



Self-Confidence Moderates The Effect of Basic Accounting, Mathematics Learning Outcomes, and Learning Behaviour on Accounting Understanding

Jane Andriani ✉, Agung Listiadi

DOI: 10.15294/eeaj.v10i1.39165

Jurusan Pendidikan Ekonomi, Fakultas Ekonomi, Universitas Negeri Surabaya, Surabaya, Indonesia

History of Articles

Received: January 20, 2021
Approved: January 30, 2021
Published:
February 28, 2021

Keywords

Basic Accounting Abilities;
Learning Outcomes of Mathematics;
Learning Behaviour; Self
Confidence; Comprehension of
Accounting

Abstract

This research, aims to analyze the influence of accounting abilities, learning outcomes of mathematics, and learning behaviour towards the level understanding of accounting partially and self confidence can moderate the relationship between basic accounting abilities, learning outcomes of mathematics, and learning behaviour towards the understanding of accounting partially. The respondent of this research were 105 tenthgrade accounting students with probability sampling techniques. Data analysis techniques using software warpPLS 6.0 with the results of research shows that: (1) not related basic accounting ability and learning behaviour with the level of accounting understanding partially (2) there is an influence between learning outcomes of mathematics with understanding of accounting (3) self-confidence is not a moderating variable between basic accounting abilities, learning outcomes of mathematics, and learning behaviour towards the level of accounting understanding partially. Suggestions for next research can use other aspects related to comprehension of accounting other than used in this study and can develop research instruments that do not only refer to the indicators that have been used.

How to Cite

Andriani, Jane & Listiadi, Agung. (2021). Self-Confidence Moderates The Effect of Basic Accounting, Mathematics Learning Outcomes, and Learning Behaviour on Accounting Understanding. *Economic Education Analysis Journal*, 10 (1) 2021, 93-100.

© 2021 Semarang State University

✉ Correspondence Address:
Graha Kuncara Blok I-16 Kemiri, Sidoarjo, Indonesia, 61213
email: andrianijane3@gmail.com

p-ISSN 1907-3720
e-ISSN 2502-5074

INTRODUCTION

Education is a relationship between educators and students that stimulates the formation of learning. Through education, it is hoped that it will be able to produce students with good quality resources and compete for the realization of the national ideals of the Indonesian nation. This is in line with the function of National Education as set out in the Law on the National Education System No. 20 of 2003 Article 3. Under the law, education functions to develop skills and shape personalities in the education of the life of the nation and the state, with the aim of developing the potential of students to be a human being dedicated to God the Almighty, of noble character, knowledge, skill, creativity, independence and responsibility.

With the existence of a national education system, schools and colleges make it a guide in the conduct of educational activities. One of the objectives of Vocational High School is to prepare students to work in accordance with their respective fields. In this case, vocational schools must prepare students to choose their careers, enter the world of work and live in society. Thus, a basic understanding of concepts and theories is needed during the learning process, especially accounting majors as provisions for students when entering the world of work or at SMKN 10 Surabaya it is called OJT (On The Job Training).

Accounting understanding is the ability to understand accounting in terms of theory and application. This cannot, of course, be separated from factors that may have an impact on the level of student accounting. Basic accounting skills are a process of understanding the scope that has been taught by teachers in basic accounting subjects. According to Ghani, Said, & Muhammad (2012), student performance will reflect their ability to demonstrate the knowledge they have learned through tests, quizzes, presentations, and final exams. In line with Pramayanti & Listiadi's research (2016), basic accounting skills can affect one's understanding of accounting. This

is evidenced by the results of his research that the learning outcomes of accounting have an effect on the level of understanding of accounting even though they do not make too large a contribution. Research by Laili & Listiadi (2020), also states the same results. However, different from Sucipto & Listiadi's research (2019), basic accounting learning outcomes have no influence on the level of accounting understanding.

J, Yunker, & Krull (2009) said that mathematical skills and knowledge can make it easier for students to make accounting calculations. This mathematics subject is a subject that must be followed by Grade X students at SMKN 10 Surabaya to support students in accounting comprehension. In line with Linster et al., (2015), mathematics is involved in the analysis of transactions and the assessment of the principles applicable to the resolution of accounting problems. In the Fadila & Listiadi (2016), it is argued that the learning outcomes of economic mathematics have a significant impact on the level of accounting comprehension, but is contrary to the Laili & Listiadi research (2020).

