

Application of Case-Based Method In Improving Students' Critical Thinking Skills *In Case Auditing Course For Accounting Department Students*

Husna Roza^{1,*} Elvira Luthan²

^{1,2} Accounting Department, Faculty of Economics, Universitas Andalas, Padang Indonesia

*Corresponding author: husnaroza64@gmail.com

ABSTRACT

Conventional learning methods (Teacher Learning Center /TCL) are unable students to exercise analytical skills, practice problem solving, and evaluate problems, especially in Auditing courses that require high analysis and critical thinking. Due to the many shortcomings of the TCL, the government recommends using the Student Center Learning (SCL) approach for the learning process in University. Finally, the Case-Based Method (CBM), an SCL, is designed to increase students' critical thinking ability in solving a case. Students are expected to exercise critical thinking to solve problems holistically in the Auditing course.

This study uses an action research approach for Classroom Action Research (CAR) in applying the Case-Based Method in improving students' critical thinking skills. The data used are primary data obtained from observations, in-depth interviews, and questionnaires to explore all the facts in the field. Respondents in this study are fifth-semester students majoring in accounting and two auditing lecturers. The analysis used is qualitative data analysis. This CAR shows that CBM can improve students' critical thinking ability. These results can be used as input for institutions in making academic policies. For lecturers, it can be a reference for improving the learning process in class and materials for making lesson plans. For students, it can increase the ability of analysis and critical thinking. It will help them to face situations and conditions after graduation.

Keywords: *Case-Based Learning Method, Critical Thinking, and Activeness*

1. INTRODUCTION

Conventional learning methods, where teachers give lectures and students only listen, are still the hallmark of Indonesian education, as universities have done. It is undeniable that students' interest in the learning process tends to decrease, so the expected output is not achieved optimally. They are changing the learning paradigm to become more interesting to overcome this situation, namely student-centred learning (SCL). The paradigm shift in the learning process from teacher-centred to student-centred is expected to encourage students to actively build knowledge, attitudes, and behaviour [Said, 2010].

SCL is a learning strategy that places students as active, independent, adult learners and able to learn "beyond the classroom" [Harsono, 2005]. In addition to Dayli's research, [2000] states that CBM can bridge the gap between theory and practice and requires students to conduct research and evaluate several data sources, fostering information literacy to make students think critically. CBM is also effective for developing real-world, professional skills and can improve students' written and oral communication skills and collaboration with teams. These skills are needed in time to act professionally as a professional Accountant.

The Auditing course is a mandatory course for accounting majors weighing six credits, Auditing 1 and Auditing 2, which discusses integrally and in-depth the concept of financial statement auditing, offered to students in semesters five and six. The topics discussed in Auditing 1 include an introduction to the public accounting profession, professional ethics, and the auditing process starting from the planning stage to preparing the audit report. Meanwhile, Auditing 2, a continuation of Auditing

1, focuses on audit concepts and auditing procedures through a transaction cycle approach and independent auditors' report writing, including audits of non-assurance services performed by public accountants. With the renewal of the learning method, the Auditing course becomes the proper object for applying SCL and CBM to make learning methods enjoyable.

To improve student achievement in the Auditing course, the team of lecturers conducted an evaluation and concluded that one cause of achievement student learning is not optimal because the learning strategy is not proper. The lecturer team has agreed to change the learning strategy to CBM, a learning method designed to improve higher-order thinking in solving a case, which can help students link education and special training while developing professional skills for practice. In the CBM method, student groups study together, focusing on creative problem-solving. The role of the lecturer as a facilitator remains to control the discussion that develops outcomes of the main problem. CBM is one of the SCL learning methods that can make students think critically, communicate, and have interpersonal skills.

From the phenomenon of changing TCL to SCL that we use CBM, it is interesting to study for Auditing course. Therefore, researchers are interested in observing the process of developing CBM learning strategies and their impact on increasing students' critical thinking skills in the Auditing course at the Accounting Study Program, Faculty of Economics, Andalas University. This study aims to determine the impact of implementing the Case-Based Method on students' critical thinking skills of the Accounting Study Program, Faculty of Economics, Andalas University.

