

# Impact of Visual Learning Methods on Accounting Students in Palembang

1<sup>st</sup> Muhammad Hidayat

Faculty Of Economics.

Universitas Sriwijaya

Palembang, Indonesia

[muhmmadhidayat@fe.unsri.ac.id](mailto:muhmmadhidayat@fe.unsri.ac.id)

2<sup>nd</sup> Patmawati

Faculty Of Economics

Universitas Sriwijaya

Palembang, Indonesia

[patmawati@fe.unsri.ac.id](mailto:patmawati@fe.unsri.ac.id)

3<sup>rd</sup> Dwirini

Faculty Of Economics

Universitas Sriwijaya

Palembang, Indonesia

[dwirini@fe.unsri.ac.id](mailto:dwirini@fe.unsri.ac.id)

**Abstract—** The development of high information technology has an impact on the learning process carried out by lecturers in the classroom. The impact of this technology is the creation of lecture material in a visual form both in the form of pictures and videos that are able to provide an overview of the field of science being studied so that students become more interested in the field of science they are learning. This Research is Experimental Research where the accounting student get pre-test and post-test after they get visual learning method. The population in this study is all accounting student at the University at Palembang City. Samples were taken using a purposive random sampling technique. Data was collected using a test result and questionnaire. Data were analyzed by Paired Sample T-Test. the results of the study showed that there were differences between the learning outcomes of conventional methods and learning using visual learning methods.

**Keywords:** conventional method, visual learning method

## I. INTRODUCTION (BACKGROUND)

Industry 4.0 which is currently taking place requires the business world to continue to innovate to be able to continue to compete in this very tight competition. Companies currently engaged must be able to adjust the requirements needed to be able to survive in the competition. Preparation for dealing with this competition requires not only reliable sales and operational planning strategies, but also high quality human resources for every part of the company is needed. The operational part plays an important role in terms of increasing efficiency in the company's operations, the sales department demands innovation in the sales method. And companies are required to have a reliable financial department that is able to provide and manage the right information for management so that management is able to make the right decisions based on reliable financial information. Such reliable information will only be created if the company has an accountant who has the ability that is qualified in the field of accounting and finance.

Accountants who have qualified abilities in the field of accounting can be produced through an educational process that puts forward aspects of theoretical and practical understanding for prospective accountants / accounting students. In Indonesia, accountants are produced through formal education in D3 and S1 strata in various universities in Indonesia.

Formal education obtained in tertiary institutions is generally based on the core curriculum of tertiary institutions which in its preparation has met the quality required by the government. The accounting curriculum in Indonesia in general has also been adapted to the needs of the business community in Indonesia. But the high unemployment rate shows that there is still a real gap between the quality of the alumni produced and the needs in the workforce.

The difference in quality between what is desired by the business world with accounting alumni produced by the company is the reason why there are still many accounting study alumni who are still difficult to find work. Learning patterns in the classroom that still rely on conventional educational procedures where students are still asked to understand the material and tasks through learning activities in the reference book causes accounting students to become saturated quickly which can cause them to become less interested in understanding the nature of accounting science itself . the lecture and discussion patterns that have been used today are successful enough to produce reliable accountants. However, other learning patterns are needed, in this case patterns that can help students more quickly understand the material presented by the lecturer, and be able to improve interactivity between lecturers and students.

The development of high information technology has an impact on the learning process carried out by lecturers in the classroom. The impact of this technology is the creation of lecture material in a visual form both in the form of pictures and videos that are able to provide an overview of the field of science being studied so that students become more interested in the field of science they are learning. In the field of accounting, the application of visual methods in learning is expected to clarify the accounting material explained by the lecturer [6] . So that accounting students can practice more precisely the science of accounting they get.

The purpose of this study is to look at the differences in the application of learning methods using a visual approach compared to the use of conventional methods and their impact on students' understanding of understanding accounting courses

## II. LITERATURE REVIEW

### A. Learning Theory

[12] explains Learning Theory (Learning Theory) aims to explain and help us to understand how people learn, wherein in this theory there are 3 factors that determine people learning

- Behavioral Factor

Behavior focuses on how people behave, it develops from positive understanding to cause and effect understanding, which can be said simply that action will produce a reaction. In education, behavior tests how students behave when learning.