Learning behavioral factors may also affect the level of accounting comprehension. This factor is the attitude of students in learning activities, which are carried out repeatedly to make it a habit (Suprianto & Harryoga, 2016). With these factors, the maximum student understanding of the lesson can be affected. Students' learning behavior during the school learning process can be assessed in a number of ways, including the habit of taking lessons, reading books, conducting exams, and visiting the library. Rokhana & Sutrisno's research (2016), shows that learning behavior has a positive and significant impact on the level of accounting comprehension. The same is also expressed in the research of Aulia & Subowo (2016). However, this is contrary to Pramayanti & Listiadi (2016), that there is no influence on accounting comprehension between learning behaviour.

Self-confidence is a positive attitude towards a person's self-esteem, ability, and belief

in all the advantages he has in achieving his life goals. According to Goleman (2018:63), self-confidence is a strong awareness of self-esteem and of one's own abilities. As far as education is concerned, this aspect of self-confidence is necessary for a student, if an individual lacks self-confidence, it will be difficult to make a decision, and this situation causes students to tend to lose motivation to do many things, especially learning. According to research by Fitri et al (2018), there are several indicators that affect a person's self-confidence, including: (1) one's own abilities; (2) optimistic; (3) objective; (4) responsible and (5) rational and realistic.

Self-confidence has a moderate impact on student achievement (Ciftci & Yildiz, 2019). Where confidence is thought to have an impact on the strength and weakness of aspects of improving accounting comprehension. Fadila & Listiadi (2016), argued that self-confidence undermines the relationship between learning outcomes and accounting, and strengthens the learning outcomes of economic mathematics in accounting comprehension. Self-confidence moderates the impact of learning behavior on the level of accounting understanding (Dewi & Wirama, 2016). Meanwhile, Pramayanti & Listiadi (2016), research findings indicate that self-confidence does not moderate the relationship between these aspects and the level of accounting comprehension.

Researchers made observations at SMK Negeri 10 Surabaya through interviews. At the time of learning, the teacher assesses that overall students have a good learning behaviour, and tend to be active in the classroom. However, after the examination, the basic accounting scores were still below the KKM in the first semester. Thus, the scores obtained by these students do not necessarily mean how well the student's skills and understanding of accounting subjects are balanced by the presence of good learning behavior and self-confidence.

The objective of the research was to analyze the effect of basic accounting skills, mathematical learning outcomes and learning

behavior on the level of accounting comprehension of Class X Financial Accounting and Institutions in part and self-confidence as a moderating variable between basic accounting skills, mathematical learning outcomes, and learning behavior at the level of comprehension of Class X Financial Accounting and Student Institutions partially.

METHOD

This research includes quantitative research, that is to say, research on a particular population or sample with data in the form of numbers analyzed with statistics. The following figure illustrates the design of the research:

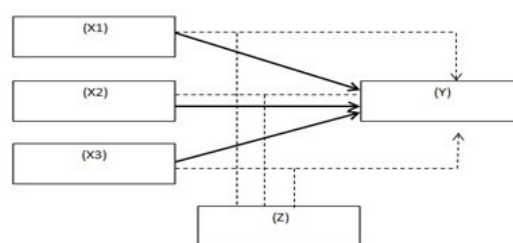


Figure 1. Research Design

Source: Data processed by researchers (2020)

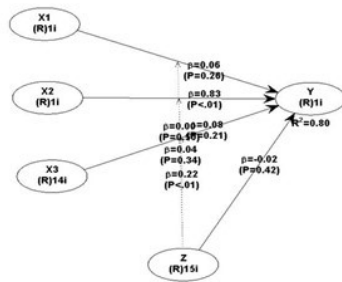
The population of this research is 142 students of Class X Financial Accounting and SMK Negeri 10 Surabaya Institutions. Sampling using probability sampling techniques, which is a sampling method that has the same opportunity to be selected as a sample member. The size of the sample was determined by 105 students using the Slovin formula.

Data collection techniques used tests, questionnaires, and documentation. The test sheet is used to measure basic accounting skills, in the form of a formative test in the form of 15 multiple choice or subjective questions. The questionnaire or questionnaire uses a closed questionnaire type which is used to examine learning behavior variables and self-confidence. While the documentation is used to gather information in the form of data on mathematics learning outcomes, basic

accounting and spreadsheets obtained from the teacher concerned. Data analysis techniques use the Structural Equation Modeling or SEM software with the help of *WarpPLS 6.0*.