2. METHODS

2.1 Research Setting, Subject and Object

This study uses Classroom Action Research, a collaborative approach to investigate, examine, or study and find something, which allows people to use systematic action to solve a problem.

The research subjects were a team of Auditing lecturers and students of semester five International class Accounting Study Program, Faculty of Economics, Andalas University.

The object of research is all actions of lecturers and students during the teaching and learning process, quizzes, interviews and surveys. The survey was conducted using questionnaires that several previous studies have used. Data analysis in critical thinking skills includes six indicators as the focus of research [Mc Taggart [1990] in Ferawati [201]:

- (1) Indicator 1; analyze arguments,
- (2) Indicator 2; able to ask,
- (3) Indicator 3; able to answer questions
- (4) Indicator 4; solve the problem,
- (5) Indicator 5; conclude, and
- (6) Indicator 6; skills to evaluate and assess the results of observations

Based on the six indicators of critical thinking skills, questionnaires consisting of 20 statements that include positive statements (favourable) and negative (unfavourable) were made. The questionnaire was designed in 5 answer options using a Likert scale. Number 1 indicates strongly agree, number 2 means agree, number 3 is normal (neutral), number 4 is disagreeing, and number 5 indicates strongly disagree. This scale is structured in a statement and is followed by five responses indicating the level. The researcher uses a Likert Scale to determine the location of a person's position on a continuum of attitudes towards the object of attitude, ranging from very negative to positive.

Provided that the positive statement when stating Strongly Agree (SS) is given a score of 5, Agree (S) is given a score of 4, Doubtful (R) is given a score of 3, Disagree (TS) is given a score of 2, and Strongly Disagree (STS) is given a score of 1. Meanwhile, for negative statements, when stating Strongly Agree (SS) is given a score of 1, Agree (S) is given a score of 2, Doubtful (R) is given a score of 3, Disagree (TS) is given a score of 4, and Strongly Disagree (STS) is given a score of 5 [Riduwan, 2013: 13].

Researchers determine the criteria for critical thinking skills using type 1 PAP as a basis of reference [Masidjo, 1995: 153 in Luthfi LRG., 2016] can be seen as follows:

- a. Average of Each Indicator
 1. Calculate the average score in the following way.

$$\text{Average score} = \frac{\text{total class score}}{\text{the number of students}}$$
 2. The average that has been obtained is converted into the value of critical thinking skills by $\text{value} = \frac{\text{average score}}{\text{the maximum score}} \times 100$
 3. The minimum number of students is quite critical

$$\text{The minimum number of pretty critical students} + \frac{\text{the number of critical students}}{\text{the number of very critical students}}$$
 4. Calculating the percentage of the minimum number of students is quite critical. $\text{Percentage of quite critical students} = \frac{\text{Minimum number of quite critical students}}{\text{the total number of students}} \times 100$

b. Critical thinking criteria score range

1. Determine the score of each student per item.
2. Finding the total score obtained from each student in each indicator or overall

Score range = Percentage x maximum score

2.2 Data Collections

Data collection methods are gathered with observation, in-depth interview and questionnaire techniques. This study uses personally administered questionnaires, which means that researchers can deal directly with respondents, provide necessary explanations about the questionnaires, and be collected immediately after being answered by the respondent. The questionnaires came from several previous studies, which were modified according to the conditions and needs of this study. The interview list will be made according to the needs in the field so that the respondents' answers are more in-depth and precise.

2.3 Data Analysis

This study uses qualitative analysis, covering several stages [Herdiansyah, 2010]:

1. Data collection was carried out before, at the study's time, and the end of the study. This process is carried out when the research is still in a concept or draft. The data that has been obtained will be processed and analyzed, and then data reduction is carried out.
2. Data reduction is the process of merging and equalizing all forms of data obtained into one written form to be analyzed. Interview results were obtained from FGD and in-depth interviews.

