

# Implementation of Blended Learning in Public Sector Accounting Learning to Improve 21st Century Skills

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**Abstract**— This research is a classroom action research with the aim of evaluating the effectiveness of the implementation of blended learning in learning Public Sector Accounting to improve 21st century skills which are proxied by critical thinking skills for students. The design of this study used the research model of Suharsimi Arikunto's class action with three cycles. The research subjects were 27 students of the accounting department at the Faculty of Economics and Business, University of Nusantara PGRI Kediri who were taking the Public Sector Accounting course in the even semester of the 2021-2022 academic year. Research data were collected using instruments in the form of observation sheets and end of semester exam scores. After being given the action, the results show that the implementation of blended learning is effective for increasing critical thinking skills, it can also improve student learning achievement in Public Sector Accounting courses.

**Keywords**—Blended Learning; Learning; Public Accounting Sector; 21st Century Skills; Critical Thinking Skills

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## I. INTRODUCTION

The Covid-19 pandemic has had an impact on all aspects of life that require people to be able to adapt. In the education sector, the Policy to Enforce Restrictions on Community Activities with the aim of breaking the chain of transmission of Covid-19 has resulted in learning not being carried out face-to-face in class (offline). Such conditions require educators/lecturers to increase their ability to master and implement technology in designing learning processes that are able to foster motivation, are more interesting and fun for students [1]. Such conditions can stimulate students to be more active in learning independently and collaboratively in an effort to increase their knowledge, expertise and skills.

The use of online mode can be implemented by lecturers if conventionally in the form of face-to-face learning in class is not optimal. Online learning can facilitate communication, coordination and discussion between lecturers and students and between students without having to meet face to face in class [2]. The results of the study show that online learning is in great demand by students, which is indicated by the great enthusiasm of students in following all the learning processes planned by the lecturer, so that in turn it can increase student achievement [3]. However, online learning often faces various obstacles, for example: poor internet connection, students do not have a private wifi connection, power outages, and interference from wifi network operators. These various obstacles resulted in the online learning process being less than optimal [4].

To overcome these obstacles, it is necessary to carry out anticipatory preparations so that the risks that will be faced can be minimized. Online learning according to research [5] cannot be done instantly without proper preparation, but must be carried out in several stages, including: providing adequate facilities and infrastructure, support from leaders, for example in the form of policies, training, and outreach to students.

The learning process that is carried out by combining offline and online modes is called blended learning. According to [6] Blended learning is combination learning where the subject matter is given more varied. Variations in the learning process are carried out by utilizing websites, video, audio, and direct (outside) meetings so that social interaction occurs between lecturers and students. Research result [7], shows that blended learning provides time and place flexibility with more varied learning methods compared to online only or face to face only learning. The application of the blended learning strategy is expected that students will be able to think critically, be moral, disciplined, have a noble character, and be able to use information technology wisely.

Blended learning, as said by [8] is learning that is carried out using various information technologies and mobile devices to obtain the expected information. According to [9] Blended learning provides space for lecturers and students to create a more conducive learning environment. Blended learning is a new approach in the learning process that is carried out by combining face-to-face learning with virtual face-to-face learning. Thus blended learning is a learning process that allows students to study on campus or can also be done outside the campus (home, workplace, etc.) by using online media. One of the advantages of blended learning is that students can manage time, four, and how to study on their own without having to meet face to face with the lecturer [10], [11]. Research result [2] recommends that blended learning is very relevant to be implemented for learning in higher education because the application of blended learning has good flexibility where learning can still be carried out even without the physical presence of students in class.

Based on these opinions, it can be concluded that blended learning is learning that is carried out by implementing a combination of two learning methods, namely online and offline learning, with the aim of creating a conducive and enjoyable learning atmosphere so that students become more active, innovative, creative, and independent. The reasons for implementing blended learning according to [12] is to provide a wider learning space for students, support learning activities, support various sources of information for students, and increase student participation to be more active in the learning process. The use of blended learning in learning, according to [13] make the lecturer act as a facilitator. The role as a facilitator is actualized in guiding online learning, designing appropriate learning activities, encouraging students to actively participate through reflection in the form of suggestions, criticisms, feedback, and increasing motivation to increase students' interest and literacy in learning.

However, the implementation of blended learning in the learning process still encounters several challenges that must be solved. Research result [14] shows that the challenges of using blended learning come from students in the form of a lack of ability to operate online devices so that they are less active in participating in various activities in their groups. In line with research [15] which states that educators and students are required not only to master teaching materials but also to be competent in operating technology. Because, if you do not have these two competencies, learning will not be effective. Research result [16] also shows the same findings that if students are less proficient in technology, the learning process becomes ineffective in improving learning outcomes. Next, the research results [7] shows that the use of blended learning can give students more time to complete assignments online.

Challenges in the world of education in the 21st century through the use of technology is a necessity to be implemented and developed. Currently there are quite a lot of learning technology

applications that are used online as a mode of learning that can be accessed by students. This learning technology has a vital role in encouraging the achievement of 21st Century skills for students. Research result [9] and [11] shows that it is very important for students to develop 21st century skills in the use of technology to foster critical thinking skills so that learning outcomes can be realized properly.