RESULTS AND DISCUSSION

WarpPLS 6.0 analysis results:



Source: WarpPLS 6.0 (2020)

Research hypothesis testing on the *WarpPLS 6.0* analysis through resampling and t-test methods. Hypothesis testing decisions can be made if the p-value ≤ 0.10 (alpha 10%) is said to be weakly significant, the p-value ≤ 0.05 (alpha 5%) is declared significant, and the p-value ≤ 0.01 (alpha 1%) is highly significant (Solimun, Fernandes, & Nurjanah, 2017). The research hypothesis can be answered by looking at the table below.

Table 1. Hypothesis Test Results

The relationship between variables			Path Coefficient	p-value	Information
X1	-	Y	0.061	0.264	Not Significant
X2	-	Y	0.0829	<0.001	Highly Significant
X3	-	Y	0.078	0.209	Not Significant
-	Z	Y	-0.021	0.416	Not Significant
X1	Z	Y	0.000	0.498	Bukan Moderasi
X2	Z	Y	0.040	0.341	Bukan Moderasi
X3	Z	Y	0.220	<0.001	Moderasi

Source: Data processed by researchers (2020)

The results of the hypothesis testing above show that: (1) The path coefficient is 0.061 with p value = 0.264, it is said to be not significant so that the H1 hypothesis is rejected. (2) The path coefficient of 0.829 with p value <0.001 means that it is said to be highly significant so that the H2 hypothesis is accepted. (3) The path coefficient is 0.078 with p value = 0.209, it is stated not significant so that the H3 hypothesis is rejected. (4) The path coefficient value of 0.000 with p-value = 0.498, is said to be not significant so that the H4 hypothesis is rejected. (5) The path coefficient is 0.040 with p-value = 0.341, it is stated not significant so that the hypothesis H5 is rejected. (6) The path coefficient is 0.220 with p-value <0.001, it is said to be highly significant, so that the hypothesis H6 is accepted.

The Effect of Basic Accounting Skills (X1) on the Level of Accounting Understanding

The results showed a path coefficient value of 0.061 and a p-value of 0.246, which is not significant. The first hypothesis "The effect of X1 on Y" is therefore rejected. Thus, it can be said that there is no influence between basic accounting skills (X1) and the level of accounting comprehension (Y).

Based on the results of the basic accounting tests, 64 students obtained the test score <70 . On the basis of these results, it can be seen that most of the students were inaccurate in answering questions 4,7 and 8 concerning the material for the adaptation of journals and questions 12 and 13 concerning the recording of transactions in general journals. This may be said to be one of the reasons why basic accounting skills have no effect on the understanding of accounting. These results are supported by research by Sucipto & Listiadi (2019) and Taufiq (2017) that does not influence the level of accounting comprehension of these variables. In Sucipto & Listiadi's research (2019) states that the cause could also be because the data on the level of accounting understanding in the form of spreadsheet values did not match the real criteria. It is better if the data used is the pure value of the test results from students, so that the data analyzed has almost the same criteria between the value of basic accounting skills and the value used as a benchmark for variable Y. The results of Taufiq (2017), indicate that accounting knowledge has no effect on accounting comprehension, where the possible cause is that experience in accounting learning has no relationship to accounting knowledge. Therefore, students with high accounting scores do not necessarily have a high understanding of accounting. In the meantime, students with low accounting scores do not necessarily experience difficulties in understanding accounting, because with the added enthusiasm for learning, it can increase students' understanding of these subjects.

The results of the test hypotheses in this study contradict the research by Laili & Listiadi (2020) which states that there is an influence between basic accounting and accounting comprehension. The same was also said by Fadila & Listiadi (2016), that the learning outcomes of accounting have a positive and significant impact on the level of accounting comprehension.

The Effect of Mathematics Learning Outcomes (X2) on Accounting Understanding Level

The results showed that there was an influence between the mathematics learning outcomes and the level of accounting comprehension, as demonstrated by the path coefficient of 0.829 and the p-value of <0.001 , the second hypothesis was accepted.

