

Does Power Point Matter for Teaching and Learning Economics?

Khasan Setiaji^{1*}, Bagus Shandy Narmaditya²

¹Universitas Negeri Semarang

² Universitas Negeri Malang

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Abstract : Learning is a complex communication process between teachers and students in an education environment. Thus, the teachers' competence in designing learning, such as the utilization of learning technology is greatly required in achieving effective learning. Economic sciences require some analytical instruments to mathematically and graphically explain and prove the theories to provide better explanations regarding the economic theories. PowerPoint for the economic learning media is greatly necessary to meet the characteristics and nature of economics. However, the empirical conditions show that the utilization of PowerPoint for learning is modestly packaged that the main purpose of PowerPoint utilization in the communication process is not properly realized. This article strives to provide guidance on the utilization of PowerPoint as an effective learning medium for economic sciences learning. There are some important things to consider in making PowerPoint for learning, such as in visual designing, text, graphics, static visual display, dynamic visual display, transitional effects, use of colors, layout, and audio.

1 INTRODUCTION

The Government Regulation of the Republic of Indonesia No. 74/2008 on Teachers states that teachers should have academic qualifications, competencies, educator certificates, physical and mental health, as well as ability to realize the national education objectives (Indonesia, 2008). The teachers' competencies include pedagogical, personal, social, and professional competence as a whole. Pedagogic competence is the teachers' ability in learners' learning management, at least consisting of; (a) understanding the educational insights or foundations; (b) understanding the learners; (c) curriculum or syllabus development; (d) learning design; (e) the implementation of educating and dialogical learning; (f) utilization of learning technology; (g) evaluation of learning outcomes; and (h) learners' development to actualize their potentials.

Learning is a communication process that the use of teaching media is considered essential in assisting the learning achievement success. (Danim, 2008) asserts that many research results have proven the effectiveness of instrument or media utilization in teaching and learning processes in the classroom, especially in terms of improving students' achievement. The limited number of media used in

the classrooms presumably becomes one cause of the student learning poor quality. Various efforts should be made to create a learning situation which enables the students to obtain various learning experiences by implementing all effective and efficient learning sources and techniques (Rusyan, A. Tabrani, 1993). In this case, teaching media is one effective support in assisting the learning processes.

One learning medium may be conducted to overcome the above obstacles is through the Microsoft program of powerpoint media. "Microsoft PowerPoint is one most popular and widely used application program for presentations in terms of learning, product introduction, meeting, seminar, workshop and so forth (Susilana, Rudi, 2009). The utilization of Microsoft PowerPoint media in economic learning has proven improving the students' learning outcomes and activities (Maryatun, 2015). However, some studies show that the utilization of PowerPoint in presentations is less effective than Prezi and Oral Presentation (Moulton ST, Türkay S, 2017).

Harvard's Department of Psychology (Moulton ST, Türkay S, 2017) recently published the study in the journal PLOS ONE titled, Does a presentation's medium affect its message? PowerPoint, Prezi, and oral presentations. Participants evaluated Prezi

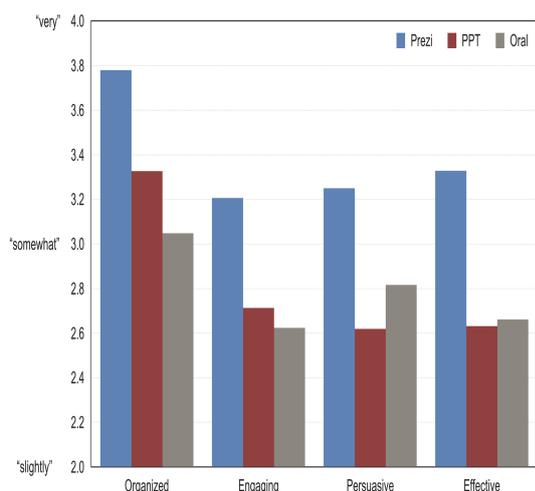


Figure 1: Audience Members Ranked the Presentations from Best to Worst

presentations as more organized, engaging, persuasive, and effective than both PowerPoint and oral presentations. In fact, PowerPoint presentations were rated as no better than verbal presentations with no visual aids at all. Users rated the three formats on a scale from 1 to 5 in a few major categories.

