

## Understanding of Auditor Professional Sceptis: Are The Sequence of Evidence and Critical Thinking Determining Factors? (Experimental Research)

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**Abstract.** Understanding professional skepticism will help the auditor to assess the risks of material misstatement in the financial statements appropriately. One of the efforts lecturers can make to improve this understanding is through an audit learning model that links efforts to collect and evaluate audit evidence into question exercises. This study aims to see audit learning regarding evidence collection (sequence of evidence) and evidence assessment (critical thinking about mitigation risk) can influence students' understanding of skepticism. The research was conducted on 120 students of the UPI accounting study program class of 2017 and 2018. The research method was carried out by experiment. The research design in this study used a 2x2 factorial design. The study results prove that learning about evidence collection (sequence of evidence) and assessment of evidence (critical thinking about mitigation risk) increases understanding of professional skepticism. The study results have implications for the development of audit learning methods that emphasize critical thinking efforts about risk mitigation that can increase students' understanding of professional skepticism.

**Keyword.** Sequence of evidence; critical thinking; risk mitigation; risk material misstatement and professional skepticism

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### INTRODUCTION

Professional skepticism is a must-have attitude for auditors (Nolder & Kadous, 2018). In an audit assignment, the auditor does not mean that he does not trust the auditee, but the auditor must always question the audit evidence. This attitude is necessary because the audit process is an process not carried out for the entire transaction. Therefore, there is the possibility that the auditor's failure to provide the correct opinion is a potential for the auditor's failure (Hung & Cheng, 2018). One of the reasons for this failure occurred because the auditor incorrectly assessed the risk of material misstatement due to an incomplete understanding of the entity (Schultz, Bierstaker, & O'Donnell, 2010).

In the audit planning phase, the auditor must understand the entity's business processes and environment, including understanding internal control and potential fraud (Schultz et al., 2010); (Vigim et al., 2020). The better the auditor understands the entity, the more appropriate it will be in assessing audit risk. Accuracy in assessing risk will have implications for good audit quality. However, because the auditors' audit evidence is many and varied, it is often difficult for the auditors to understand the business entity and the audit environment appropriately because the limited audit time causes the auditor to understand the entity being audited quickly (Knechel, 2007).

Auditors often experience conditions where the first information received, will be information that is always remembered and tends to ignore other information (Chiang,

2016). When the auditor obtains information about the auditee's bad condition, it causes the auditor to ignore good auditee information. Conversely, when the auditor first gets good information about its condition, the bad auditee conditions will be ignored. This condition is called confirmation bias, which tends to look for evidence that supports their opinion or belief and ignores the evidence (Bamber, Ramsay, & Tubbs, 1997). The evidence that stated otherwise

Confirmation bias when assessing the risk of misstatement will result in the auditor not being skeptical of the audit evidence it collects and tests (Chiang, 2016). Information bias that occurs due to the auditor's sequence of evidence can be reduced through a critical learning process (Kern, 2001). Learning critical thinking does not only need to be done by senior auditors to junior auditors. However, learning must also be instilled in prospective auditors to be more ready and easier to apply in an audit assignment. The existence of confirmation bias affects the auditor's accuracy in assessing the risk of misstatement through the critical learning process.

The challenge for lecturers in the audit course is to provide understanding for students to understand the practice directly regarding the audit process in a comprehensive manner. The more learning that provides an overview of the audit process's reality, the better it will be for student understanding compared to only providing theoretical material delivery (Stanley & Marsden, 2013). One of the difficulties experienced by audit lecturers is providing an understanding of professional skepticism that is implemented directly in collecting and testing audit evidence. Based on this, the lecturer must create a learning model that can directly link the collection and testing of audit evidence into a case example.

The learning model with a case study approach will help students understand how to assess misstatement risk. The risk of misstatement is important for the auditor because the accuracy of the risk of misstatement will determine the extent and scope of evidence that the auditor will obtain (Brown & Solomon, 1991). Learning about critical thinking processes is a cognitive activity related to the use of reason (Forawi, 2016). Learning to think critically means using mental processes, such as paying attention, categorizing, selecting, and judging/deciding. Students who get critical thinking learning will determine the relationship between audit evidence and other audit evidence.

