

The Comparability of Outcome Feedback Towards Experience on Internal Control Learning

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ABSTRACT

This study compares the judgment performance of inexperienced auditor who learns internal control audit assignment from outcome feedback review and experienced auditor on internal control audit assignment. The comparison is based on: (1) the previous studies having revealed that learning from experience generates expectation and perception that deteriorate the judgment accuracy of auditor and (2) different learning method that enhances the different level of the knowledge structure. Outcome feedback learning provides a review for the judgment performance of auditor and can improve the accuracy of inexperienced auditor's performance on internal control audit assignment. This study uses experimental method and survey, and then, the comparison both of subjects supports the advantage of outcome feedback learning method through different level of internal control knowledge structure. The result contributes to the important role of learning method that provides a review process in auditor's judgment to encourage the suitable knowledge structure of auditor to audit assignment requirement.

Key words: outcome feedback review, experienced and inexperienced auditor, internal control audit assignment, and experimental method.

1. INTRODUCTION

Learning from the previous assignment experiences does not always exactly generate optimum performance of auditor in current audit assignment. A previous audit assignment shapes the auditor's thinking framework, and it is realized on the perception or expectation forms (Abdolmohammadi and Wright, 1987; Tubbs, 1992; Choo and Trotman, 1991; Tan, 1995; Davis, 1996, Libby and Frederick, 1990; Lehman and Norman, 2006). As a result, the auditor's judgment on the current audit assignment is based on the auditor's perception or expectation, although the auditor faces the different environment and characteristic of audit assignment (Tan, 1995; Choo and Trotman, 1991, and Jeffrey, 1992). Auditor tends to focus on the evidence which is perceived supporting the auditor's perception (Chung and Monre, 2000). An auditor who uses the last year working paper is a concrete example of the application of an auditor's perception or expectation on the current audit assignment (Tan, 1995). As an additional, the consistency of auditors to their expectation and perception raises the skeptical behavior in getting evidence (Chung and Monroe, 2000; Moeckel, 1990). Thus, the

experience does not necessarily improve the judgment accuracy of auditors (Libby and Luft, 1993), because the auditor's belief, perception, and expectation that formed from the prior experience have negative effects on the auditor's performance, e.g. Pincus (1991), Robert and Ashton (1993), Kadous (1996), Davis (1996), Chung and Monroe (2000), Earley (2002), and Newell and Rakow (2007).

Bonner and Walker (1994) state that experience does not have the review process, such as there is no information about the correct judgment of auditor or the information about why this judgment is correct/incorrect, after auditor performs audit assignment. Therefore, Bonner and Walker (1994) reveal that procedural knowledge of auditor does not enhance improvement from experience. Bonner and Walker (1994) also state that although procedural knowledge will be acquired as long as a professional auditor. However, this knowledge could be acquired through appropriate learning method, such as instruction or feedback. Hirst et al. (1999) and Bakken (2008) state that feedback has important role to shape the memory of decision maker, because a review process implies an opportunity to learn continuously until auditor's memory match for audit assignment requirement. The empirical evidence of Borthick et al. (2006) also reveals that auditor must have the suitability to the audit assignment requirements in enhancing the optimum judgment accuracy of auditor. The suitability can only be enhanced from the training that improves the auditor's knowledge structure.

According to the negative effect of expectation or perception, auditor needs learning method that has a review process, such as outcome feedback, for auditor's judgment improvement. The review process provides the backward looking of auditor's performance after doing a judgment. It implies that the outcome feedback review encourages learning for auditor to enhance the suitable auditor's knowledge structure to an audit assignment requirement. The outcome feedback learning method is a kind of learning by doing. Therefore individual receives outcome feedback after doing assignment practice (Bonner and Walker, 1994). The study of Bonner and Walker (1994) is based on learning theory stating that procedural knowledge can be acquired through some practice. Earley (2003) reveals that outcome feedback method could increase a novice auditor in reasoning of real estate valuation. It means that if the judgment of inexperienced auditor will be reviewed through outcome feedback, it will enhance suitability to the audit assignment requirements in enhancing the optimum judgment accuracy of auditor.

This suitability of the inexperienced auditor knowledge structure also implies that inexperienced auditor will enhance more accurate judgment than the experienced auditor's judgment performance. The learning from outcome feedback review method can shape the memory of inexperienced auditor as suitable as audit assignment requirement. Contrast with experienced auditor, the auditor's expectation or perception implementation from prior assignment could not be eliminated or reduced on auditor's current assignment judgment.

According to the reasoning, the aim of this study is to compare the judgment accuracy among inexperienced auditors who learn an internal control audit assignment from outcome feedback review and experienced auditors in the internal control audit assignment. The result of learning in both outcome feedback review and experience is showed in the level of auditor's knowledge structure on internal control, because the most effective learning method is the method that encourages the highest level of suitability in internal control audit assignment requirement. This study uses the knowledge structure of internal control audit assignment as a measurement in both of

learning methods because the assignment has an important role in determining the nature, timing and extent of substantive tests in financial statement assertions (IAPI, 2011). In fact, auditors have obligation to review internal control of their client as it is declared in section 404 Sarbanes Oxley Act (U.S. Congress, 2002).

This study uses experimental and survey methods in which the experimental method is aimed to reveal the learning effect of outcome feedback review in inexperienced auditors' performance on the internal control audit assignment and the survey methods are aimed to measure the experienced auditors' performance on internal control audit assignment. The test reveals that the inexperienced auditors who receive outcome feedback review have performance significantly higher than the experienced auditor on internal control audit assignment. The achievement of higher performance is an effect of review that enhances the suitable knowledge structures on the internal control audit assignment requirement.