This finding was true for both live and prerecorded presentations, when participants rated or ranked presentations, and when participants judged multiple presentations of different formats or only one presentation in isolation. Presenters giving Prezi presentations were also noted as being “more knowledgeable and professional” by their audience. Although PowerPoint is considered as one most popular and widely used application program for various presentation purposes in the learning process. Practically, there are still many mistakes found in designing PowerPoint for learning in order to make an interesting presentation but the result is in the other way around. The presentation becomes unattractive and extremely boring. Many people make various mistakes in designing their presentation slides, such as (a) The slides are created for presentation purposes; (b) The slides are wordy and full of bullet points; (c) Slides are made with irrelevant photographs or images; (d) Slides are made with low quality photographs or images; (e) Slides are made with weak color contrast; (f) Slides are created by entering the actual data tables; (g) Slides are created with excessive animations; (h) Slides are made with 4D theater sound effect (Sutomo, 2007).

From the above explanations, it is obvious that teaching media are considered unavoidable

requirements in economic learning in order to achieve the expected learning outcomes. Consequently, the teachers should be able to play their roles in selecting the right media and planning based on the most appropriate techniques and procedures. In facts, due to the phenomena found in the field, many teachers do not perform and understand the procedures in utilizing PowerPoint for better learning results. If those phenomena are not well-paid attention, there is a possibility that the economic learning process may become less optimal. This article explains how to create a sophisticated PowerPoint for more effective economic learning.

2 LITERATURE REVIEW

2.1 Learning Media

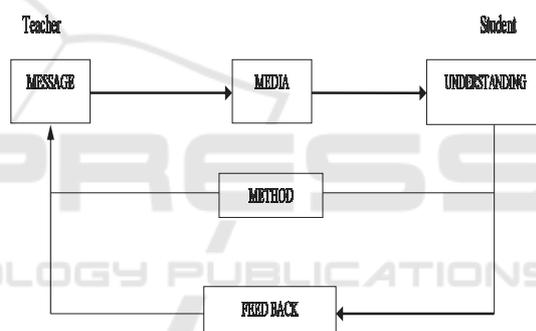


Figure 2: The Position of Media in Learning System

Regarding its process, education is considered a communication. Learning process contains five communication components consisting of teachers (communicators), learning materials, learning media, students (communicants), and learning objectives. Thus, learning media are defined as everything used to convey the messages (learning materials) in order to stimulate the students’ attention, interests, thoughts, and feelings in learning activities to achieve the goals (Santyasa, 2007). The word “media” is the plural noun of the word “medium”. The medium may be defined as communication intermediary or conveyor from the sender to the receiver (Heinich et al., 2002). Media is one communication component as a messenger from the communicator to communicant (Criticos, 1996). Berlo (1960) states that the message sender and

receiver are greatly influenced by various factors, such as communication skills, behaviors, knowledge, the social and cultural system (Powell and Powell, 2010).

Since the learning process is considered as a communication process and occurs within a system, learning media occupy an important position as one learning system component. Without media, communication may not occur and the learning process as a communication process may also unable to optimally occur. Learning media is an integral component of the learning system. The position of instructional media as a communication component is shown in Figure 2.

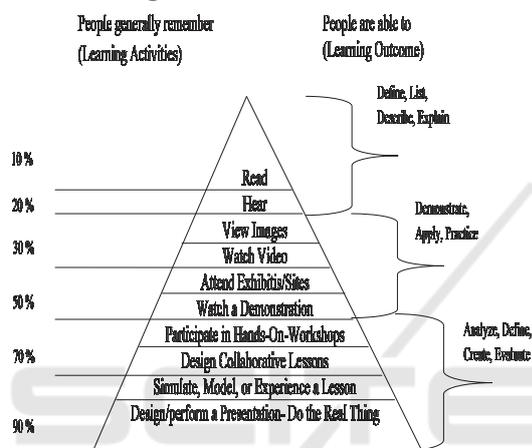


Figure 3: Cone of Experience concept (Dale, 1969)

In selecting the media, (Winkel, 2005) states that media are selected not only due to their compatibility with the specified instructional objectives, learning materials, didactic procedures and student grouping forms, cost factor, equipment availability, and time (availability factor), electricity and technical quality (technical quality), classrooms, and teachers' ability to appropriately use the media (technical know-how) are greatly required. Accordingly, (Dale, 1969) classifies experience into layers from the most concrete level to the most abstract one that the classification is known as "cone of experience".