Based on the math value data obtained from the subject teacher, it can be seen if the majority of students are in grades >70 . It can therefore be assumed that overall students have good skills and knowledge of mathematics. Mathematics learning outcomes can be said to be one of the supporting aspects or factors affecting students' understanding of accounting. Having the skills and knowledge of mathematics can make it easier for students to calculate and analyze transactions or the principles that apply to the solution of an accounting problem. In line with Fajriah & Mastum (2015), accounting lessons are related to mathematics because they have the same characteristics, including logic and calculation. This may be the cause of the influence of the X2 variable on the Y.

This is in line with the Fadila & Listiadi research (2016), which states that this variable has a positive and significant effect on accounting comprehension, where the mathematics learning outcomes achieved through values will be a benchmark for making accounting calculations easier. So, by having good mathematical skills, students' understanding of these subjects can be improved. However, contrary to Laili & Listiadi (2020) which states that these factors do not have a partial effect on the understanding of accounting.

The Effect of Learning Behavior (X3) on Accounting Understanding Level

According to the results of the study, there is no influence of the X3 variable on the level of accounting comprehension as indicated by the value of the net coefficient of 0.078

and the p-value of 0.209, so it is said to be insignificant. For this reason, the third hypothesis, which reads "The influence of financial and institutional accounting students on learning behavior and the level of accounting comprehension," is rejected.

In the learning behavior variable, most students chose the Likert scale 3 as an indicator of the habit of visiting the library, which resulted in an average of 2.91. So, it can be assumed that some students are visiting the library, and some are not. This may be one of the reasons why this variable has no effect on accounting comprehension. Muntiah (2018) said that the habit of participating in learning, reading books, visiting the library and facing tests that are carried out irregularly and in a disciplined way can have an impact on students' understanding of accounting. This is influenced by many internal and external factors in the learning process, so that learning behavior does not affect the level of accounting comprehension. As a result, each student has different learning behaviors depending on the conditions or situations of each individual in absorbing the material being taught. So, of course, they have different ways of learning and habits of understanding the learning material, especially with regard to accounting. It is also possible that the hypothesis is rejected.

It is in line with Pramayanti & Listiadi (2016) and Sucipto & Listiadi (2019), which shows the lack of influence of these variables on accounting comprehension. These results are also consistent with the research conducted by Muntiah (2018) and Efriyenti (2017). However, in contrast to the research results of Aulia & Subowo (2016) dan Rahayu (2019), the result is that learning behavior has a partial effect on accounting understanding.

The Effect of Basic Accounting Skills on the Level of Confidence Accounting Understanding as Moderation Variable

Based on the Table of Hypothesis Test Results, it shows that self-confidence cannot be said to be a moderating variable between basic accounting skills and accounting comprehen-

sion, where the path coefficient of 0.000 and p-value = 0.498 are considered insignificant. In this case, the assumption "Self-confidence as a moderating variable between basic accounting skills and the level of accounting understanding of Class X students of Financial Accounting and Institutions" is rejected.

Every student in Class X Financial Accounting and Institutions has a different level or level of confidence, so that not all students who have good accounting scores have high self-confidence. This is in line with the research carried out by Sucipto & Listiadi (2019). However, in contrast to Fadila & Listiadi (2016), self-confidence as a moderating variable has a negative effect as this variable is considered to undermine the relationship between X1 and Y variables.

The Influence of Mathematics Learning Outcomes on the Level of Confidence Accounting Understanding as a Moderation Variable

Self-confidence is not, according to research findings, a moderating variable between mathematics learning outcomes and accounting comprehension. This is indicated by the path coefficient on the hypothesis test of 0.040 and p-value = 0.341, so it is not significant, so that the hypothesis "Self-confidence as a moderating variable between mathematics learning outcomes and the level of accounting understanding of class X students of Financial and Institutional Accounting" is rejected.

The results of this study show that mathematics learning outcomes have an impact on accounting comprehension as well as on the results of Pramayanti & Listiadi (2016). However, an excessive level of self-confidence is not always interpreted as a positive trait. These variables are the feelings and self-confidence of someone who uses the right brain to explore various issues. In the meantime, it differs from mathematics learning outcomes that are seen on the basis of student mathematics scores and tend to use logic to think. This may be one of the reasons why self-confidence is not a moderation between the influence of

X2 on Y. It can also be said that students with good math scores lack self-confidence so that they are reluctant to stand out and be active in class. So that this variable cannot be said to be a moderation between the influence of mathematics learning outcomes on accounting understanding. The results of this hypothesis are in line with Pramayanti & Listiadi (2016). However, contrary to Fadila & Listiadi (2016) the result is that this variable is said to be moderate because it strengthens the influence of mathematics and accounting comprehension on learning outcomes.