- A Cognitive Factors

Cognitive theory is a theory that says that learning is a process of change in perception and understanding that can be measured and observed. This model is more oriented to the study of how students learn to think. The focus of the study is on cognitive development questions. For teachers the most important thing is how it can influence the development of thinking and how teachers can adapt teaching to the level of cognitive development of students

- Social Constructive Factors

A process of meaning carried out by each individual on the environment and aspects outside of himself consisting of the process of externalization, internalization and objectivation. Externalization is adjustment to the sociocultural world as a human product, objectivation is social interaction in an intersubjective world that is institutionalized or undergoes a process of institutionalization, and internalization is an individual identifying himself in the midst of social institutions where the individual is a member.

### B. Previous Research

Research conducted by [3] shows that there are no differences in the values produced between traditional learning methods (face-to-face) and online learning methods using technology. This pedagogical study examines accounting undergraduate student's performance, satisfaction, and perceived course effectiveness under two distinct modes of course delivery: traditional live-instructed classes and teacher-less pre-recorded online lectured classes. Hypotheses testing on the differences and possible factors influencing the two settings are based upon data collected from two sections of each introductory accounting course: Financial Accounting and Managerial Accounting. The findings on students' performance indicate no significant differences in students' grades in each mode of course delivery. Live lectures given in traditional classrooms do not affect students' overall learning when compared to a teacher-less course environment. The results of testing indicate that a student's prior GPA and interest in the course material are the most important factors that determine his or her final course grade. This study also provides some evidence that students' satisfaction and perceived effectiveness is greater in a traditional course setting. The methodology employed in this research avoids many of the problems

encountered in prior studies. The main findings are also useful to university instructors and administrators in terms of the use of technology and its impact on the cost and effectiveness of introductory accounting courses

Research that has the same results was also carried out by [5], surveyed MBA students in online sections and traditional face-to-face classes of financial accounting. They reported insignificant differences for overall evaluations of the course and instructor and for final grades.

[10] compared two sections of the same course—one section was online and asynchronous; the other was face-to-face—by examining gender, age, learning preferences and styles, media familiarity, effectiveness of tasks, course effectiveness, test grades, and final grades. The two sections were taught by the same instructor and used the same instructional materials. The results revealed no significant differences in test scores, assignments, participation grades, and final grades, although the online group's averages were slightly higher. Ninety-six percent of the online students found the course to be either as effective or more effective to their learning than their typical face-to-face course. There were no significant differences between learning preferences and styles and grades in either group. The study showed that equivalent learning activities can be equally effective for online and face-to-face learners

[8] Promoting distance education is an important policy on many college campuses, so evaluating to what extent online learning environment may affect learning outcomes and/or student satisfaction should continue to be a research priority. This study investigated whether students in an online class performed differently than students in a traditional classroom setting on weekly quizzes, and whether their satisfaction with the course and instructor differed from students in a traditional classroom setting. Participants were two classes of students ( $N = 69$ ) in Theories of Counseling. Results indicated no difference between the scores of the two groups on the weekly quizzes, but students in the online class were less satisfied with the course and instructor overall. These findings support other research indicating students may perform as well in an online environment as their counterparts in a traditional classroom, but their satisfaction with the educational experience may suffer

[1] This study compared the academic achievement between undergraduate students taking an introductory managerial accounting course online ( $N = 104$ ) and students who took the same course in a hybrid classroom setting ( $N = 203$ ). Student achievement was measured using scores from twelve weekly online assignments, two major online assignments, a final examination held on campus, and overall course performance. This study found that students receiving only online instruction were as successful as students receiving hybrid classroom instruction. These findings suggest that course instruction and pedagogy are more important for student learning than the type of media delivery, and online instructors should focus their effort on quality in developing "online courses."

The results of research conducted by [9] produce no difference in effectiveness between traditional learning and

learning using tutorials using computers. The results of this previous study showed that there was no significant impact on the application of information technology to students' abilities.

But the results of different studies conducted by [2], This paper assesses the differences in performance and attitudes of students taught online versus onsite. Students completed a course evaluation designed to determine student satisfaction in specific areas. Student performance was measured by means of a comprehensive exam that tested all material covered in the course. Results support the contention that students in online courses learn as much or more than students in traditional onsite courses and are as satisfied with the course and the instruction as their onsite counterparts

[4] The majority of the students perceived that they spent more or an equal amount of time on the WBI courses as compared with past experiences in traditional courses. A majority of the students also indicated that the WBI instruction courses were easier or equal in difficulty to the traditional courses. In other words, students found they needed to spend an equal amount or more time on the WBI courses than on typical traditional courses, but they did not tend to find the WBI courses more difficult. No statistically significant differences were found between the two versions of each of the courses on the student satisfaction measures.