Dales' cone of experience is a tool to help instructors make decisions about resources and activities (Anderson, n.d.). The instructor can ask the following:

- Where will the student's experience with this instructional resource fit on the cone?
- How far is it removed from real-life?
- What kind of learning experience do you want to provide in the classroom?

- How does this instructional resource augment the information supplied by the textbook?
- What and how many senses can students use to learn this instructional material?
- Does the instructional material enhance learning?

2.2 Characteristics of Economic Sciences

Economics is the science that deals with production, exchange, and consumption of various commodities in economic systems. It shows how scarce resources can be used to increase wealth and human welfare. The central focus of economics is on the scarcity of resources and choices among their alternative uses. Economics as a social science discipline is a science that investigates how people manage scarce resources (Mankiw, 2006). Economics as a science adopts two methods for the discovery of its laws and principles (a) deductive method and (b) inductive method. In the deductive method, we start from certain principles that are either indisputable or based on strict observations and draw inferences about individual cases. In the inductive method, a particular case is examined to establish a general or universal fact. Both deductive and inductive methods are useful in economic analysis.

Figure out the general characteristics of economic theory, there are several important elements of economic theory as follows (Sukirno, 2003) :

- The definitions explaining the variables in which the relationship characteristics may be applied in theory. Variables are important elements in each theory. A theory actually aims at explaining how an economic condition is determined. For example, in price theory, it is explained that the nature of the demands required by the buyers is known with the law of demand. The law says "if the price of an item changes then the number of demands for goods will also change". It is clearly seen that the theory/law of demand has two variables, namely price and the demanded quantity of goods.
- A number of assumptions or segregations about conditions which should exist that the theory may apply well. Making assumptions is one important condition in making theory in economic sciences. It means that the theory should simplify the actual events taking place in the society.

- c. One or more hypotheses about the relationship characteristics between variables. The hypothesis is a statement of how the variables relate to each other. The relationship characteristics are classified into two groups: (1) direct relationship, such as a state in which the variable value changes move to the same direction. For example, if people's income increases, their consumption will also increase; (2) inverse relationship, that is, when the variable values change in the opposite direction. For example, the price increase may cause the demand decreases. Hypothesis plays an important role in explaining a theory. A hypothesis is a functional relationship which states about the relationship characteristics between variables.
- d. One or more predictions about the upcoming applicable conditions. Making predictions is one important part of economic theory. Economic theory makes an important contribution in analyzing the economic activities in the society, explaining why certain events may apply and what causes them to take such event forms. Economic theory may also predict the applicable conditions which may be utilized as a basis in formulating strategies to improve an economic condition. Economic sciences require some analytical instruments to mathematically and graphically explain and prove the theories. Various efforts to provide more complete explanations of economic theories may be conducted with the mathematical and graphical assistance.

3 RESULTS AND DISCUSSION

3.1 Effective PowerPoint for Teaching and Learning Economics

PowerPoint as one of learning media may help the teachers deliver the learning materials effectively, moreover, regarding the materials of economic theory deal with its characters and characteristics. Thus, PowerPoint for learning presentation may not be carelessly made. There are some aspects to consider in making PowerPoint presentation for learning, such as visual designing, text, graphics, static visual display, dynamic visual display, transitional effects, and use of colors, as well as layout, and audio (Chee and Wong., 2003).

3.2 Designing Visual

Visuals that are well designed can also help motivate students to learn by attracting and maintaining their attention. Often complicated information and those that are difficult to remember can be simplified using appropriate visual. For example, diagrams such as flowchart or timelines, can be used to help the student organize, store and retrieve information more easily. Teachers face facing numerous considerations when dealing whit a visual problem.