The Effect of Learning Behavior on the Level of Confidential Accounting Understanding as a Moderation Variable

Based on the results of the research, self-confidence is not a moderating variable between the influence of learning behavior on accounting comprehension, because the results of the third hypothesis test show that the X3 variable has no effect on Y. However, self-confidence and learning behavior influence the level of accounting understanding simultaneously by showing the path coefficient of 0.220 and p-value <0.001, it is stated to have a high level of significance, so that the hypothesis "Self-confidence as a moderating variable between learning behavior and the level of accounting understanding of class X students of Institutional and Financial Accounting" is accepted.

Although the relationship between learning behavior and this moderating variable has an effect on accounting comprehension, essentially the results show that there is no influence between the X3 and Y variables, and the trust variable itself has no influence on accounting comprehension. For this reason, it can be argued that self-confidence does not moderate the impact of learning behavior on accounting comprehension, which is consistent with the research findings of Muntiah (2018) and Sucipto & Listiadi (2019). Similarly, Efriyenti (2017) argued that if the variable does not moderate learning behavior and accounting comprehension, the assumption is

that learning behavior and self-confidence are low, the ability of an individual to understand certain fields is not excluded.

CONCLUSION

Based on the analysis of the results of hypothesis testing and discussion, it can be concluded: (1) There is no influence of basic accounting skills and learning behavior with the level of accounting comprehension of class X Financial and Institutional Accounting students partially. (2) There is an influence between mathematics learning outcomes on accounting understanding of class X Financial Accounting and Institutions students. (3) Self-confidence is not a moderating variable between basic accounting skills, mathematics learning outcomes, and learning behavior and partial understanding of accounting for class X students of Financial Accounting and Institutions.

REFERENCES

- Aulia, A., & Subowo. (2016). Pengaruh Pengendalian Diri, Motivasi, dan Perilaku Belajar Terhadap Tingkat Pemahaman Akuntansi Mahasiswa. *Economic Education Analysis Journal*, Vol.5(1), 346–362.
- Ciftci, S. K., & Yildiz, P. (2019). The effect of self-confidence on mathematics achievement: The meta-analysis of Trends in International Mathematics and Science Study (TIMSS). *International Journal of Instruction*, Vol.12(2),683–694. <https://doi.org/10.29333/iji.2019.12243a>
- Dewi, N., & Wirama, D. (2016). Kepercayaan Diri Sebagai Pemoderasi Pengaruh Kecerdasan Emosional dan Perilaku Belajar pada Tingkat Pemahaman Akuntansi. *E-Jurnal Akuntansi*, Vol.16(1), 615–644.
- Efriyenti, D. (2017). *Pengaruh Kecerdasan Emosional, Perilaku Belajar Terhadap Tingkat Pemahaman Akuntansi dengan Kepercayaan Diri sebagai Variabel Pemoderasi Pada Perguruan Tinggi Swasta di Batam*. Vol.4(9), 300–305.