Changes in human preferences in processing information lead to changes in the way humans choose audit evidence. Much of the evidence in the current audit process is different from the previous audit process. The need for an information system audit is important. Financial report auditors must link the findings in the information system audit process with the quality of the auditee's financial reports. A quality information system has adequate general controls and application controls. If the auditor gets information about poor general controls and application controls and then gets good information, it will be difficult for the auditor to accept confidence in good evidence (Chiang, 2016). This condition causes the misstatement risk assessment process to be too high. On the other hand, if the auditor gets information about good general controls and application controls and then gets bad information, it will be difficult for the auditor to change his belief in other bad evidence (Bamber et al., 1997). This condition causes the misstatement risk assessment process to be too low. The critical thinking process will help the auditor to assess the risks of material misstatement better. Understanding the good assessment of the risk of material misstatement will help students understand the professional skepticism the auditor must have so that the risk assessment of material misstatement is neither too high nor too low.

(Asare & Messier, 1991); (Bamber et al., 1997); (Asare & Cianci, 2009); (Peytcheva, 2013) has carried out research that links the sequence of audit evidence to the auditor's attitude in assessing audit evidence. However, this research has not linked audit evidence to

general controls and application controls, even though this is necessary because of the changing audit environment. Meanwhile, research that links the critical thinking process in audits to the assessment of audit evidence has been carried out by (Nelson, Ratliff, Steinhoff, & Mitchell, 2003); (Manita, Elommal, Baudier, & Hikkerova, 2020). However, previous research has not linked it to the auditee's disaster mitigation system, even though this aspect is important for researchers to pay attention to because disaster mitigation will ensure that the data in the financial report notes can be protected because current audit evidence that is digital will have different management than manual evidence.

Previous researchers have not widely studied research that links aspects of evidence collection (sequence of evidence) and aspects of evidence assessment (critical thinking about disaster mitigation) with students' understanding of professional skepticism as seen from the accuracy of assessing the risk of misstatement. This research contributes to filling in the literature study gaps linking these two aspects with auditor skepticism. This research has implications for the audit learning process, which must be developed by educating accountants by considering critical learning thinking in testing audit evidence.

## **LITERATURE REVIEW**

### **Cognitive Bias Theory, Critical Thinking Learning Theory and Auditor Skepticism**

Frequently humans face errors in perceiving, considering, or interpreting an object. These errors occur in the process of thinking, judging, remembering, or cognitive processes. So this condition is known as Cognitive Bias (Kleinman, Palmon, & Yoon, 2014). One of the reasons for this limitation in thinking is due to human limitations in processing information. Humans sometimes tend to trust the first information they receive, so that when there is second information or other information that is different from the first information, it will cause humans to ignore it. When there is information that is different from the first information, we must be critical of it (Ashton & Ashton, 1988).

Critical thinking is a cognitive activity that uses reason. Learning to think critically means that students or learners use reasoning activities or mental processes, such as paying attention, categorizing, selecting, and assessing or deciding (Hajhosseiny, 2012). This critical thinking will help someone make an assessment, especially for auditors; this will help their workers. Thinking critically in the audit process will help the auditor relate one particular audit evidence to other audit evidence.

Learning to think critically has long been a must-do program in the education process in Indonesia. However, the current learning process has not optimized students' ability to think critically. There are 2 (two) factors that cause critical thinking not to develop during education: First, the curriculum is generally designed with a broad target material so that lecturers are more focused on completing the material. Second, a Lack of lecturers' understanding of teaching methods can improve critical thinking skills (Fernando & Meneses, 2020)

Several aspects become the focus in the critical learning process, namely 1) Clarity, 2) Accuracy, 3) Precision, 4) Relevance, 5) Depth, 6) Breadth, 7) Logic. These aspects are important to produce students' abilities in making decisions about something. Student learning strategies to achieve critical thinking skills can be done by repetition and enrichment of material, giving questions that require answers at a higher level of thinking, allowing students to think first before presenting arguments or income (Paul, 1990)

Learning critical thinking for accounting students is very necessary (Kaciuba, 2012), including in the audit course, because it will help future auditors evaluate audit evidence appropriately. The auditor does not mean that he does not trust the auditee, but the auditor must always question the audit evidence he/she has. This attitude is a description of professional skepticism. The auditor must possess this attitude because the auditor must

collect and evaluate evidence or information. Furthermore, the auditor must determine the degree of conformity of the evidence with existing criteria on that evidence. When auditors carry out the process of evaluating and assessing this evidence, a critical thinking process is needed (Nelson et al., 2003)