[7] meta-analysis of the empirical literature was conducted in order to answer the following questions: overall, is interactive distance education as effective, in term of student achievement, student attitudes and retention rate, as its classroom-based counterparts? What conditions contribute to more effective distance education, in total 510 independent findings from 157 studies, based on total 40.495 students were included in analysis. The result indicate a very small but significantly positive mean effect size for interactive education over.

Research conducted by [11] shows that the use of applications in the delivery of accounting material can improve the understanding of accounting students in understanding material provided by lecturers. While [13] said that a balance is needed for accounting students to understand the material using mixed methods. Where lecturers give face-to-face lectures also give lectures using technology.

Current technological developments change the way students learn today. students can more easily get information from the internet. where information or lessons learned can be in the form of videos. learning through visual media makes it easy for them to understand the lesson.

Based on the results of previous studies, the research hypotheses proposed are as follows:

Ha. there is a difference between the quality of accounting students before getting visual learning and traditional learning

### III. RESEARCH METHODS

This research is a experimental research that aims to determine the effect of visual learning method on study result on accounting student of . The data used in this study are quantitative data and are primary data obtained directly from respondents. The data was collected using a test result and interview.

The population in this study is Accounting Student at Palembang, research population is taken in this city because the city of Palembang is one city that has many universities that provide accounting majors. The research sample was taken using purposive sampling. with the following criteria

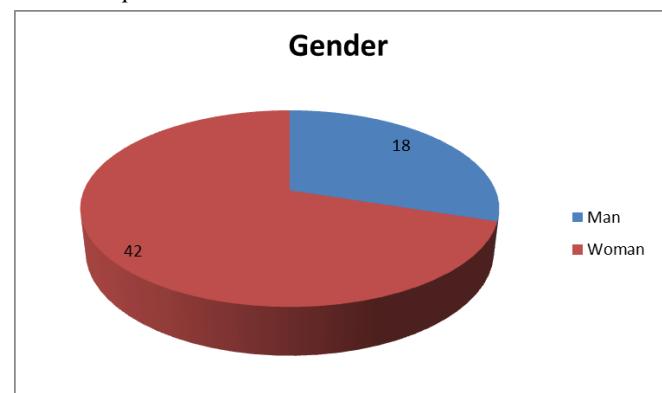
- 1) Active student
- 2) have studied basic accounting courses
- 3) Willing to be a research sample

The analysis technique used in this study is paired sample t test. there are 3 universities as objects of research Universitas Sriwijaya, Universitas Bina Darma and Universitas Indo Global Mandiri.

the variable used in this study is student learning outcomes. learning outcomes are obtained by giving tests to students before and after getting the visual learning method.

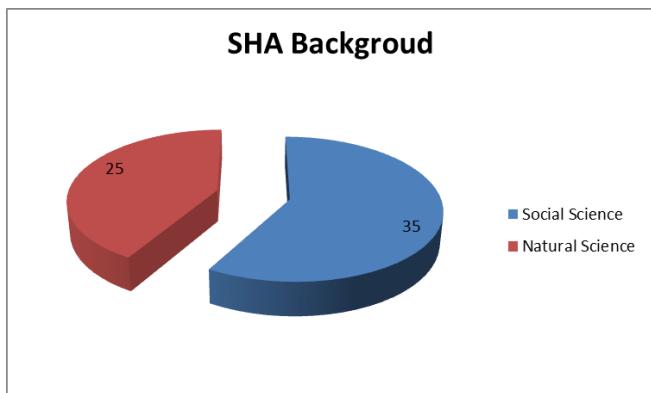
### IV. RESULTS AND DISCUSSION

#### A. Descriptive Statistic



<sup>a</sup> from the research sample taken, 18 students (30%) are Man and 42 Students (70%) are woman.

fig. 1. Gender



<sup>b</sup>from the research sample taken, 35 students (58,33%) are from social science and 25 Students (41,67%) are from natural science.

fig. 2. Senior High School Background

### B. Paired Samples Statistict

TABLE I. PAIRED SAMPLE STATISTICS

Paired Samples Statistics

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 Pre_test	72,8833	60	10,18821	1,31529
Post_test	83,3500	60	5,92560	,76499

Based on the average value for the pre-test and post-test scores, data obtained that for the average value of the test using face-to-face learning methods in class without the help of visual media, the average value of the test was 72.88 whereas after learning by using visual media, there was an increase to 83.35.