This result extends the finding of Borthick et al. (2006) stating that the auditor's knowledge structure has an important role on the auditor's judgment performance. The higher suitable knowledge structure to audit assignment requirement will encourage the higher judgment accuracy in that audit assignment. For broad scope, learning method has important role in formulation of auditor judgment performance, because how knowledge acquisition could not be separated from effort to enhance the effectiveness performance achievement. The second contribution of this research is as the additional empirical evidence of the role of the learning theory in which outcome feedback review can improve the knowledge structure of inexperienced auditor on internal control audit assignment, as it is stated in empirical evidence of Bonner and Walker (1994), Hirst and Lockett (1992), and Earley (2001 and 2003). The comparison of the experiment and survey methods results in this study is the third contribution, because the comparison will increase external validity of the experiment method result. Based on statistic testing, the outcome feedback review is more effective learning method than experience, so it implies that outcome feedback review can be considered as learning method for a novice of auditors to enhance same level performance as their senior.

The following description is divided into four sections: literatures review and hypotheses development, research methods, result, and conclusions. The literatures review and hypotheses development section will detail the feedback learning and some arguments of the effect of outcome feedback and experience learning in knowledge and performance acquisition. The research method contains the description of experiment and survey phases. The description of the result starts form the characteristic of the subject, descriptive statistic, and concludes hypothesis testing. The description in this study ends with the conclusion about the implications of the test results as well as limitations and future research opportunities.

2. LITERATURE REVIEW AND HYPHOTESIS DEVELOPMENT

2.1. Outcome Feedback Review as Learning Method

Learning is defined as an increasing ability of individual that is relatively permanent as an output of an assignment (Shuell, 1986; Russo, 2006). The ability will be shown by the well organizing of knowledge, so that the auditor has the easiness in searching and analyzing the knowledge as well as ability in accessing to the content of knowledge (Russo, 2006). According to Russo (2006), learning type is also categorized as cognitive ability oriented learning. Ho and Rodgers (1993) also state that cognitive abilities will

be demonstrated by the ability to solve problems on audit assignment through how an individual to acquire, storage, search, and transform information. More explicit, the learning definition proposed by Bédard (1989) is that learning is indicated by the increasing conformity between the auditor's knowledge and the audit assignment requirement, because knowledge is the information that is stored and organized in memory in fulfilling the assignment objective (Akbar, 2003).

The learning oriented to suitability, as expressed by Bédard (1989), is very urgent for increasing auditor's judgment accuracy, because the judgment accuracy of individual depends on the fit between the mental models of decision maker and the criteria of events that would be predicted by the decision maker (Hogarth, 1980). The individual's mental model implies the possession of information or clues from the event environment by individual as base of predicted event (Hogarth, 1980). Therefore, the suitability of the auditor's knowledge as well as assignment requirement will determine the performance or accuracy of the auditor's judgment (Hirst et al., 1999). Borthick et al. (2006) reveal that the appropriateness acquisition of knowledge structure by auditor with an assignment knowledge structure requirement will improve the performance of the auditor.

This study uses outcome feedback review as a learning method for internal control audit assignment. In general, feedback provides a review for the auditor's judgment that is given after carrying out an audit practice or training assignment (Bonner and Walker, 1994; Hirst and Lockett, 1992). Feedback can be categorized as structured learning, because the auditor would carry out each stage of the learning process according to the review of feedback. If the auditor's judgment refers to the feedback, it is possible that the auditor has knowledge structure in accordance with the requirements of the audit assignment. In other words, the learning is designed in accordance with the structure and characteristics of the audit assignment requirement that will be performed by the auditor.

Bédard (1989) and Gibbins (1984) claim that the audit assignment is accompanied by feedback review equivalent to formal education and training in the acquisition of knowledge. Bonner and Walker (1994) also reveal that the feedback can be used to enhance the procedural knowledge of inexperienced auditor, although such knowledge should only be obtained as professional auditor. Rose (2005) and Wright (2007) also support the previous evidence that the performance of inexperienced auditors can be enhanced through learning by decision-aided methods, such as feedback.

In general, previous studies have revealed that the feedback review can be used as means of learning, such as: Bonner and Walker (1994), Hirst and Lockett (1992), Arunachalam and Daly (1996), and Leung and Trotman (2005 and 2008). The use of feedback review in learning is based on learning theory in which the acquisition of procedural knowledge can be achieved through learning by doing (Bonner and Walker, 1994). The learning by doing method includes giving feedback review after training or practice assignment. Bonner and Walker (1994) reveal that the auditor can learn about how to carry out audit assignments through feedback review or auditor learns to integrate the clues from feedback review (Leung and Trotman, 2005). As a consequence, the feedback review can reduce the incidence of auditor cognitive gap with the criteria events that would be predicted (Hirst and Lockett, 1992; Arunachalam and Daly, 1996), so that process of auditor's judgment is more effective (Leung and Trotman, 2008).