### **Effect of Evidence Collecting (sequence of evidence) and Evaluation of Evidence (critical thinking) can influence student understanding of skepticism.**

An audit is a process of collecting and evaluating evidence to determine the degree of conformity between criteria and information (Kim, Teo, & Bhattacharjee, 2017). The auditor must always seek to find relevant and sufficient evidence as a basis for making conclusions (Isa200, 2012); (Fay, Jenkins, & Popova, 2015). The unyielding attitude in obtaining quality evidence is part of professional skepticism. This attitude must always be present in the auditor so that the auditor can produce good audit quality. One of the skepticism can be described when the auditor will assess the risks of material misstatement. The process of assessing the risk of material misstatement is critical in the audit phase (Wright, 2016), because assessing the risk of material misstatement will determine the extent and scope of the audit evidence obtained. Professional skepticism will help the auditor to assess audit evidence. The importance of skepticism in the audit process causes learning about this attitude to be carried out during learning in college.

Understanding the importance of skepticism needs to be carried out by teachers using a learning method that is not difficult (Nelson et al., 2003). One of the learning methods used is to replicate the audit process in 1) collecting audit evidence and 2) evaluating audit evidence. First; In the process of collecting audit evidence, the auditor sometimes experiences confirmation bias. One of the reasons for this is because the auditor trusted the audit evidence that was first received and tried to refute the new evidence that did not match the initial evidence (Asare & Messier, 1991); (Bamber et al., 1997); (Peytcheva, 2013). This attitude causes the auditor to incorrectly conclude audit evidence because it does not question new evidence that appears. When the auditor first gets good information about the auditee and then gets bad information, then the tendency to maintain the assessment that the client's condition is good will be greater. Therefore, with such an order of evidence (good-bad), when the auditor will assess the risk of material misstatement, he will tend to assess it at a low level of risk.

Conversely, when the auditor first gets bad information about the auditee and then gets good information, then the tendency to maintain the judgment that the bad client condition will be greater. Therefore, with such a sequence of evidence (bad-good), when the auditor assesses the risk of material misstatement, he tends to assess it at a high-risk level. The audit evidence sequence will cause the auditor to experience confirmation bias to be less skeptical (Asare & Messier, 1991); (Bamber et al., 1997); (Peytcheva, 2013). Learning about the impact of the sequence of evidence and its relation to conformational bias is an important thing that needs to be taught to students (prospective auditors) in an audit course. Based on the description above, the following hypothesis is formulated:

### **H<sub>1</sub> (Main Effect) = Audit Evidence Sequence Affects Professional Skeptic Attitudes**

Apart from the evidence-gathering process, another important thing in the audit process is the testing or evaluation the evidence itself. Second, audit evidence assessment will be more accurate if the auditor makes an effort to think critically (Isa200, 2012); (Fay et al., 2015). Learning critical thinking can be done by questioning information and linking the causes and effects of an event. A person's mistakes in acting are often caused by the inability

to relate a condition to the bad effects. Most people think for the present condition only, without thinking to see the possibility of this condition in the future (Nelson et al., 2003); (Manita et al., 2020)..

Efforts to see a situation and carry out this assessment are closely related to identifying and measuring risks. If a person can see a condition as a whole, the best decision can be determined. Various risks occur in a business process, including risks related to information technology disruptions (Moorthy & Seetharaman, 2011). The industrial era 4.0 causes all business activities never to be separated from the use of the internet or information technology. The role of information technology is very large in helping facilitate work, but not many people realize the need to identify the risks associated with information technology. One form of an effort to minimize risks in the era of information technology is to prepare disaster management procedures that can disrupt information technology. Auditors can identify business entities with a high dependence on information technology (Merhout & Havelka, 2008); therefore, auditors must dig up more information about disaster management procedures in the industry. One of them is the banking industry. Auditors who always think critically will have high professional skepticism . Learning about how to think critically on audit evidence can improve the accuracy of (students) auditing candidates assessing the risk of misstatement, so this learning becomes an important thing that needs to be taught in an audit course. Based on the description above, the following hypothesis is formulated:

## **H<sub>2</sub> (Main Effect) = Learning Critical Thinking Affects Professional Skeptic Attitudes**

The auditor will be exposed to a variety of audit evidence (Johnstone & Bedard, 2003). Each audit evidence will provide a different degree of persuasiveness. Auditors' ability to sort relevant audit evidence with a sufficient amount of evidence is very useful to produce an effective and efficient audit program. However, in practice, auditors often experience confirmation bias due to the auditor having too much confidence in the first audit evidence received and trying to ignore other evidence that does not support his belief (Asare & Messier, 1991); (Bamber et al., 1997); (Peytcheva, 2013). This condition occurs because auditors experience failure in processing information. The auditor will misjudge the audit risk, which causes the auditor's skepticism to being reduced. Confirmation bias due to the auditor's sequence of evidence can reduce its negative impact by using a critical thinking process, namely a thought process that always pays attention to other aspects related to a condition, so that risks can be identified, assessed risks and risk management. Bias Confirmation will cause the possibility of failure to assess the risk of misstatement to decrease so that indirectly this will be related to the increasing skepticism of auditors.

## **H<sub>3</sub> (Interaction Effect) Audit Evidence Sequence and Learning Critical Thinking Affects Professional Skeptic Attitudes**

### **METHOD**

This research is using an experimental method. The research subjects were students of the 2017 and 2018 Indonesia Education University accounting study program. The students selected were students who had participated in an audit class so that they were able to do a general analysis of the audit work paper. The number of students who became participants in this study was 120 people. The selection of students as research subjects was based on efforts to reduce internal validity disturbances due to the auditor's experience that made the auditor less likely to make mistakes in the audit risk assessment. Students' use in

this study is also based on research objectives that want to prove the audit learning process that should be carried out at the tertiary level.

The design in this study used a 2x2 factorial design. The first factor is the sequence of audit evidence, which consists of 2 (two) levels, namely the order of evidence from Good to Bad and evidence from Bad to Good. The second factor is critical thinking learning, which consists of 2 (two) levels, namely not getting critical thinking learning and getting critical thinking learning. The following is the Factorial Table in this study:

**Table 1 Factorial Design**

<b>Faktorial</b>	No Critical Learning Related to Disaster Management Procedures	There are critical lessons related to Disaster Management Procedures
Good To Bad- Information Regarding General Controls and Application Controls	CELL 1	CELL 3
Bad To Good - Information Regarding General Controls and Application Controls	CELL 2	CELL 4

This research was conducted using google form media. Participants in this study used within-subject, meaning that every student participant only attended 1 (one) treatment. Participants in this study were randomly selected to occupy one of the four cells. Students are asked to position that they are junior auditors who are currently getting an audit assignment at a banking company. Students will be given information about General Control and Application Control of the company's information technology system. Some students get information in the order of Good to Bad information, and other students get information in Bad to Good. Students will then answer 2 (two) questions related to the information given earlier to ensure that students understand audit evidence. This is done as a form of manipulation check. After that, students who do not get critical thinking learning treatment about disaster management procedures are asked to assess the risk of misstatement for the company directly. Meanwhile, for students who get critical thinking learning treatment about disaster management procedures, they will be given various critical questions relating to the events and impacts that arise. After being given 7 (seven) questions regarding the impact of a condition, the student is asked to assess the risk of material misstatement. The following is the research procedure illustrated in Figure 1:

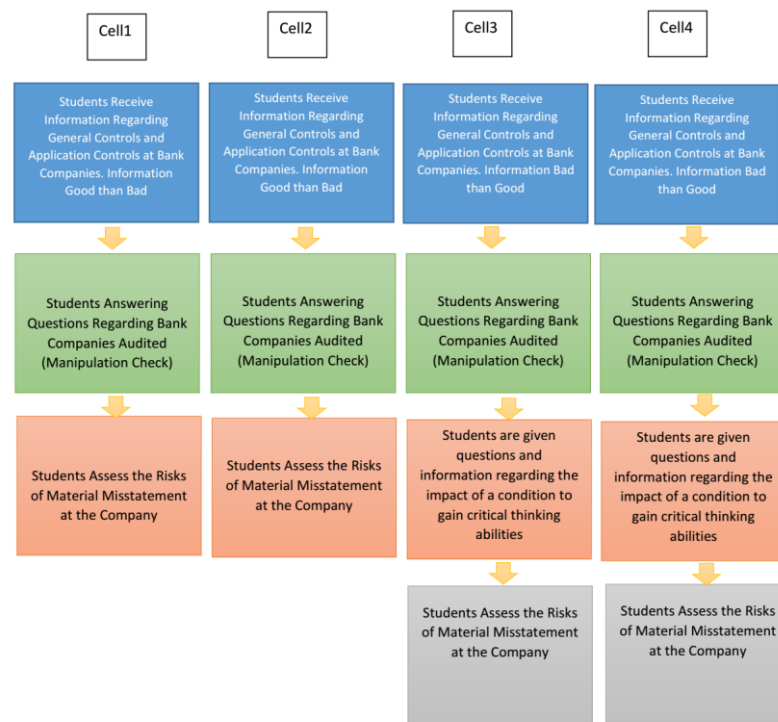


Figure 1 Experimental Procedure

The collected data were then analyzed using ANOVA TWO-WAY. Before the analysis was carried out to see the main effect and the interaction effect, the homogeneity and normality tests were carried out. After the test is carried out, the concluding process of acceptance and rejection of the hypothesis is carried out with a significance value of less than 5% alpha.

## RESULTS AND DISCUSSION

Professional skepticism is an absolute must-have for auditors. This attitude will help the auditor collect evidence and test evidence better, resulting in a good quality audit report. The purpose of this study consisted of 3 (three), namely 1) To see the main effect of the sequence of evidence on professional skepticism 2) To see the main effect of learning critical thinking on professional skepticism; 3) To see the interaction effect of the sequence of evidence and learning critical thinking on professional skepticism. The number of participants in this study was 120 people who are shown in table 2 below:

Table 2 Number of Participants

Between-Subjects Factors		N
Information_Sequential	Good - Bad	60
	Bad - Good	60
Critical_Thinking	Without	63
	With	57

Table 2 explains the number of participants in this study consisting of 120 people who received Good-Bad treatment as many as 60 people and who received Bad-God treatment as many as 60 people. Meanwhile, the number of participants who were grouped based on the treatment of the absence of a critical thinking learning process was 63 people, and those who received the treatment of the critical learning process were 57 people. After

testing for homogeneity and normality (data is not tabulated), the following tests are performed, which are listed in table 3:

**Tabel 3 Tests of Between-Subjects Effects**

Dependent Variable:score

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	224.910 <sup>a</sup>	3	74.970	18.508	.000
Intercept	4286.247	1	4286.247	1058.149	.000
information_sequential	65.012	1	65.012	16.050	.000
critical_thinking	78.893	1	78.893	19.476	.000
information_sequential * critical_thinking	85.534	1	85.534	21.116	.000
Error	469.882	116	4.051		
Total	4955.000	120			
Corrected Total	694.792	119			

a. R Squared = ,324 (Adjusted R Squared = ,306)

The test results show that Information\_Sequential has a significance value of 0.000 ( $\alpha = 5\%$ ), so the first hypothesis is accepted. The same thing also occurs in the second hypothesis that Critical\_Thinking influences professional skepticism as seen from the significance value of 0.000 ( $\alpha = 5\%$ ). Testing the interaction between the two factors shows that Information\_Sequential and Critical\_Thinking influence the understanding of professional skepticism. So it can be concluded that the third hypothesis is accepted.

### **Audit Evidence Sequence Affects Professional Skeptic Attitudes**

The first research objective is to see the main effect of the sequence of evidence on professional skepticism. The results in table 3 show that the research hypothesis is accepted. So it can be concluded that the order of audit evidence will affect students' understanding of professional skepticism. Maintaining an attitude of professional skepticism throughout the audit process is essential to reduce audit risk. Audit risk is a condition where the auditor gives a wrong opinion. Errors in giving opinions can relate to possible litigation suits and a poor audit reputation. Audit Standard 200 explains that professional skepticism includes questioning contradictory audit evidence, the reliability of documents, and responses to inquiries and other information from management and those charged with governance (Isa200, 2012). It also includes the adequacy and appropriateness of audit evidence obtained in the circumstances of the engagement.