3. Data display, after the data is converted into interview transcripts, is processed in written form, and a clear theme flows into a categorization matrix according to the themes that have been grouped and categorized. Furthermore, the theme is broken down into a more concrete and more straightforward form called a sub-theme which ends by giving the code of the sub-theme according to the interview transcript that was previously conducted.

4. Conclusion/verification is the final stage in qualitative data analyses. The conclusion in the series of qualitative data analysis describes all subcategories of themes listed in the completed categorization and coding table accompanied by quotes from interview transcripts.

3. RESULT AND DISCUSSION

The first activity observed was presentation and discussion per student group on topics 1 to 6. At each meeting, one group presents one topic for the week. The lecture begins with group presentations, questions, answers, and discussions for about 40 minutes. Then the lecturer provides comments and additional explanations on the parts that have not been touched during the presentation and discussion.

From the observations, it turns out that their presentations are still not optimal. It can be seen that students presentation is not the result of reading and understanding materials. They only list the items without any explanation that shows the effort to understand the material better. Students are also not active in discussing; only a few students respond and try to ask questions or add essential points that should be displayed in the presentation. Students

still have not awakened their spontaneity in responding to presentations. Students are still always asked to respond to presentations and topics presented.

The average score of the quiz before applying CBM in the lecture process was 60.91. This result indicates the level of critical thinking ability of students before CBM. It can be seen that the level of critical thinking skills and student activity in lectures before CBM is low.

The third observation activity is the lecturer will assess student paper on a case of current Indonesian's violations of professional auditor ethics. Results show that many students still have difficulty understanding the instructions. Students' choices are old cases, abroad cases, and uninvolved accountants cases. Only 12 students could understand that their choice must be written academically.

The fourth activity is observation for five groups of students discussion. There were only two groups that could show all the variables of critical thinking ability even though they were still at the intermediate level. On average, they still agree with the arguments presented. From their conclusions, only two groups could explain what they had decided. There is one group that cannot conclude.

Following are the survey results for each indicator. The first indicator that measures students' ability to analyze arguments by asking four questions has resulted in 14.96. It means that the average student's ability is reasonably critical. Because the score is quite critical, it is between 13 – 15.8. Three students are critical, seven students are critical, and ten are pretty critical, but four are not critical.

The condition of students' critical thinking skills on the second indicator is asking questions. From the results of the data analysis, the score of 6.16 means

that students, on average, are not critical. However, one EY student shows his ability to ask questions is at a number that shows a critical attitude.

The situation of students' critical thinking skills on the third indicator is answering questions. The student's ability to answer questions results in a score of 60.8. This result also shows that students are not critical because this number is 5.5-6.4. None of the students has a critical attitude in this regard. There are three students in the category of very uncritical. For the fourth indicator measuring students' ability to solve problems, the average result is 20.44. It means that students are sufficient to have critical thinking skills. The number of very uncritical students is one person, and five people are not critical (20%), meaning that there are still students who cannot find solutions to problems.

The survey results for the fifth indicator, which measures the ability to make conclusions, the number obtained is 5.8, which means that students cannot think critically. However, there is one student who is very critical name is BA. In class, she stands out and responds to something the lecturer asks during discussions and can draw conclusions. Nine students (36%) have a very uncritical score in indicator five, and 11 people (44%) on a non-critical score. It means that students who are respondents still have difficulty concluding.

The last is the sixth indicator that shows the number 15.8, meaning that students' skills in evaluating and assessing the results of observations are pretty critical. Four students are very critical in this indicator. In their daily activities, their scores are satisfactory. None of the students was very uncritical, although there were still four students who were not critical.