Moreover, the feedback review can be used to redesign the memory of decision maker, when the memory of the previous assignment is not in accordance with the current assignment (Bakken, 2008). Auditor learns to make judgment through training assignments and feedback review (Libby, 1993). The review from a feedback will improve auditor's reasoning (Shuell, 1986; Bédard, 1989; Earley, 2001 and 2003). Hirst et al. (1999) also state that continuous learning opportunities of feedback review would improve the accuracy of auditor's memory through the auditor's judgment in accordance with the requirements of assignment. Learning opportunities will increase the knowledge of auditor as indicated by the suitability or conformity of auditor cognitive with audit assignment (Hirst and Lockett, 1992) and it will encourage the higher judgment accuracy (Earley, 2001 and 2003; Hirst et al., 1999).

2.2. The Knowledge Acquisition of Experience and Outcome Feedback Learning

Experience, in the narrow scope, is the implementation of practice, and, in a broad scope, is a learning opportunity (Libby, 1993:179-180). The definition explicitly states that the execution of the assignment practice can improve the ability of the individual. Furthermore, according to Libby and Luft (1993), the continuous execution to an assignment affects positively on auditor's opportunity to accumulate his or her knowledge, because the assignment which is repeated over and over is also an opportunity to access the knowledge content continuously (Hirst et al., 1999). Access repeatedly indicates repetitive decision-making, so the auditor has an opportunity to learn in improving audit quality or performance (Shoosmuangpak, 2007; Hirst et al., 1999). Thus, knowledge of internal control audit can be obtained by auditor through experience, since the implementation of the assignment practice by the auditor indicates learning opportunities.

Instead of learning through experience, auditor can also use outcome feedback review as a learning method of internal control audit assignment. Outcome feedback review contains review about the correct answer of judgment or decision (Bonner and Walker, 1994). Previous studies state that the outcome feedback review is appropriate and adequate to learn internal control assignment, because the audit assignment has a high prediction ability which refers to the availability of information to solve the problems (Earley, 2003; Hirst and Lockett, 1992; Hirst et al., 1999). The review in the form of outcome, as well as outcomes feedback, is categorized as a simple learning, but the learning method does not cause auditor to be bored of information overload (Bonner and Walker, 1994).

If an auditor does not have prior experience in internal control assignment, it means that the auditor does not have memory about the assignment. It implies that the knowledge structure of auditor is not in accordance with the internal control requirements. Therefore, the provision of outcome feedback to inexperienced auditors is to shape mental model in accordance with the internal control assignment requirement because auditor receives a review after practice or training of internal control audit assignment. Bakken (2008) also states that the feedback shapes the memory of decision maker, if the previous assignment of decision maker does not encourage the appropriate memory assignment. It means that outcome feedback review will decrease the cognitive gap of inexperienced auditors with the internal control audit assignment requirements.

In general, the goal of learning through experience or outcome feedback review is to gain knowledge structure. In the context of this study, the learning aims to gain the knowledge structure of internal control audit assignment. Experience refers to the

implementation of the repetitive internal control audit engagement practice, while outcome feedback review refers to the receiving review in correct answer after the accomplishment of the internal control audit assignment. The argument implies that the two methods should produce the same level of knowledge structure in internal control assignment.

Nevertheless, Bonner and Walker (1994) state that the experience is not the optimum method for learning, because the auditor's judgment is not reviewed after the assignment practice. Bonner and Walker (1994) also state that the outcome feedback method is more effective than learning from experience. First, inexperienced auditors can review their own judgment without senior suggestion who has possibility of using expectation or perception from prior experience and who also has limited time and types of experience (Earley, 2001). Second, the outcome feedback review encourages auditor to get the clues intensively compared to the experience from previous assignment that increase auditor's confidence through skeptical behavior (Tuttle and Stocks, 1997). Based on that argument, the research hypothesis is stated as follows:

H1: Learning from experience generates lower level of knowledge on internal control audit assignment rather than the learning from outcomes feedback review.

2.3. The Auditor Performance of Experience and Outcome Feedback Learning

Recently, auditor performance model emphasizes on knowledge as an antecedent of performance, such as Libby (1993), Bonner and Lewis (1990), Libby and Tan (1994), because the memory is formed from the experience of previous assignments leading to inaccurate judgments (Libby, 1993). Tuttle and Stocks (1997) also state that the decision process that is based on the previous experience assignment will have negative effect to performance of the auditor's judgment. According to Bonner and Lewis (1990) and Libby and Luft (1993), an experienced auditor's performance is not always superior, as Bonner and Lewis (1990) have revealed that the performance of managers and senior auditors are not always higher than that of the students. Moreover, Bonner and Walker (1994) reveal that the performance of students in analyzing of manipulation is higher than the managers. The empirical evidence of Davis (1996) also states that the accuracy level between experienced auditors and inexperienced auditors do not differ significantly on the internal control audit assignment.

Moeckel (1990) argues that the experience from previous assignments will increase auditor's confidence in carrying out the current assignment. As a consequence, auditor only gathers information or clues perceived support his belief or suspicion that is built from the previous assignment (Pincus, 1991; Chung and Monroe, 2000; Kadous, 1996; Robert and Ashton, 1993; Davis, 1996; Tan, 1995; Newell and Rakow, 2007; Jeffrey, 1992; Earley, 2002; Butt, 1988; Arunachalam and Daly, 1996). In other words, the judgment is formed based on the auditor's perception or bounded rationality (Moeckel, 1990; Andersen and Malletta, 1994), so auditors act skeptically and do not optimally apply strategies in gathering instructions and information (Moeckel, 1990). Another consequence of the conviction is inaccuracy and negligence in selecting information (Andersen and Malletta, 1994). Abdolmohammadi and Wright (1987) also reveal that experienced auditor tends to be less conservative than inexperienced auditor, so the experienced auditor predicts the mean error lower than inexperienced auditor.