The audit evidence obtained by the auditors is, of course, very diverse, in the condition the auditor is faced with various information. There will be a tendency for the auditor to experience information bias. This occurs because the auditor is too sure of the truth of the evidence or audit information that he first received. The auditor will try to deny or refuse to accept further information that is deemed inconsistent with the first information he obtained. Initial information about the entity is closely related to information about the company's internal control. In the context of information technology systems, there are general controls and application controls. If the information regarding the control is good and the following information is bad, then the auditor's tendency to retain the first information will cause the auditor to assess the risk of misstatement that is lower than the



opposite. If the information about the control is bad, and the following information is good, then the auditor's tendency to retain the first information will cause the auditor to assess a higher risk of misstatement. This condition is known as confirmation bias. This can cause the accumulated audit evidence to be too substantial or too low, so that this condition causes the auditor's skepticism to decrease.

The results of the research on this first hypothesis are in line with previous research conducted by (Asare & Messier, 1991); (Bamber et al., 1997);(Asare & Cianci, 2009); (Peytcheva, 2013) and also support the theory of confirmation bias. One of the reasons for this limitation in thinking is due to human limitations in processing information. Humans sometimes tend to trust the first information they receive, so that when there is second information or other information that is different from the first information, it will cause humans to ignore it.

### **Learning Critical Thinking Affects Professional Skeptic Attitudes**

The second research objective is to see the main effect of learning critical thinking on professional skepticism. The results in table 3 show that the research hypothesis is accepted. So it can be concluded that critical learning thinking will affect students' understanding of professional skepticism. Humans need critical thinking to find solutions to the problems of life they face. The same is true for the auditor; critical thinking in the auditor needs critical thinking of the audit of financial statements is to determine the fairness of value and determine the suitability of financial statements' presentation with accounting standards. When the auditor determines whether the financial statements' presentation is fair or not, the auditor must gather relevant audit evidence. The auditor must always be able to relate audit evidence to other audit evidence.

In a current audit engagement, the audit assignment is inseparable from the auditor's assessment of the entity's information technology systems' reliability. The more reliable the information technology system company has, the higher the accuracy in company financial statements. In entities with a high dependence on internet-based information technology systems, efforts to reduce risk are required so that the entity's financial data can be maintained properly. One example of an entity that has a high dependence on the internet is the banking industry. Therefore, disaster mitigation procedures in banking companies are very necessary because they relate to data in soft files owned by the entity.

If students as auditors are not given a stimulus to think about a condition's impact, then one or two future steps cannot be planned properly. Students' ability to analyze the impact and reduce risk is very much needed in today's industry. This is necessary because business processes are constantly changing rapidly. It cannot be denied that using the internet or information technology systems helps social work. So that if the system cannot run, the entity cannot serve its customers. Operating activities will be severely disrupted. Disaster mitigation procedures are needed to anticipate operational services that can continue to be carried out. When students are given a stimulus to think critically by asking about the possible impact of a condition, it causes an understanding of the importance of the auditor's professionalism skepticism.

The results of the research on this second hypothesis are in line with previous research conducted by (Nelson et al., 2003); (Manita et al., 2020). The results of this study also support critical thinking learning theory. Critical thinking is a cognitive activity that uses reason. Learning to think critically means that students or learners use reasoning activities or mental processes, such as paying attention, categorizing, selecting, and assessing or deciding. This critical thinking will help someone make an assessment, especially for auditors; this will help the workers. Thinking critically in the audit process will help the auditor relate one particular audit evidence to other audit evidence.

