explained." RY also has the similar point of view by stating "What I want in the presentation is making the audience be involved so I attempt to explain the materials as detail as possible to make them stay focused." The result of the observation found that most of the audience paid attention to RY since he fluently described and explained the multimedia objects.

Another view was addressed by NA who preferred to use the cue card to help her during the presentation. Based on the observation, NA occasionally read the cue card while presenting the illustration. She used the card whenever she has not enough words to explain. However, to make her stay interactive to the audience, she only read the cue card at a glance and then directly explained the illustration to the audience. "I did not want my audience feel that I ignore them, that is why I only read my card at a glance only to give me the clue in delivering the material," she added. Regarding to the illustration description, VR stated that the multimedia objects attract the audience visually; therefore, the presenter is only required to give the verbal explanation to make the audience be connected both verbal and visual. ME as the audience stated that she can easily receive the new information when the presenters providing the illustration as well as describing the illustration to the audience. "When they decribe the visual objects or illustration, I can receive the new

information using my background knowledge and it is supported by the visualization provided by the presenter," she stated.

Based on the observation and the in-depth interview,it can be concluded that the describing patterns of each presenter are varied, such as 1) describing using own words, 2) describing using cue card-assisted, 3) describing by reading the on-screen text. Those three different patterns show that they have different strategies in describing the material using multimedia objects. In sum up, they state that visual objects must be assisted using the verbal explanation to make the audience receive both visual and verbal information. It is due to the function of receiving those two modes to activate the audience background knowledge and to support them in constructing new information.

Standing in the audience point of view, the result corresponds to the idea of Heinich et al. (2002) who agree that the visual objects help the learners to have multisensory experience to promote learning. They highlight the theory of multisensory as they believe each learner has different way to receive new information. One might use his visual sensory to imagine the material or to experience the sight, while another might use his auditory sensory to transform the presenter's explanation becomes the meaningful information that can be easily processed by the brain. The similar idea is also proposed by Elias and Ali (2016) who believe that multimedia is more effective to encourage the learning compared with the material only presented by the static text. In terms of interactiviy in Describing pattern, Hedberg (2004) when he explains the relationship of multimedia and interactivity by mentioning the point of creativity and combinability. In the discussion, Hedberg (2004) believes that the learners are enable to receive the combination of different media such as visual or auditory media.

Dialoguing

Dialoguing, in the context, is defined as the action done by the presenters of multimedia-based presentation when they are interact with the audience while delivering the materials. Based on the observation in Academic Speaking Classroom, the presenters interact with the audience by describing the visual objects that they provided. NA, in some occasions, attempted to ask the agreement by saying "..... It is impossible, right?" to the audience. NA explained that she occasionally confirms the audience's agreement because she wants them to have the same understanding as hers. In describing the illustration of Toontastic 3D, she began by asking the audience the questions, for example, "Do you know Toontastic 3D?" and "What is Toontastic 3D?".

Another pattern of dialoguing was also found in the presentation of RY which had the slightly different view. He was observed mentioning "Got it?" several times once he finished explaining the materials. IM believes that confirming the audience understanding is essential in presentation to control him. "I frequently confirms the audience understanding to control my pace or to clarify my explanation. If any of the audience said that he or she has not comprehended the material, I am willing to reexplaining what I just delivered," he added.

In the end of the presentation, the lecturer gave the question an answer session. Therefore, RY mentioned "That's all the presentation about feedback, okay please, please." He ended the presentation by saying 'please please' which indicated that he wanted the

audience to respond the presentation or to ask the questions. He attempted to interact with the audience even though he only said 'please'. It was effective to stimulate the audience to ask since there was one student raising her hand after he mentioned so. Moreover, some different patterns in dialoguing at the question and answer session was found in IM's statement. He stated that he preferred to stimulate the audience by mentioning the materials that probably sound unfamiliar to them. "I chose to mention or signal the audience about the materials or the theme of discussion which sounded unfamiliar to them." The repetition of the word 'please' is in line with the theory proposed by Tenri (2013) dealing with the appropriateness of presentation. According to him, repeating the words or phrases can indicate the interactivity between the presenter and the audience.

Based on the finding above, it can be concluded that in dialoguing, the presenters attempt to interact the audience verbally. There are some types of dialoguing used in multimedia-based presentation, they are: 1) signalling the unfamiliar topics to the audience; 2) confirming the audience understanding; and 3) asking the audience's agreement. The finding conforms the previous research proposed by Oommen (2012), he states that presenting can not be separated with the encouragement to involve the audience in the presentation. The encouragement can be done by doing the above-mentioned types of dialoguing. Elias and Ali (2016) view the same idea that the multimdia helps to manage cognitive burden as well as to stimulate the learning environment better. This finding corresponds to active learning in which the presenter actively stimulate the audience and the audience themselves actively involve in the learning. In relation to this point, Mayer (2003) also states that the active learning can also occur even though the presentation media do not allow hands-on activity. In this case, the audience only receive the information through the presentation consisting of printed text, on-screen text, illustration, animation, and narration. Even though the concept contradicts with what being stated by Aldrich et al. (1998) dealing with hand-on activity, the finding of this research remains closer to the concept of Mayer (2003).

CONCLUSION

Based on the above-mentioned findings, the study can be concluded into two result of discussion. First, in designing multimedia-based presentation, the presenters need to consider several elements of multimedia-based presentation dealing with the use of icon, picture, and illustration. The simultaneous use of visual objects, on-screen text description along with verbal explanation can cause redundant information transfer. Therefore, having the keywords or phrases and the visual object in one slide is considered to be effective because the human brain is capable to process the information through more than one mode. However, when the input is too much, the human brain can not optimally process the information due to the brain limited capacity. The multimedia objects assisted by verbal explanation will facilitate the audience to activate their background knowledge to support the process of information transfer. Second, GDD (Gesturing, Describing, Dialoguing) interactivity form is emerged in multimedia-based presentation. Gesturing that is in the form of using hand gesture and pointing visual object helps the presenter to deploy the materials. Describing as one of the interactivity form attempts to provide two modes of

presentation in the form of visual objects explained using verbal explanation. Those two modes will effectively help the audience to visualize the multimedia presentation. Dialoguing deals with the verbal interaction between the audience and the presenters that can be done by confirming the audience agreement, asking directly to the audience to give response or feedback. This result reveals that multimedia-based presentation assists the learners in receiving the transfer of information. It provides the multisensory experience and material visualization that enables the audience to construct the information or knowledge input.

ACKNOWLEDGEMENT

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Faculty Of Teacher Training And Education Sebelas Maret University
Volume 2 Issue 1 June 2018 eISSN : 2615-4382

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