### C. Paired Sample t-test

TABLE II. PAIRED SAMPLE T TEST

	T	df	Sig. 2 tailed
Pair Pre-test	-8,389	59	0,000
Post-test			

Based on the above data it can be seen that the significance value of 0,000 is less than 0.05, thus it can be concluded that the research hypothesis can be accepted, namely there are differences in conventional learning outcomes with learning using visual media in learning accounting courses

### D. Discussion

the results showed that accounting students could more easily grasp the lesson using visual methods. this shows the need for changes in learning methods in accounting courses. where the lecturer is expected to improvise the teaching process in the classroom by using information technology. so that student learning outcomes can be maximized.

the way to increase the ability of lecturers is to hold information technology training for lecturers who do not have the ability in the field of information technology. with an increase in the ability of lecturers in teaching, it will improve the quality of teaching materials and learning

methods used, so students can more easily understand the material.

based on the results of the interview after the test give, Students express several factors that influence them in understanding the lesson. There are four factors that can be summarized by the writer, i.e.

- lecturer education background

Students believe that lecturers who have a good educational background, in this case are reputable college graduates, have better material delivery abilities than lecturers who are not from reputable colleges, they are more enthusiastic when taught by the lecturer. thus increasing their motivation in learning.

- teaching style

The obstacle faced by students in understanding accounting courses is the monotonous teaching style of lecturers. lecturers only focus on the material being taught without regard to the suitability of the material to the actual situation. this causes students to be reluctant in understanding the material presented. they assume if they can get it on the internet.

- infrastructure completeness

completeness of infrastructure is a matter that is often complained of by students, they often complain about inadequate, damaged and incomplete infrastructure to support the studying process.

- communication language

Submission of material by lecturers is also hampered by sound factors that are too small or unclear. this will not be a problem if the lecture is attended by only a few students. but it will be significant when attended by many students, so a clear voice will help students understand the lesson

one solution to overcome these problems is to use visual media to assist lecturers in delivering the material being taught

## V. CONCLUSIONS AND FUTURE WORK

### A. Conclusions

based on the results of the study showed that there are differences in student learning outcomes using visual learning methods

### B. Future Work

further research can expand the object of research not only in the city of Palembang but also in the province of South Sumatra. further research is also expected to be able to further discuss the factors that influence the way students learn today

## VI. ACKNOWLEDGMENTS

Our thanks go to Sriwijaya University for funding this research

## REFERENCES

- [1] Aly, I. (2013). Performance in an online introductory course in a hybrid classroom setting. *Canadian Journal of Higher Education* 43 (2), 85-99.
- [2] Campbell, M., Floyd, J., & Sheridan, J. (2002). Assessment of student performance and attitudes for courses taught online versus onsite. *The Journal of Applied Business research* 18(2), 45-51.
- [3] Chiu, V. G., Sannella, A. J., & Vasarhelyi, M. A. (2014). Does a Live Instructor Matter? *Journal of Emerging Technologies in Accounting*. Vol.11, 1 – 25.
- [4] D.J, P., & Stertz, T. (2005). Effectiveness of and student satisfaction with web-based compared to traditional in-service teacher education courses. *Journal of Industrial Teaching Education* 1(42), 7-23.
- [5] Gagne, M., & Shepard, M. (2001). Distance learning in accounting: A comparison between a distance learning and a traditional graduate accounting class. *T.H.E. Journal* 28 (9), 58.
- [6] Groomer, S. M., & Murthy, U. S. (1996). An Empirical Analysis of the Accounting Information Systems Course. *Journal of Information System*. Vol 10 (2), 103-127.
- [7] Jhonson, G. (2008). The Effectiveness of distance education vs classroom instruction: A Summary of Bernard's meta-analysis with implication for practice. *International Journal of Instructional Media* 35(2), 137-144.
- [8] Lyke, J., & Frank, M. (2012). Comparison of student learning outcomes in online and traditional classroom environments in a psychology course. *Journal of Instructional Psychology* 39 (4), 245-249.
- [9] Merino, D. N., & D, A. K. (2003). Evaluating the Effectiveness of Computer Tutorials Versus Traditional Lecturing in Accounting Topics. *Journal of Engineering Education*.
- [10] Neuhauser, C. (2002). Learning style and effectiveness of online and face-to-face instruction. *The American Journal of Distance Education* 16 (2), 99-113.
- [11] Paz, V. (2017). Innovative New Apps and Uses for the Accounting Classroom. *Journal of Emerging Technologies in Accounting*. Vol.14 (1), 63-75.
- [12] Picciano, A. G. (2001). Theories and Frameworks for Online Education: Seeking an Integrated Model. *Journal of Asynchronous Networks* 5(2).
- [13] Wong, L. d. (2009). The Need to Balance the Blend: Introductory Accounting Subject. *Issues in Informing Science and Information Technology*