## **Audit Evidence Sequence and Learning Critical Thinking Affects Professional Sceptic Attitudes**

The third research objective is to see the interaction effect of the sequence of evidence and learning critical thinking on professional skepticism. The results in table 3 show that the research hypothesis is accepted. So it can be concluded that the sequence of evidence and critical learning thinking will affect students' understanding of professional skepticism. The auditor's confirmation bias due to the sequence of audit evidence causes the assessment of the risk of misstatement to be biased, but the bias in that assessment can be reduced through the critical learning process. The results of the research on this second hypothesis are in line with previous research conducted by (Nelson et al., 2003); (Manita et al., 2020). The results of this study also support the theory of confirmation bias and critical thinking learning theory

## **CONCLUSION**

The results of this study provide empirical evidence that the order of evidence will have an influence on students' understanding as a potential auditor regarding professional skepticism. The learning process using the critical thinking method can affect the understanding of professional skepticism. The confirmation bias that occurs due to the sequence of audit evidence can be reduced through the critical thinking learning process so that the process of assessing risk aspects will be increasingly skeptical. This study has limitations, namely in the use of critical learning methods that only emphasize students to understand the impact of implementing disaster mitigation procedures and do not consider other aspects. So it is hoped that further research can use more complex cases to provide a comprehensive picture. The study results have implications for the development of audit learning methods that emphasize critical thinking efforts about risk mitigation that can increase students' understanding of professional skepticism.

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## **REFERENCES**

- Asare, S. K., & Cianci, A. M. (2009). The effect of goals on auditors' judgments and their perceptions of and conformity to other auditors' judgments. *Managerial Auditing Journal*, 24(8), 724–742. <https://doi.org/10.1108/02686900910986385>
- Asare, S. K., & Messier, W. F. (1991). A Review of Audit Research Using the Belief-Adjustment Model, (1990).
- Ashton, A. H., & Ashton, R. H. (1988). Sequential Belief Revision in Auditing. *Accounting Review*, 63(4), 623. <https://doi.org/10.2307/247903>
- Bamber, E. M., Ramsay, R. J., & Tubbs, R. M. (1997). BELIEF-ADJUSTMENT MODEL AND ALTERNATIVE ATTITUDES TO EVIDENCE IN AUDITING, C, 249–268.
- Brown, C. E., & Solomon, I. (1991). Configural information processing in auditing: The role of domain-specific knowledge. *The Accounting Review*, 66(1), 100. Retrieved from <http://www.jstor.org/stable/pdfplus/247708.pdf?&acceptTC=true&jpdConfirm=true%5Cnhttp://www.jstor.org/stable/247708%5Cnhttp://www.jstor.org.www2.lib.ku.edu:2048/stable/pdfplus/247708.pdf>
- Chiang, C. (2016). Conceptualising the linkage between professional scepticism and auditor independence. *Pacific Accounting Review*, 28(2), 180–200.