In contrast to the experience learning, the outcomes feedback review will shape knowledge structure inexperienced auditors as suitable as internal control assignment requirement. The inexperienced auditor judgment could be traced backward through the answer or information in outcome feedback. It implies that inexperienced auditor learns to make accurate judgment based on information in outcome feedback. As consequence, the higher suitability of knowledge structure will improve the performance of auditor in performing internal control assignment.

When referring to the results of previous studies on the role of outcome feedback in improving auditor's critical reasoning, it is possible that the performance of inexperienced auditors who receive outcome feedback review is higher than experienced auditors. Learning from experience is not as optimal as learning from outcome feedback, because the auditor does not receive review after internal control audit assignment practice. The absence of a mental model in learning leads to a lack of experienced auditors in accordance with the requirements of internal control assignment. These conditions contrast with inexperienced auditor who receives outcome feedback review, because the learning of outcome feedback shapes auditor's knowledge structure accordant with knowledge structure that is required in the internal control audit assignment. Based on that argument, research hypotheses is set as follows:

H2: Knowledge from the learning of experience generates the lower level of performance on internal control audit assignment rather than the performance level of knowledge from the learning of outcome feedback review.

3. RESEARCH DESIGN

3.1. Subject Characteristic in Experiment and Survey

This study applies two methods to acquire knowledge structure and performance in internal control audit assignment: experimental and survey. The experiment involves students as the experimental subjects and is conducted in two private universities in Yogyakarta Province. Students as subjects have pass in auditing and accounting information system course. In contrast, the survey involves experienced auditors and there is no specific requirement for an experienced auditor, because previous studies have revealed that knowledge of internal control audit assignment can be obtained at least the first three years as a professional auditor (Libby and Tan, 1994; Chung and Monroe, 2000).

The students are the surrogate for inexperienced auditors, because the subjects do not have the experience of the internal control audit assignment. According to Bonner and Walker (1994), the auditor should have a declarative knowledge, such as knowledge about accounts in the balance sheet, before carrying out audit assignments and such knowledge can only be acquired from formal education. Thus, the student has qualification as an inexperienced auditor, both in terms of formal education and experience. The involvement of students is voluntary, but each subject has the same opportunity to get a financial reward as their score in the experiment. It means that the award is not a treatment, because the award aims to motivate and to reduce the threat of mortality during the experiment. Each participant signs a statement as a declaration that his/ her involvement in the experiment is voluntary.

The aim of this experiment is to measure the level of knowledge structure and performance of subjects as inexperienced auditor on internal control audit assignment

that are achieved from learning of outcome feedback review. Therefore, subjects are divided into two treatment groups: one group does not receive outcome feedback (no feedback group) and another group receives outcomes feedback after implementing internal control audit assignment practice. The experimental subjects who do not receive outcome feedback treatment are a control group, so, this group will receive a story that must be read at the same time. The story does not acquire complex cognitive, so the assignment will not influence the performance for next assignment for control group.

The aim of survey is to measure the knowledge structure and performance level of experienced auditor in internal control audit assignment. The involvement of experienced auditors in this survey is voluntary. Researchers meet the respondents one by one in her or his audit firm and the respondents perform task as inexperienced auditor in experiment. Actually, researchers send a preliminary letter to audit firm and then confirm the availability of respondents in each of audit firm. The survey conducts in an audit firm that has head office in one of three provinces; Yogyakarta, Semarang, and Surabaya. The reason in choosing of the provinces is about the easiness in accessing to those provinces for the researchers.

3.2. Experimental Design and Procedures

According to the research hypothesis, this study compares the knowledge structure and performance level between the experimental subject and survey respondent. The comparison is intended to reveal the optimal learning method between experiences and outcomes feedback review. The comparison will show which is the learning method encourage the highest suitability between subject's knowledge structure and internal control assignment requirement.

The experimental subjects will carry out four assignments, i.e. (1) assignment practice or performance before learning (1st), (2) learning from outcome feedback (2nd), (3) knowledge structure measurement (3rd), and (4) performance after learning (4th). Thus, the knowledge structure and performance measurement will be performed after learning. Each of assignment comprises 5 questions in the form of multiple-choice questions that are carried out within 10 minutes. However, the subjects of survey only carry two assignments that are used to measure their knowledge structure and performance of internal control assignment. The two assignments for experienced auditor are as many as the third and fourth assignment for inexperienced auditors. Because inexperienced auditors receive treatment, so participants of experiment receive a questionnaire as manipulation check after completion of the second assignment. It means that experienced auditors do not receive manipulation check because of no treatment during survey.

At the end of the experiment, the participants of experiment fill out the demographics: the grade of auditing and cumulative grade point academic (GPA). The demographic data used to control the experimental subjects who receive outcome feedback have same ability with the experimental subjects who do not receive feedback or control group. Libby and Tan (1994) state that ability has effect to knowledge structure acquisition and judgment performance. Therefore, both groups of treatment in experiment have to same level ability. If both groups enhance different level of knowledge structure and performance, it means that the difference is caused by learning treatment.