3.3 Text

The choice of font, style, and size are important considerations when selecting the appropriate lettering or text to be used. Some guidelines to help teachers with this task are as follows: (1) Font Type, this should be consistent and harmonies with the other elements of visual (Figure 4). (2) A number of lettering styles, keep this to no more than two in any static display or a series of related visual and make sure that the two font types harmonize with each other. If variations of a particular font (bold, italics, underline and difference size) are to use, keep into a maximum of four variations. (3) Use of capital, short headlines or titles of no more than six words may be written in all capital. However, for anything longer than that, best legibility is archived by using lower case lettering for all word, adding capitals only where normally required. (4) Lettering color, contrast lettering with the background. This makes the words easy to see and read. (5) Lettering size, choose a lettering size that when projected allows good visibility even by the student seated right at the back of the classroom. Usually, the minimum lettering size for these is 24 point. (6) The spacing between line, if lines of text are too close together, they tend to blur out at a distance, while lines too far apart will seem disjointed. For computer generated paragraphs of text, a one- and –a- half line spacing the best choice. (7). A number of lines, this depends on the type and purpose of the visual.

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Figure 4: Style versus Legibility of Lettering

3.4 Graphics

Graphics refer to pictures and illustrations which can be used in your visuals. Since graphics can be in the form of static or dynamic (moving) display, the discussions that follow will explore the guidelines for using each type of graphics in your presentations.

3.5 Static Visual Display

Therefore they can vary from realistic to graphic to event abstract representations of the actual object. In some instances, a photograph may have too much detail within it, and a simple line drawing may be a better choice. Another type of more abstract representations that could be used includes analogical visual and organizational charts. When choosing your graphics, is also important to ensure that it matches the next that goes with it. Do not use pictures just for decorative purposes as they may distract the learner from the main message.

3.6 Dynamic Visual Display

Dynamic visual displays include animation and video. They can help students learn. Some guideline for you to consider when using the dynamic visual display in your presentations. (1) Replay feature, consider providing the replay feature for the students because they may not have been able to see the animation or video clearly during their first viewing. (2) Clarity, ensure that the visual quality of the animation or video clip is good. They would be of little educational value if the image is not focused. (3) Support learning, the purpose of using dynamic visual display is to help the student to learn better faster. (4) Simplicity, short simple animations may be more effective than the complex ones.

3.7 Transitional Effects

There are many text animation features available for users. Inappropriate use of animations can do more harm than good to the learning process. It may end up diverting the learner's attention to irrelevant information, or it may illustrate concepts incorrectly. Do not use text animations unless there is a good reason to use it.

3.8 Use of Colors

Two considerations to keep in mind are color scheme and color appeal. Select colors that effect

harmony rather than an annoyance. Since it is not possible to present a color picture in black and white print. Consider the emotional impact of color. For example, highlight important information using red or orange.

3.9 Layout

The idea to establish an underlying pattern to decide how the viewer's eye will move across the visual. Consider the following factor as you decide on the overall look of visual: (1) alignment of the graphic and text element. Use this to show the clear visual relationship between the main elements in the visual. (2) Shape, the graphic and text elements can also be arranged in a shape that is familiar to the student. The circle is one of the most widely used shapes, as it is often used in depicting the life cycle of living things and the water cycle too. (3) Balance. A sense of balance is achieved when the weight of the elements in a visual is equally distributed on each side of its vertical or horizontal axis. (4) Style, choose a design style which matches your audience. But as far as possible, choose to use an uncluttered primary color design style rather than one filled with complex imagery.

3.10 Audio

Some general guidelines for teachers to bear in mind when including audio in their computer presentation. (1) Learner control feature. When audio is used in computer presentations, teachers should consider providing features such as turn on, turn off and replay to allow students to control the medium. (2) Clarity, although most teachers do not have the professional equipment to record voice, music and/or sound effects, they still need to ensure that the audio quality is good enough to serve its purposes. (3) Audio quality, the recorded voice/speech should be pleasant. The pace should not be too fast or too slow. Monotones should be avoided. (4) Comprehensibility, the teacher should avoid using difficult vocabulary in their narration.

4 CONCLUSION

Nowadays, the utilization of technology in learning is a great necessity. In a learning presentation, a teacher should be able to present a real situation to involve all human senses that the messages to convey are well received. The research theories and

results show that the right combination of audio, visual and text in a presentation may bridge the learning messages more effectively. The combination may be performed through the use of PowerPoint for the economic learning media. There are some considerations in making PowerPoint in learning, including the visual design, text, graphics, static visual display, dynamic visual display, transitional effects, and use of colors, as well as layout, and audio.

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