- <https://doi.org/10.1108/PAR-08-2015-0034>
- Fay, R., Jenkins, J. G., & Popova, V. (2015). Effects of awareness of prior-year testing strategies and engagement risk on audit decisions. *Managerial Auditing Journal*, 30(3), 226–243. <https://doi.org/10.1108/MAJ-04-2013-0845>
- Fernando, L., & Meneses, S. (2020). Critical thinking perspectives across contexts and curricula : Dominant , neglected , and complementing dimensions. *Thinking Skills and Creativity*, 35(November 2019), 100610. <https://doi.org/10.1016/j.tsc.2019.100610>
- Forawi, S. A. (2016). Standard-based science education and critical thinking. *Thinking Skills and Creativity*, 20, 52–62. <https://doi.org/10.1016/j.tsc.2016.02.005>
- Hajhosseiny, M. (2012). The Effect of Dialogic Teaching on Students’ Critical Thinking Disposition. *Procedia - Social and Behavioral Sciences*, 69(Iceepsy), 1358–1368. <https://doi.org/10.1016/j.sbspro.2012.12.073>
- Hung, Y. S., & Cheng, Y. C. (2018). The impact of information complexity on audit failures from corporate fraud: Individual auditor level analysis. *Asia Pacific Management Review*, 23(2), 72–85. <https://doi.org/10.1016/j.apmr.2017.09.002>
- Isa200. (2012). International Standard on Auditing 200. *Handbook of International Quality Control, Auditing Review, Other Assurance, and Related Services Pronouncements*, 72–100. Retrieved from [http://www.ifac.org/sites/default/files/publications/files/2012 IAASB Handbook Part I\\_Web.pdf](http://www.ifac.org/sites/default/files/publications/files/2012 IAASB Handbook Part I_Web.pdf)
- Johnstone, K. M., & Bedard, J. C. (2003). Risk management in client acceptance decisions. *The Accounting Review*, 78(4), 1003–1025. <https://doi.org/10.2308/accr.2003.78.4.1003>
- Kaciuba, G. (2012). An instructional assignment for student engagement in auditing class: Student movies and the AICPA Core Competency Framework. *Journal of Accounting Education*, 30(2), 248–266. <https://doi.org/10.1016/j.jaccedu.2012.08.003>
- Kern, B. B. (2001). Structuring financial statement analysis projects to enhance critical thinking skills development. *Journal of Accounting Education*, 18(4), 341–353. [https://doi.org/10.1016/S0748-5751\(01\)00005-7](https://doi.org/10.1016/S0748-5751(01)00005-7)
- Kim, S. L., Teo, T. S. H., & Bhattacharjee, A. (2017). IS auditor characteristics , audit process variables , and IS audit satisfaction : An empirical study in South Korea. *Information Systems Frontiers*, 577–591. <https://doi.org/10.1007/s10796-015-9612-z>
- Kleinman, G., Palmon, D., & Yoon, K. (2014). The Relationship of Cognitive Effort , Information Acquisition Preferences and Risk to Simulated Auditor – Client Negotiation Outcomes, 1319–1342. <https://doi.org/10.1007/s10726-013-9371-5>
- Knechel, W. R. (2007). The business risk audit: Origins, obstacles and opportunities. *Accounting, Organizations and Society*, 32(4–5), 383–408. <https://doi.org/10.1016/j.aos.2006.09.005>
- Manita, R., Elommal, N., Baudier, P., & Hikkerova, L. (2020). Technological Forecasting & Social Change The digital transformation of external audit and its impact on corporate governance. *Technological Forecasting & Social Change*, 150(December 2018), 119751. <https://doi.org/10.1016/j.techfore.2019.119751>
- Merhout, J. W., & Havelka, D. (2008). Information Technology Auditing : A Value-Added IT Governance Partnership between IT Management and Audit, 23. <https://doi.org/10.17705/1CAIS.02326>
- Moorthy, M. K., & Seetharaman, A. (2011). The impact of information technology on internal auditing, (January). <https://doi.org/10.5897/AJBM10.1047>
- Nelson, I. T., Ratliff, R. L., Steinhoff, G., & Mitchell, G. J. (2003). Teaching logic to auditing students: Can training in logic reduce audit judgment errors? *Journal of Accounting Education*, 21(3), 215–237. [https://doi.org/10.1016/S0748-5751\(03\)00027-7](https://doi.org/10.1016/S0748-5751(03)00027-7)

- Nolder, C. J., & Kadous, K. (2018). Accounting , Organizations and Society Grounding the professional skepticism construct in mindset and attitude theory : A way forward ☆. *Accounting, Organizations and Society*, 67(December 2014), 1–14.  
<https://doi.org/10.1016/j.aos.2018.03.010>
- Paul, R. W. (1990). Critical Thinking : What Every Person Needs to Survive in a Rapidly Changing World.
- Peytcheva, M. (2013). Professional skepticism and auditor cognitive performance in a hypothesis-testing task. *Managerial Auditing Journal*, 29(1), 27–49.  
<https://doi.org/10.1108/MAJ-04-2013-0852>
- Schultz, J. J., Bierstaker, J. L., & O'Donnell, E. (2010). Integrating business risk into auditor judgment about the risk of material misstatement: The influence of a strategic-systems-audit approach. *Accounting, Organizations and Society*, 35(2), 238–251.  
<https://doi.org/10.1016/j.aos.2009.07.006>
- Stanley, T., & Marsden, S. (2013). Accountancy capstone: Enhancing integration and professional identity. *Journal of Accounting Education*, 31(4), 363–382.  
<https://doi.org/10.1016/j.jaccedu.2013.08.002>
- Vigim, J. A., Apandi, R. N. N., Widarsono, A., Farida, I., Prawira, A., Indonesia, U. P., ... Java, W. (2020). HOW AUDITOR LIMITATION AND CORPORATE TAX GOVERNANCE EFFECT ON AUDIT QUALITY, 7(16), 432–440.
- Wright, W. F. (2016). Client business models, process business risks and the risk of material misstatement of revenue. *Accounting, Organizations and Society*, 48, 43–55.  
<https://doi.org/10.1016/j.aos.2015.11.005>