According to important same level of ability, as first assignment in this study, it also compares the performance between both groups of treatment in internal control

audit assignment before receiving learning treatment. The first assignment in this experiment is also as a surrogate for experience on internal control assignment. Bonner and Walker (1994) use assignment practice as surrogate for experience. Then, in second assignment, subjects receive treatment; no feedback or outcome feedback. After receiving treatment, both of groups will answer manipulation check and then they will be measured their knowledge structure (3rd) and performance on internal control (4th). The effect of learning for inexperienced auditor is based on comparison between treatment and control group of experiment. According to hypothesis, this study compares the knowledge structure and performance achievement between subjects who learn internal control audit assignment from outcomes feedback review and subjects who learn internal control audit assignment from experience. Subjects who achieve higher knowledge structure will enhance the higher performance in internal control audit assignment.

Each experimental participant receives an envelope containing four assignments, one empty envelope that will be used to store the finished assignments, and stationery. Grouping of subjects into treatment group is random, so it does not consider the seat order of participants. The code of group treatment is listed on each assignment and it does not communicate to participants. Thus, participants do not aware of any difference in treatment in the experiment. To increase apprehensive experimental subject, this research changes the order of number or answer in forth assignment. It avoids subjects to implement same answer as second assignment. Implementation of same answer can indicate that the subjects feel bored or no objective sound in experiment involvement, such as following friend idea. The changing order number completes other apprehensive detection such as manipulation check after receiving feedback treatment and voluntary involvement. All of the assignments on the experiment or survey use paper based. Therefore, especially this experiment involves assistants in distributing and collecting the assignments. However, researchers lead the experiments and convey every assignment. The assistants are given the experimental scenario as guidance in performing their duties. Researchers set out some rules for assistant about recruitment and experiments performance.

Instruments on the internal control audit assignment for experiment and survey refer to Romney and Steinbart (2000) and Boockholdt JL (1999). The internal control audit assignment in this study uses a credit purchases system and cash disbursements system for credit settlement, because this assignment is the most complex cycle than other cycles in manufacturing company. The case of internal control uses a hypothetical company, so this study performs a set of focused group discussion with experienced auditors to ensure that treatment accordance with the real case in company. More specific, the aim of discussion is to design the knowledge structure level measurement and performance level measurement on internal control audit assignment. The reliability of knowledge structure level measurement determines the reliability of performance level measurement. Therefore, this discussion is to ensure that performance on internal control caused by the possession of appropriate knowledge structure.

Before the instrument is used in the actual experiments, the researcher also performs a set of pilot test that involves experienced auditors who have experience less than 3 years and students. The aim of pilot test that involves experienced auditors is to ensure that the case accordance to cognitive level of auditors who have experience in first three years as professional auditor. Then, the pilot test that involves students is to

ensure that the students as experimental subject understand the case because the subjects have not yet experienced about the case.

Feedback as a treatment consists of outcome feedback and without feedback. Both of feedback treatments are given to the subjects after carrying out training assignment (second phase). Outcome feedback provides information or correct answers of questions on internal control training assignment. The group that does not receive outcome feedback or the control group receives short stories as substitute of outcome feedback review.

Knowledge structure of internal control audit assignment is the dependent variable that is measured on the 3rd assignment for experimental subject or on 1st assignment for survey subject. Measuring the level of knowledge structure is based on the number of correct answers of 5 multiple choice questions with allocated time of 10 minutes. The highest achievement of internal control knowledge indicates the understanding of possible threat of inappropriate the credit purchase system and cash disbursement system application. It also indicates that subject achieves highest knowledge structure of internal control assignment from learning; outcome feedback review or experience.

Performance as the dependent variable is measured from the level of accuracy in the internal control assignment on the 4th assignment for experimental subject or on the 2nd assignment for survey subject. In this assignment, subjects answer 5 multiple choice questions and the maximum of allocated time of 10 minutes. The accuracy level is measured by the number of correct answers. Measurement of internal control assignment performance is related to the participants' ability to predict the likelihood of misstatements in the financial statements as the effect of the implementation of internal control systems on credit purchase and cash disbursement system.

4. RESULTS

4.1. Subject Demographic Data and Results Manipulation Checks

The experiments in this study are followed by 46 participants with details: as many as 23 participants with no outcome feedback treatment and 23 participants receiving outcome feedback treatment (see table 4.1.). The each of group member is assigning randomly through distributing closed envelope to the experimental subjects, so the subjects do not have information about treatment or group. The random method will eliminate the group of students who have same friend or relationship preference that has possibility to influence group treatment achievement. Both groups perform the internal control audit assignment and t-test is performed on the demographic data to ensure that the only treatment causes the differences in the knowledge structure acquisition and the performance achievement on internal control audit assignment.

According to the demographic data, the mean of auditing grade is not significantly different (sig. 0.32) between the two treatment groups (see table 4.1.). The mean of auditing grade of the no outcome feedback participants is 1.78, whereas the mean of auditing grade of the outcome feedback participants is 1.43. Similarly, for the GPA, the mean of the both groups are also not significantly different (sig. 0.532). The mean of GPA of the participants who did not receive outcome feedback is 2.30, while the mean of GPA of the participants who received outcome feedback treatment is 2.15. Based on the test of demographic data, the difference in the knowledge acquisition and the performance achievement on internal control audit assignments between the two treatment groups is completely affected by treatment.