When all the indicator scores are combined, the results will be 69.24, which means that the thinking ability of students taking the International A1 class

Auditing 1 in the odd semester 2021/2022 is quite critical. Overall indicators three students are not critical, but in general, it can be concluded that students who take Auditing 1 course are already critical enough 21 people (84%) and only one critical student.

4. CONCLUSION

The use of CBM can improve students critical thinking. After we gave the case and monitored the students discussing it, we found that they seemed enthusiastic to discuss the case. This result is in line with the results of the survey we conducted.

5. RECOMMENDATION

It is recommended to conduct a similar study using a similar method with different approaches and indicators such as the Project-Based Method with a more extended period of at least one semester. The results can be compared which the best method can improve students critical thinking and student learning outcomes

AUTHORS' CONTRIBUTION

Husna Roza, concept and design of the research, data collection, analysis and interpretation, draft of the report and then further draft of the article

Elvira Luthan, concept and design of the research, data collection, analysis and interpretation, reading and editing of draft article

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Head of Accounting Department Economic Faculty
Andalas University

REFERENCES

- [1] Alwasilah C. Contextual Teaching And Learning:Menjadikan Kegiatan Belajar Mengajar Mengasyikan Dan Bermakna. Cet-3. Bandung: Mizan Learning Center, 2007.
- [2] Beyer, B. K., Critical Thinking. Fastback 385. Phi Delta Kappa, 408 N. Union, Po Box 789, Bloomington, In 47402-0789, 1995.
- [3] Binkley, M., Erstad, O., Herman, J., Raizen, S., Ripley, M., & Rumble, M. . Defining 21st Century Skills, 2010, DOI: www.At21s.Org
- [4] Budiati, Rina Veni, Pengaruh Pelaksanaan Tutorial Klinik Dengan Metode Case Based Learning (CBL) Terhadap Kemampuan Berfikir Kritis, 2014.
- [5] Chen, C. C., Rong-An Shang, & Harris, A., The Efficacy Of Case Method Teaching In An Online Asynchronous Learning Environment. International Journal Of Distance Education Technologies, 4(2), 2006. DOI: <http://Search.Proquest.Com/Docview/201698537?Accountid=38628>.
- [6] Christiane, Clifford , G. Ethics And Politics In Qualitative Research, Dalam Handbook, Second Edition, Thousand, Oaks, California: Sage, 2000.
- [7] Choi, E., Lindquist, R. & Song,Y, Effects Of Problem-Based Learning Vs. Traditional Lecture On Korean Nursing Students' Critical Thinking, Problem-Solving, And Self-Directed Learning. Nurse Education Today, 34, 2014.
- [8] Ferawati, Penerapan Case Based Learning Dalam Meningkatkan Kemampuan Berpikir Kritis Mahasiswa Keperawatan, Tesis S2, Universitas Muhammadiyah Yogyakarta. (Tidak Dipublikasikan), 2016.
- [9] Harsono, Student Centre Learning di Perguruan Tinggi, Jurnal Pendidikan Kedokteran dan Profesi Kesehatan Indonesia Vol 3 No. 1, 2008.
- [10] Hassoubah, Z. I., Mengasah Pikiran Kreatif Dan Kritis. Terjemahan Bambang Suryadi). As Noorden.(Buku Asli Diterbitkan Tahun 2002), 2008.
- [11] Herdiansyah, H., Metode Penelitian Kualitatif untuk Ilmu-ilmu Sosial, Jakarta: Salemba Humanika, 2010.
- [12] Luh Wahyu R P. Et Al, Case-Based Accounting Learning Strategies, International Research

