

## Conference Paper

# Students and Lecturers' Perception Toward Powerpoint as an Aid of Accounting Textbooks

Wiwin Nurlailia and Sulastri

State University of Malang

## Abstract

This descriptive comparative research is used to know the perception of students and lecturers toward the use of PowerPoint as an aid of accounting textbooks. The data were collected through questionnaires given to students and lecturers of State University of Malang and Brawijaya University which were randomly taken as many as 202 students and 6 lecturers. The questionnaire contains the principles of multimedia learning design in designing a PowerPoint, and students and lecturers were asked to fill in the forms using a Likert scale. The collected data will be analyzed using proportion model (percentages) in order to know the majority of students and lecturers' perception. The t-test is also used to investigate whether there exists any difference between students and lecturers' perception. By knowing the perception of students and lecturers toward PowerPoint as an aid of accounting textbooks, it is expected that lecturers will not directly input materials from Kieso's Intermediate Accounting IFRS into learning and teaching activities.

**Keywords:** PowerPoint, Cognitive Load Theory, Perception, Principles of Multimedia Learning Design

In the education world, technology rapidly skyrockets as what can be seen in the common use of presentation as a media in learning activities in the classroom. One of the presentation media is PowerPoint. PowerPoint is a presentation media that holds an important role in the education world, proven by the use of PowerPoint in various levels of education, elementary – higher education, as a deliverable media. PowerPoint has so many features that are implementable in a teaching context. One of the features is that it can be administered as a deliverable media to convey information from the educator to the learner. Another advantage of PowerPoint is that it can boost learning and teaching activities in the class. In accordance with a study done by Jones (2003), it is proven that the proper use of PowerPoint can boost learning and teaching activities in the class.

Corresponding Author:

Sulastri  
Sulastri.fe@um.ac.idReceived: 23 January 2018  
Accepted: 5 April 2018  
Published: 23 April 2018Publishing services provided by  
Knowledge E

© Wiwin Nurlailia and Sulastri. This article is distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use and redistribution provided that the original author and source are credited.

Selection and Peer-review under the responsibility of the 1st IRCEB Conference Committee.

 OPEN ACCESS

This proper use of PowerPoint needs to pay further attention to cognitive load theory in order to gain the best impact. Sweller said, "*Cognitive Load Theory (CTL) began as an instructional theory on our knowledge of human cognitive architecture* (Plass, et al., 2010:29). The basic principle of cognitive load theory focuses more on the management of mental effort to a high level by the cognitive system at the learning time. A limited cognitive system and an excessively received information result in a poorly managed memory capacity. Thus, the working memory capacity requires extra attention.

The limited memory capacity can be overcome by utilizing principles of learning design that shows how the preparation and implementation of learning and teaching should be. These principles of multimedia learning design will reduce students' cognitive load. These principles of multimedia learning design are as follows: 1. Coherence Principle, 2. Signalling Principle, 3. Spatial Contiguity Principle, 4. Temporal Contiguity Principle, 5. Multimedia Principle, 6. Personalisation Principle, 7. Individual Difference Principle (Mayer, 2014:63).

Another research on PowerPoint is about the perception of the clarity and attraction of PowerPoint's column chart. The result shows that 2-D column chart is better than the 3-D one for it displays the colour contrast between the chart colors and the background, and the color used in the chart is quite contrastive such as blue and green [2]. Accordingly, designing charts on PowerPoint should be precisely calculated.

According to several previous types of research, it is safe to conclude that the use of PowerPoint in the class should pay more attention to the suitable choice of fonts and colors. Based on the mentioned observation done by the researcher, it can be seen that lecturers are utilizing PowerPoint as an aid of accounting textbooks. This PowerPoint is used for learning and teaching activities. However, is the PowerPoint used as an aid of accounting textbooks considered appropriate? This appropriateness refers to the suitability of cognitive load theory and principles of learning design.

The researcher is interested in conducting a research on PowerPoint as an aid of accounting textbooks. The researcher wants to analyze Kieso's PowerPoint for it is being administered in learning and teaching activities in several universities such as State University of Malang, Brawijaya University, and the Maulana Malik Ibrahim State Islamic University of Malang. Those three universities are making use of Kieso's PowerPoint in the learning and teaching activities. The researcher tries to confirm whether Kieso's PowerPoint has met the standard of contrastive colors in making column charts on PowerPoint in the aforementioned research done by Jo (2007). Ergo, Kieso's commonly and widely used PowerPoint needs to be analyzed.