Tabel 4.1.: Demographic Data of The Eksperiment Participants

The Assignment	The Group of Treatment	Number of Participants	Auditing Grade Mean (DS)	GPA Mean (DS)
Internal Control	No Outcome Feedback Treatment	23	1.78 (1.313)	2.30 (0.794)
	Outcome Feedback Treatment	23	1.43 (0.992)	2.15 (0.845)

Note: DS = Deviation Standard, GPA = Grade Point Average

This study also conducts manipulation checks to ensure that the participants understand the assignment and the treatment. The manipulation check consists of two questions with multiple choices to be answered. The first question asks about what audit assignments is carried out by participants, while the second question asks about what reading that is received by participants on 2nd assignment. All experimental subjects pass the manipulation checks, and no participants are eliminated from the experiment. .

The research survey is conducted to experienced auditors in KAP (Indonesian public accounting firm) of Yogyakarta, Surabaya, and Semarang Province and they are not big 4 KAP. The auditor has been experienced for at least 3 years. There are 16 experienced auditors who are willing to answer questions on the survey and each of auditor represents each of KAP. As subjects of the experiment, experienced auditors also answered 5 multiple choice questions about the maximum time of 10 minutes for each assignment. The assignments are for measuring knowledge and performance of the internal control audit assignment. The experienced auditors perform the same questions as experimental subjects, so knowledge structure and performance achievement in internal control audit assignment between both experience levels could be compared as hypothesis testing.

4.2. Descriptive Statistic

The participant subjects who do not receive feedback have mean 1.83 (standard deviation = 1.267) of performance before learning on internal control assignment. The participant subjects who receive outcome feedback have mean 2.48 (deviation standard = 0.898) of performance before learning on internal control assignment (see table 4.2.). After learning, the subjects without feedback have mean 2.83 (deviation standard = 1.435) of internal control knowledge, whereas the treatment group that received outcome feedback have mean 4.74 (deviation standard = 0.449) of internal control knowledge. The performance achievement mean after learning of the subjects without outcome feedback is 2.04 (deviation standard = 1.261). The performance achievement mean of the subjects who receive outcomes feedback treatment is 4.57 (standard deviation = 0.662). Based on the data, participants who receive outcome feedback achieve higher performance before learning, higher knowledge structure after learning, and higher performance after learning in internal control audit assignment rather than participants who do not receive feedback or control group. However, according to the effect of treatment, the achievement of both groups should be compared by statistic testing (t-test).

Experienced auditors only perform two assignments that measure internal control knowledge (phase 1) and internal control audit performance (phase 2).

Experienced auditors do not receive outcome feedback treatment because they learn internal control assignment through experience. It means that measurement of knowledge is to reveal the knowledge structure level of experienced auditors with experience learning, while performance measurement is intended to express the performance levels that affected by knowledge structure. The knowledge structure and performance data of experienced auditors is conducted with survey methods, therefore, researcher came to the auditors one by one in performing the internal control assignment. Experienced auditors have mean 2.44 (deviation standard = 0.269) for knowledge structure level of internal control, whereas the mean performance on the internal control audit engagement is 2.38 (deviation standard = 1.668 (see table 4.2.)). According to the hypothesis, the achievement of experienced auditors should be compared to the achievement of experimental subjects who receive outcome feedback as learning method in internal control audit assignment.

Table 4.2.: The Mean of Knowledge and Performance

Treatments		Performance before Learning ^a	Internal Control Knowledge ^b	Performance after Learning ^c
Experimental Subjects Without Feedback	Mean (Deviation Standard)	1.83 (1.267)	2.83 (1.436)	2.04 (1.261)
Experimental Subjects With Outcome Feedback	Mean (Deviation Standard)	2.48 (0.898)	4.74 (0.449)	4.57 (0.662)
Experienced Auditor	Mean (Deviation Standard)	====	2.44 (0.629)	2.38 (1.66)

Description:

- The performance before learning is subjects who carry out practices internal control audit assignment (first phase). The assignment is completed, the subject receives outcome feedback treatment (second phase). The second phase is a method of learning by doing (Bonner and Walker, 1994).
- The scores measure the level of knowledge structure of subjects after learning treatment (third phase) or the knowledge structure of experienced auditor on first assignment.
- The performance score (fourth phase) is reexamination of performance such as first assignment for experimental subject, but the performance level of experienced auditors is the second assignment.

4.3. The Result of Hypothesis Testing

T-test is conducted on the performance of experimental subjects before receiving treatment between the experimental subjects who do not receive outcome feedback and the experimental subjects who receive outcome feedback treatment. The test is to ensure that both treatment groups have the same ability to carry out the internal control assignment. The test shows that the both treatment groups do not have performance mean that is significantly different ($\text{sig} = 0.051$) on the internal control audit engagement before learning (see table 4.3.). Thus, if there are differences in knowledge and performance of the two groups after learning, they are caused by outcome feedback learning. Furthermore, the group who receives outcome feedback treatment will be compared to the experienced auditor for their achievement of knowledge and performance. The aim of comparison is to test hypothesis.

Table 4.3.: The T-Test between The Treatment Groups of Experiment

		Without Feedback - Outcome Feedback
Performance Before Learning	Mean Different	-0.652
	Sig.	0.051
Knowledge Structure	Mean Different	-0.931
	Sig.	0.00***
Performance After Learning	Mean Different	-2.522
	Sig	0.00***

Note: ***) significant level < 1%

Next t-test is to compare the knowledge structure and performance on internal control assignment between experimental subjects who receive outcome feedback treatment and experienced auditors. The aim of the comparison is to reveal whether learning on internal control audit engagement through outcomes feedback review is more optimal than learning form experience. The test states that the mean difference of knowledge structure between both of groups is 2.302 and it is significant (sig = 0.00) (see table 4.4.). Thus the first hypothesis is supported by the test result that the learning from experience generates lower level of knowledge structure rather than the learning from outcomes feedback review on internal control assignment.