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- [13] Lutfi., L R G (2016) Peningkatan Hasil Belajar Dan Kemampuan Berpikir Kritis Matematika Siswa Kelas VB Pada Materi Pengukuran Waktu Melalui Pembelajaran Kontekstual SDN Perumnas Condongcatu. Skripsi thesis, Sanata Dharma University, Retrieved October 2021, at <http://repository.usd.ac.id/7348/>
- [14] Martindho.M, Almeida. Pa, Dias. Jt, Do Moodle's Forums Foster Student Questioning? The Student's Voice, Information Age Publishing, P. 125-126, 2014.
- [15] Patnani., M., Upaya Meningkatkan Kemampuan Problem Solving Pada Mahasiswa, Jurnal Psikologi Vol.1, No.2 /Juni 2013.
- [16] Riduwan, Skala Pengukuran Variabel-Variabel Penelitian, Bandung, Alfabeta, 2013.
- [17] Said, Fairuz El., Artikel Pendidikan: Konsep SCL (Student Centered Learning). Retrieve May 2021, (<https://fairuzelsaid.wordpress.com/2010/08/28/pendidikan-konsep-scl-student-centered-learning/#more-2505>), 2010.
- [18] Santyasa, W Dan Tegeh, Validasi Dan Implementasi Model-Model Student Centered Learning Untuk Meningkatkan Penalaran Dan Karakter Siswa Sekolah Menengah Atas. Journal : Pendidikan Indonesia, Volume ; 4, Number ; 1, April 2015.
- [19] Sanjaya, W., Perencanaan Dan Desain Sistem Pembelajaran. Jakarta: Predana Media Group, 2008
- [20] Samejima, M., Hisakane, D., & Komoda, N., Automatic Annotation Method On Learners' Opinions In Case Method Discussion. Interactive Technology And Smart Education, 12(2), 2015.
- [21] Saputra K Et Al., Pengaruh Penerapan Metode Case-Based Learning Dan Motivasi Terhadap Pemahaman Akuntansi Forensik Dengan Kecerdasan Emosional Sebagai Variabel Pemoderasi, Prosiding Simposium Nasional Akuntansi Xx, Jember, 2017.
- [22] Scott, S., Perceptions Of Students' Learning Critical Thinking Through Debate In A Technology Classroom: A Case Study. The Journal Of Technology Studies, 2008.
- [23] Scriven, M., & Paul, R., Defining Critical Thinking. A Draft Statement For National Council For Excellence In Critical Thinking Instruction, 2003
- [24] Senjaya, W., Strategi Pembelajaran; Berorientasi Standar Proses Pendidikan. Jakarta: Kencana Prenada Media Group, 2008.
- [25] Simbolon, R Peningkatan Kompetensi Guru Membuat Penelitian Tindakan Kelas Melalui Workshop Model P2fr, Jurnal Penelitian Bidang Pendidikan, Volume 20 Nomor 2, 2004.
- [26] Sobur, A., Psikologi Umum Dalam Lintasan Sejarah. Bandung: Cv. Pustaka Setia, 2003.
- [27] Suharto, Metodologi Penelitian Pendidikan Kompetensi Dan Praktiknya. Jakarta: Bumi Aksara, 2005.
- [28] Suprijanto, Pendidikan Orang Dewasa. Jakarta: Pt. Bumi Aksara. 2008.
- [29] Tiwari, A., Lai, P., So, M., & Yuen, K. A Comparison Of The Effects Of Problem-Based Learning And Lecturing On The Development Of Students' Critical Thinking. Medical Education, 40(6), 2006.
- [30] Thistlethwaite Et Al, The Effectiveness Of Case Based Learning In Health Professional Education. A Beme Systematic Review: Beme Guide NO. 23. Medical Teacher. Diakses Tanggal 21 September 2016 DOI: <http://www.Ncbi.Nlm.Nih.Gov/Pubmed/22578051>
- [31] Trianto, Model-Model Pembelajaran Inovatif Berorientasi Konstruktivistik. Jakarta, 2007
- [32] Yanto D & Sururi, Faktor-Faktor Penentu Niat Mahasiswa Pengauditan Menggunakan Mind Map Untuk Meringkas Materi Kuliah: Aplikasi Theory Of Planned Behaviour, Jurnal Ekonomi & Bisnis, Vol. 10, No. 2, Juli 2016: 89-100, 2016.