In analyzing Kieso's PowerPoint, the researcher wants to identify the perception. According to Robbins and Judge (2008:175), perception is a process by which individuals organize and interpret their sensory impressions in order to give meaning to their environment. In accordance with the given definition, the perception in this context is taken from the perspectives of lecturers and students in analyzing PowerPoint as an aid of accounting textbooks. Students are asked to be respondents of the research since they actively participate in learning and teaching activities. Meanwhile, lecturers are asked to be respondents for they utilize Kieso's PowerPoint to teach. In analyzing the PowerPoint, the researcher has set limits so that the result will not be biased. The limits are the use of current and non-current liabilities.

## 1. METHODS

This research is a comparative research that uses descriptive-quantitative approach. The reason why this research is a descriptive-quantitative research is that this research discovers students and lecturers' analytical perception towards PowerPoint as an aid of accounting textbooks. The population of this research is students of the academic year 2015 at State University of Malang and Brawijaya University, and also lecturers who teach Introduction to Accounting 2 at State University of Malang and Brawijaya University. The sampling methods utilized in this research are probability sampling and simple random sampling. It is called simple because the way to choose the sample from the population is random without taking strata into consideration (Sugiyono, 2010:82).

### 1.1. Validity Test

The validity of an instrument shows how valid and authentic an instrument is (Setyosari, 2010:185). An instrument is considered valid or having validity if that instrument truly measures what should be measured. A valid instrument has high validity. In contrast, an invalid instrument has low validity.

### 1.2. Reliability Test

An instrument is said to have the proper level of reliability if it is used to measure certain aspects several times, the results are mostly the same or relatively similar (Sukmadinata, 2012:229). A reliable instrument is supposed to be well-qualified to use

in data collection process so that it can provide a reliable and trusted result. The table below shows the result of the reliability test.

TABLE 1: Reliability Statistics.

Cronbach's Alpha	N of Items
.838	20
Source: Processed Data	

The results meet the reliability concept with the Cronbach's Alpha of 0.838. Based on the result, the result is considered reliable for it is bigger than 0.06.

## 2. FINDINGS AND DISCUSSION

### 2.1. FINDINGS

This analytical data of PowerPoint as an aid of accounting textbooks are used to measure the difference in perception on PowerPoint as an aid of accounting textbooks between students and lecturers. The descriptive analysis of the research can be seen in the table below.

TABLE 2: Descriptive Analysis about PowerPoint as an Aid of Accounting Textbooks Derived from Students' Perspectives.

Variable	N	Range	Minimum	Maximum	Mean	Std. Deviation
PowerPoint as an Aid of Accounting Textbooks	202	40	40	80	60.05	8.221

Source: Appendix.

According to table 4.1, it can be seen that the descriptive analysis result of PowerPoint as an aid of accounting textbooks from the total respondent of 202 students shows the minimum value of 40 and the maximum of 80, resulting in a range of 40 with the standard deviation of 8.221. The mean is 60.05.

Here is the classification of the analysis of PowerPoint as an aid of accounting textbooks derived from students' perspectives:

Based on the frequency distribution on the table above, it is stated that 9.4% (19 students) chose very suitable, 46.5% (94 students) chose suitable, 33.7% (68 students) chose less suitable, and 10.4% (21 students) chose not suitable. The mean is 60.05 and falls into the category suitable.

TABLE 3: Description about PowerPoint as an Aid of Accounting Textbooks Derived from Students' Perspectives.