- Fadila, D. O., & Listiadi, A. (2016). Pengaruh Hasil Belajar Pengantar Akuntansi, Matematika Ekonomi dan Minat Belajar Terhadap Tingkat Pemahaman Akuntansi dengan Kepercayaan Diri sebagai Variabel Moderasi. *Jurnal Pendidikan Akuntansi*, Vol.3(6), 1–8.
- Fajriah, A. N., & Mastum, J. H. (2015). Pengaruh Hasil belajar Matematika Terhadap Hasil Belajar Akuntansi Siswa di SMK. *Jurnal Pendidikan dan Pembelajaran Khatulistiwa*, Vol.4(3), 1–13.
- Fitri, E., Zola, N., & Ifdil, I. (2018). Profil Kepercayaan Diri Remaja serta Faktor-Faktor yang Mempengaruhi. *JPPi (Jurnal Penelitian Pendidikan Indonesia)*, Vol.4(1), 1. <https://doi.org/10.29210/02017182>
- Ghani, E. K., Said, J., & Muhammad, K. (2012). The Effect of Teaching Format, Students' Ability and Cognitive Effort on Accounting Students' Performance. *International Journal of Learning and Development*, Vol.2(3). <https://doi.org/10.5296/ijld.v2i3.1776>
- Goleman, D. (2018). *Emotional Intelligence : Kecerdasan Emosional Mengapa EI Lebih Penting dari IQ*. Jakarta: PT. Gramedia Pustaka Umum.
- J, P., Yunker, J. A., & Krull, G. W. (2009). The Influence of Mathematical Ability on Performance in Principles of Accounting. *The Accounting Educators' Journal*, Vol.19(0), 1–20.
- Laili, Nuri Fadilatul, & Listiadi, A. (2020). Pengaruh Hasil Belajar Pengantar Akuntansi, Matematika Ekonomi dan Minat Belajar Terhadap Tingkat Pemahaman Akuntansi Mahasiswa Pendidikan Akuntansi Universitas Negeri Surabaya. *Jurnal Pendidikan Akuntansi*, Vol.8(1), 533–539.
- Linster, J., Cimafranca, J. L. B., Capuyan, B. A., Cabilla, F. B., Cansancio, A. L., & Balacy, G. M. V. (2015). The Influence of School Ability Measures on Accounting Competencies: A Path Analysis. *Journal of University of Mindanano Digos College*, Vol.5(72372).
- Muntiah, N. S. (2018). Kecerdasan Emosional dan Perilaku Belajar Membentuk Tingkat Pemahaman Akuntansi dengan Kepercayaan Diri Sebagai Variabel Moderating (Studi Kasus Pada Universitas Muhammadiyah Ponorogo). *Jurnal Ilmu Ekonomi, Manajemen, dan Akuntansi*, Vol.7(1), 1–14.
- Pramayanti, D. A., & Listiadi, A. (2016). Pengaruh Kecerdasan Emosional, Hasil Belajar Matematika Ekonomi, dan Perilaku Belajar Terhadap Tingkat Pemahaman Akuntansi dengan Kepercayaan Diri Sebagai Variabel Moderating. *Jurnal Pendidikan Akuntansi*, Vol.0(0).
- Rahayu, S. I. (2019). Analisis Faktor-Faktor Yang Mempengaruhi Pemahaman Konsep Dasar Akuntansi. *Jurnal Pajak, Akuntansi, Sistem Informasi, dan Auditing*, Vol.1(1), 40–57.
- Rokhana, L. A., & Sutrisno, S. (2016). Pengaruh Kecerdasan Emosional, Perilaku Belajar, dan Minat Belajar Terhadap Tingkat Pemahaman Akuntansi. (Studi Empiris Pada Mahasiswa Akuntansi Fakultas Ekonomi dan Bisnis UNTAG Semarang). *Media Ekonomi dan Manajemen*, Vol.31(1), 26–38. <https://doi.org/10.24856/mem.v31i1.282>
- Solimun, Fernandes, A. A. R., & Nurjannah. (2017). *Metode Statistika Multivariat Pemodelan Persamaan Struktural (SEM) Pendekatan WarpPLS*. Malang: Universitas Brawijaya Press.
- Sucipto, A., & Listiadi, A. (2019). Kepercayaan Diri Memoderasi Kecerdasan Emosional, Perilaku Belajar Akuntansi, dan Hasil Belajar Akuntansi Dasar Terhadap Tingkat Pemahaman Akuntansi Siswa. *Jurnal Pendidikan Akuntansi*, Vol.7, 400.
- Suprianto, E., & Harryoga, S. (2016). Faktor-Faktor Penentu Tingkat Pemahaman Akuntansi. *Jurnal Ekonomi Dan Bisnis*, Vol.18(3), 75. <https://doi.org/10.24914/jeb.v18i3.281>
- Taufiq, M. (2017). Pengaruh Pengetahuan Awal Akuntansi dan Efikasi Diri Terhadap Tingkat Pemahaman Akuntansi Melalui Minat Belajar Pada Mahasiswa Jurusan Akuntansi Universitas PGRI Adi Buana Surabaya. *Jurnal Ekonomi Pendidikan dan Kewirausahaan*, Vol.3(2), 181.