The second hypothesis implies that higher knowledge structure on internal control assignment achieves higher performance on that assignment. Therefore, this study compares between the performance level on internal control audit assignment that is achieved from experience learning and the performance level on that assignment that is achieved from the learning of outcome feedback review. Because experience increases expectation and perception that has negative affect to the judgment accuracy of auditors, the learning form experience enhances the lower level of performance on the internal control audit assignment rather than the learning from outcome feedback review.

According to the hypothesis, t-test is conducted between the performance achievement of the subjects who receive outcome feedback treatment and experienced auditors on internal control audit assignment. The test reveals that the mean of group who receive outcome feedback learning is significantly (sig = 0.00) higher (mean difference = 2.190) than the mean of experienced auditors on internal control audit engagement (see table 4.4.). Thus, hypothesis 2 is supported, so this result indicates that the learning from outcomes feedback review encourage knowledge structure acquisition is more optimal than learning from experience.

Table 4.4.: The Comparison of Knowledge and Performance among Auditors

		^a Subject with Outcome Feedback - ^b Experienced Auditor
Knowledge Structure	Mean Different ^c	2.302
	Sig.	0.00***
Performance	Mean Different ^c	2.190
	Sig	0.00***

Note: ***) significant level < 1%

- a. The knowledge and performance of the participants who receive outcome feedback
- b. The knowledge and performance of experienced auditors from the survey
- c. Mean different shows the mean of the participants who receive outcome feedback minus the mean of the experienced auditors

Although it is not hypothesized, the t-test of knowledge structure and performance on internal control assignment between the two treatment groups on the experiment state that the mean of knowledge structure of group who receives the outcome feedback significantly (sig = 0.00) higher (mean different = 0.931) than the mean of knowledge structure of the group who does not receive outcome feedback (see table 4.3.). Similarly, the performance of group who receives outcome feedback is also significantly (sig = 0.00) higher (mean different = 2.522) than the mean of performance of group who does not receive outcome feedback treatment. This result confirms the previous studies giving inexperienced auditor a review process will improve inexperienced auditor through higher suitability between the auditor's knowledge structure and audit assignment requirement.

This study also conducts a simple regression between knowledge structure and performance to reveal whether the higher knowledge structure acquisitions achieve the higher performance achievement on the internal control audit assignment. The regression test results that the knowledge structure has significant positive effect (sig = 0.00 and coef. 0.448) on performance (see table 4.5.). Thus, the increasing on knowledge structure acquisition affects on improving the performance on internal control audit assignment. The result implies that outcome feedback review will decrease the negative effect of experience that is shown on the optimum of performance achievement as the result of optimum knowledge structure acquisition. As statement of Borthick et al. (2006) that training method determines knowledge structure acquisition.

Table: 4.5.: Regression Result of Internal Control Assignment

Factors	Coefficient	T	Significance	Rsqu
VI: Knowledge Score	0.448	4.190	0.00***	0.322
VD: After Learning Performance				

Note: VI: Independent Factor dan VD: Dependent Factor: (***) significant level < 0,01

5. CONCLUSION

5.1. The Implication of Research Finding

This study is motivated by negative effect of experience on judgment accuracy of auditor, for example Pincus (1991), Robert and Ashton (1993), Kadaous (1996), Chung and Monroe (2000), Earley (2002) and Newell and Rakow (2007). Prior experience of audit assignment shapes memory or mental model of auditor and then auditor uses the memory to accomplish the current audit assignment (Abdolmohammadi and Wright, 1987; Tubbs, 1992; Choo and Trotman, 1991; Tan, 1995; Davis, 1996; Libby and Frederick, 1990; Lehman and Norman, 2006). It implies that auditor implements his or her expectation and perception as the basis of judgment process (Tan, 1995; Choo and Trotman, 1991; Jeffrey, 1992). As a consequence, auditor focuses on clues or information that supports auditor's expectation or perception (Chung and Monroe, 2000; Moeckel, 1990). Therefore, experience is not an optimal learning method to acquire knowledge structure in accordance with assignment.

To reduce the negative effect of experience, auditor needs the learning method that provides a review process of auditor's judgment, such as outcome feedback review. The review process will improve the auditor's judgment process and then auditor should be encouraged to possess knowledge structure in accordance with audit assignment. Prior empirical evidences have proven that feedback can shape memory of decision maker (Hirst et al., 1999; Bakken, 2008) and can increase procedural knowledge of inexperienced auditor that can only be acquired as professional auditor (Bonner dan Walker, 1994; Earley, 2001 and 2003). The review process of feedback provides continue learning process because auditor has opportunity to compare his or her judgment to correct judgment that is provided by feedback (Hirst et al., 1999; Bakken, 2008). In general, Borthick et al. (2006) state that the suitability of auditor's knowledge structure to the audit assignment requirements can only be enhanced from the training that improves the auditor's knowledge structure, and in turn, it enhances the optimum judgment accuracy of auditor.

According to the advantages of feedback, especially, outcome feedback, the purpose of this study is to compare the knowledge structure and performance of internal controls audit assignment between experienced auditors and inexperienced auditors who receive outcome feedback review after assignment practice internal control. The comparison will show the difference knowledge structure as an effect of two learning methods: from experience and from outcome feedback. Then the difference knowledge structure encourages the difference in performance between both groups in internal control audit assignment.