No	Interval Class	Description	Frequency	Percentage
1	70-80	Very suitable	19	9.40%
2	60-69	Suitable	94	46.50%
3	50-59	Less suitable	68	33.70%
4	40-49	Not suitable	21	10.40%
			202	100

Source: Processed Data (Appendix)

Here is the descriptive analysis result of PowerPoint as an aid of accounting textbooks taken from lecturers' perspectives:

TABLE 4: Descriptive Analysis of PowerPoint as an Aid of Accounting Textbooks Derived from Lecturers' Perspectives:

Variable	N	Range	Minimum	Maximum	Mean	Std. Deviation
PowerPoint as an Aid of Accounting Textbooks	6	20	56	76	65.67	6.947

According to table 4.3, it can be seen that the descriptive analysis result of PowerPoint as an aid of accounting textbooks from the total respondent of 6 lecturers shows the minimum value of 56 and the maximum of 76, resulting in a range of 20 with the standard deviation of 6.947. The mean is 65.67.

Here is the classification of the analysis of PowerPoint as an aid of accounting textbooks derived from lecturers' perspectives:

TABLE 5: Description about PowerPoint as an Aid of Accounting Textbooks Derived from Lecturers' Perspectives.

No	Interval Class	Description	Frequency	Percentage
1	71-76	Very suitable	1	16.70%
2	66-70	Suitable	2	33.30%
3	61-65	Less suitable	2	33.30%
4	56-60	Not suitable	1	16.70%
			6	100

Source: Processed Data (Appendix)

Based on the frequency distribution on the table above, it is stated that 16.7% (1 lecturer) chose very suitable, 33.3% (2 lecturers) chose suitably, 33.3% (2 lecturers) chose less suitable, and 16.7% (1 lecturers) chose not suitable. The mean is 65.67, rounded to 66, and falls into the category suitable.

## 2.2. T-Test Results on the Analysis of PowerPoint as an Aid of Accounting Textbooks

The type of T-test used in this research is T-test for Independent Samples. The result of the T-test is as follows:

TABLE 6: T-Test for Independent Samples.

	Perception	Sig.	Mean
T-Test for Independent Samples	Students	0.105	60.05
	Lecturers		65.67

Source: Appendix

According to the table above, it is found that there is no difference in the analysis of PowerPoint as an aid of accounting textbooks. This is proven by the existence of significant value of the 2-tailed test of 0.105, making the probability value looks greater than the real value which is  $0.105 > 0.05$  so that  $H_0$  is accepted. Therefore, it is safe to conclude that there is no significant difference of PowerPoint as an aid of accounting textbooks between students' analysis and lecturers' analysis. The analysis is suitable with Mayer's principles.

## 3. DISCUSSION

### 3.1. PowerPoint Analysis according to Students and Lecturers

Based on the result, PowerPoint can be an aid to help learning and teaching activities in the class. The use of PowerPoint boosts students' understanding, resulting in achieving learning purposes and expectation. On Kieso's PowerPoint, it is found that it is applicable and suitable to different characteristics of the students because it employs the diverse and attractive use of design, making the PowerPoint implementable in learning and teaching in the class.

Firstly, in the coherence principle, people will learn better if unnecessary words, pictures, audio, or visual are excluded. The students believe that the PowerPoint has met the condition stated in the coherence principle. It can be seen that the content on Kieso's PowerPoint is relevant to the materials stated in accounting textbooks. Aside from the content and materials, Kieso's PowerPoint also utilizes current and non-current liabilities materials as well as relevant figures as additional features.

Second, in the signaling principle, people can learn better if the words are equipped with cues that highlight every single essential material. Students also believe that Kieso's PowerPoint has met the signaling principle. Kieso's PowerPoint highlights every prominent point in each slide by giving bold effect and stress.

Third, in the spatial contiguity principle, people learn better if corresponding pictures/figures and words are presented near rather than far or separated. Students believe that Kieso's PowerPoint has met this principle too. It can be seen that corresponding words and pictures on the PowerPoint are displayed in the same slide.

Fourth, in temporal contiguity principle, people learn better if corresponding words and pictures are presented simultaneously rather than alternately. According to the students, this principle has also been met, proven by all the simultaneous words and pictures displayed in each slide of the PowerPoint.

Fifth, in multimedia principle, people learn better from words and pictures rather than from words alone. Students believe that the PowerPoint meets this principle. This is proven by the slides which contain many combinations of words and pictures altogether, and the students prefer to have it that way rather than having all-word slides.

Sixth, the personalization principle, people learn better from multimedia learning when the materials are delivered in a conversational style rather than a formal one. However, most of the students think that Kieso's PowerPoint employs formal language to deliver the materials than communicative language. Materials delivered using conversational language are easier to understand by the students rather than the formal one. In this case, Kieso's PowerPoint uses formal language too much. Ergo, it can be concluded that Kieso's PowerPoint does not really meet the standard of personalization principle.

According to the analysis discussed above, there can be spotted differences between students and lecturers in analyzing the PowerPoint, yet there are also some similarities between them in analyzing it.

### 3.2. The Difference of Analysis of PowerPoint as an Aid of Accounting Textbooks derived from Students and Lecturers' Perception

This research specifically focuses on whether a difference of perception exists between students and lecturers when analyzing PowerPoint as an aid of accounting textbooks. According to T-Test and Independent 2-tailed Test, it is discovered that there is no significant difference and  $H_0$  is accepted. Accordingly, it can be concluded that there is no difference in analyzing the topic between students and lecturers.

According to the result, there is no difference in perception to analyze the PowerPoint between the two groups through the difference in role between students as the receivers and lecturers as the senders exist. In general, both students and lecturers agree that Kieso's PowerPoint is suitable enough to use in the class. On one hand, it helps the students to understand the materials better. On the other hand, it helps the lecturers a lot for it boosts students' understanding towards the materials. All in all, the learning objectives will be easier to achieve.

The result helps to prove multimedia learning cognitive theory stating that there are three assumptions which need further attention when designing a multimedia-integrated learning such as utilizing PowerPoint. In designing a PowerPoint slide, it is suggested to take Mayer's principles into consideration in order to make precious learning so that the learning objectives will be easier to achieve and students will understand the materials quicker than usual.

### 3.3. Conclusions and Suggestions

The conclusions of the research are:

According to the result of the research, it can be concluded that students and lecturers agree that Kieso's PowerPoint has met most of the multimedia learning design principles, which are coherence principle, signaling principle, spatial contiguity principle, temporal contiguity principle, multimedia principle, personalization principle, and individual difference principle. Even though the overall result indicates that the PowerPoint is suitable, there are several differences found when each indicator of the questionnaire is analyzed. Their differences lie in spatial contiguity principle and personalization principle. In personalization principle, students say it is suitable while the lecturers say the opposite. This is caused by factors that affect the perception, which is the experience. The factor of experience owned by students and lecturers is indubitably



different; therefore, this is believed to be the reason why the difference of opinion occurs in spatial contiguity and personalization principles.

### 3.4. Suggestion

- a. This research should be continued by using the statements of the questionnaire taken from the perception aspects and multimedia learning design principles.
- b. The number of respondents from lecturers group who utilizes Kieso's PowerPoint in several different universities should be increased.
- c. The time gap between the use of Kieso's PowerPoint and the survey should not be far.

## References

- [1] Allan M Jones. (2003). The use and abuse of PowerPoint in Teaching and Learning in the Life Sciences: A Personal Overview. *Bioscience Education E-Journal*, 1-13. Retrieved from <http://dx.doi.org/10.3108/beej.2003.02000004>
- [2] Jo, Mackiewich. (2007). Perceptions of Clarity and Attractiveness in PowerPoint Graph Slide. *Technical Communication*, Volume 54, Number 2, 145-156 (12). <http://www.ingentaconnect.com/content/stc/tc/2007/00000054/000>
- [3] Mayer, R. E. (2014). *The Cambridge Handbook of Multimedia Learning*. Cambridge University Press.
- [4] Plass, J. L., dan Jones, L. C. (2014) dalam Mayer (Ed.). *The Cambridge Handbook of Multimedia Learning*. New York: Cambridge University Press
- [5] Robbins, Stephen P., Judge, Timothy A. 2007. *Perilaku Organisasi* (buku 1). Terjemahan Diana Angelica, Ria Cahyani, dan Abdul Rosyid. 2008. Jakarta: Salemba Empat.
- [6] Setyosari, Punaji. 2010. *Metode Penelitian Pendidikan dan Pengembangan*. Jakarta: KENCANA PRENADA MEDIA GROUP
- [7] Sugiyono. 2010. *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: ALFA-BETA
- [8] Sukmadinata, Syaodih Nana. 2012. *Metode Penelitian Pendidikan*. Bandung: PT REMAJA ROSDAKARYA.