This study uses two methods: experiment and survey to measure the role of outcome feedback and experience on internal control audit assignment learning. The experimental method is to capture the knowledge structure and performance level of outcome feedback learning, otherwise, the survey method is to capture the knowledge structure and performance of experience learning. According to the research objective, this study uses inexperienced auditors as experimental subjects, while experienced auditors are as the participants of survey.

The test result supports the hypothesis 1 that the learning form outcomes feedback review encourages the higher possession of knowledge structure on internal control audit than learning from experience. The test result also supports the hypothesis 2 that the performance achievement on internal control audit assignment will be more effective through the knowledge acquisition of outcome feedback review rather than experience.

An important implication of the test results is the suitability of the auditor's knowledge structure that will optimize the auditor's performance, as the findings Borthick et al. (2006). The auditor's knowledge structure has significant effect to auditor's judgment accuracy (Borthick et al., 2006). However, the knowledge structure acquisition should consider the audit assignment structure. An auditor should be provided appropriate learning and training method to optimize the knowledge structure achievement. This study reveals that outcome feedback review is more appropriate rather than experience as learning method on internal control audit assignment, therefore the knowledge structure achievement from outcome feedback learning is higher than the knowledge structure achievement from experience learning on internal control audit assignment. Learning from experience is not the only one method to enhance the suitability of auditor's knowledge structure to audit assignment requirement, because experience learning method does not provide a review process that

could build auditor's mental model in order to audit assignment requirement. The opportunity to look backward to the auditor's judgment that based on outcome feedback review provides inexperienced auditor an opportunity to compare his or her judgment to the review and in turn to the opportunity learning. In broad scope, the auditor's performance formulation could not be separated from auditor's knowledge acquisition. Libby (1993) states that auditor's performance is determined by experience, knowledge, and ability in which knowledge as mediating factor between experience and performance, but ability could influence directly or indirectly through knowledge to performance. According the comparability of outcome feedback learning method rather than experience, the formulation of auditor's performance should redefine what experience is. Such as Bonner and Walker (1994) define experience as audit assignment practice, but the definition does not capture learning process. Therefore, Bonner and Walker (1994) suggest that a process review should accompany the audit assignment practice.

The second contribution of this research is as the additional empirical evidence of the role of the learning theory in which outcome feedback review can improve the knowledge structure of inexperienced auditor on internal control audit assignment. This result expands the empirical evidence of Hirst et al (1999), Hirst and Luckett (1992), Earley (2003), and Tuttle and Stocks (1997) that the process review of outcome feedback could enhance higher judgment performance rather than no feedback review. Bonner and Walker (1994) use learning theory in examination of the instruction and feedback role on procedural knowledge acquisition. Bonner and Walker (1994) show that appropriate instruction and feedback could improve the inexperienced auditor's procedural knowledge. Borthick et al. (2006) also use instruction to accelerate the internal control knowledge acquisition of student. Wright (2007) also reveals that academic instruction and practice give advantage to student's judgment performance. As the prior studies in procedural knowledge acquisition, this study also shows the advantage of outcome feedback review process as the learning method on improving the procedural knowledge acquisition of inexperienced auditor.

The comparison of the experiment and survey methods results in this study is the third contribution. The result of experimental method has high internal validity to prove that outcome feedback review is the cause of the subjects' knowledge structure and performance achievement. However, this result should be generalized into inexperienced auditor who exclude of the experimental subjects, beside the treatment formulation that has involved experienced auditor in order to accordance the real internal control case. Therefore, the comparison between the experimental subjects' achievement and the survey participants' achievement will increase external validity of the experimental method result. Based on statistic testing, the outcome feedback review is more effective learning method rather than experience, so the outcome feedback review can be considered as learning method for novice auditors to enhance same level performance as their senior.

5.2. Research Limitations and Opportunities

The study examines the GPA and auditing grade between control group and treatment group in experiment to ensure that only treatment as the cause of the different knowledge structure and performance achievement on both of groups. In one side, this method will increase internal validity of the experiment result. However, in other side, this study does not use ability as determinant factor of performance. Earley (2003) has

revealed that ability has significant effect in individual's reasoning on real estate valuation after receiving feedback. Although, Libby and Tan (1994) have revealed that ability does not significantly effect to structured task performance, such as internal control. Both of the studies use the different research paradigm, Earley (2003) based on learning paradigm, otherwise Libby and Tan (1994) based on cognitive paradigm. According to the both empirical evidences, the future research opportunity is to examine the effect of different level (high or low) of learner ability in outcome feedback review learning on unstructured task, such as analytical review. This study has an objective to reveal whether outcome feedback is still needed to optimize the knowledge acquisition on unstructured task.

The study only uses one type of feedback as learning method in internal control audit assignment. The previous studies have revealed that each type of feedback, such as outcome feedback, task properties feedback, and explanatory feedback has different effect to the auditor's judgment accuracy or the procedural knowledge acquisition, such as Bonner and Walker (1994), Earley (2003), and Hirst and Luckett (1992). This study does not consider the audit assignment characteristic that requires the different characteristic of cognitive structure. The future research opportunity is to compare the knowledge structure and performance on internal control assignment between participants who receive more complex feedback review, such as task properties feedback or explanatory feedback, and experienced auditor.

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