Changes in learning patterns from one-way information to branched information-based learning and mass-based learning patterns are currently seen as an urgent need so that students' potential can be optimally developed. Research result [10] shows that the implementation of blended learning for learning purposes there are significant differences between classes, but learning can take place on an ongoing basis. [17] states that giving assignments to students that are sustainable in the form of online discussions can improve the quality of student analysis. This happens because the online discussion model involves critical thinking skills and the interaction of students with peers has a positive correlation. Based on the findings of previous research results, as described above, it can be concluded that the implementation of blended learning in learning can foster critical thinking skills as an element of 21st Century skills for students so that they can significantly improve student learning outcomes.

## **II. RESEARCH METHOD**

The design of this research is Classroom Action Research (CAR) with four stages, including: planning, implementing action, observing, and reflecting. The first stage in the form of planning is carried out with activities consisting of: (1) compiling semester learning (RPS) and learning implementation plans (RPP) based on blended learning, (2) preparing learning tools in the form of resources, materials, and learning media based on blended learning, (3) develop learning observation instruments for lecturers and students. The second stage of implementation of the action.

At this stage blended learning is implemented in learning based on RPS and RPP. The activities carried out in this second stage include: (1) the lecturer provides information to students regarding the application of blended learning in learning, (2) students download learning tools that have been prepared by the lecturer in the form of: lecture materials, questions and working instructions through the website, (3) students read lecture material and look for learning resources according to enrichment needs, (4) students work on questions according to instructions, (5) lecturers ask and answer questions with students regarding learning material. The third stage of observation. Observation activities were carried out in several cycles, where each cycle consisted of four steps. This research is focused on the implementation of blended learning in learning to improve 21st century skills.

The four steps carried out in the first cycle are also carried out in the next cycle, and so on. The fourth stage is reflection. This stage is an activity to evaluate the learning process that has been implemented with blended learning. The purpose of reflection is to find out whether the implementation of blended learning in learning improves students' critical thinking skills. With reflection the lecturer gets input so that it can be used as feedback regarding strengths and weaknesses to improve the learning process further.

The 21st century skills in this study are proxied by students' critical thinking skills which are determined by their success in each cycle. As stated by [18] that classroom action research is more emphasized on perfecting or improving learning processes and practices. This research was conducted in the even semester of the 2021-2022 academic year. The research subjects were 27 students of the Accounting study program, Faculty of Economics and Business, University of Nusantara PGRI Kediri, who took the Public Sector Accounting course.

The object of this research is the implementation of blended learning in learning Public Sector Accounting to improve students' critical thinking skills. This study uses instruments in the form of: (1) student observation sheets to record and process data on student activities in learning, (2) lecturer worksheets, function to record data on learning activities that implement blended learning, (3) assessment instruments, in the form of tests in the form of essays carried out at the end of each cycle. This test aims to measure changes in students' critical thinking skills before and after the application of blended learning in learning.

Observation of student activities aims to obtain data on learning outcomes achieved by students, namely increasing 21st century skills by proxy for critical thinking skills. Measurement of critical thinking skills is measured by 13 elements adopted from research [16], including: (1) being open-minded, (2) acting based on adequacy of evidence and reasons, (3) considering all situations, (4) enriching information, (5) seek as much truth as possible, (6) solve problems systematically, (7) determine various alternatives, (8) look for causes of problems, (9) formulate problems with clear statements, (10) focus on the main issues, (11) use a credible source and mentions it, (12) is consistent with the main idea, and (13) is responsive to the feelings and level of knowledge and abilities of the other party.

### **III. RESULT AND DISCUSSION**

Based on the results of observations of student activities that reflect critical thinking skills, the data is obtained as presented in table 1 below.

Table 1. Results of Analysis of Students' Critical Thinking Ability

| No   | Element                                                                            | Pra-PTK (%) | Sic. 1 (%) | Sic. 2 (%) | Sic. 3 (%) |
|------|------------------------------------------------------------------------------------|-------------|------------|------------|------------|
| 1    | open minded                                                                        | 37.04       | 40.74      | 74.07      | 92.59      |
| 2    | act on the basis of sufficient evidence and reason                                 | 22.22       | 55.56      | 62.96      | 88.89      |
| 3    | consider all situations                                                            | 18.52       | 44.44      | 74.07      | 88.89      |
| 4    | enrich information                                                                 | 40.74       | 59.26      | 70.37      | 96.3       |
| 5    | seek as much truth as possible                                                     | 18.52       | 37.04      | 66.67      | 85.19      |
| 6    | solve problems systematically                                                      | 22.22       | 55.56      | 74.07      | 92.59      |
| 7    | define alternatives                                                                | 18.52       | 44.44      | 62.96      | 85.19      |
| 8    | find the cause of the problem                                                      | 29.63       | 33.33      | 88.89      | 100        |
| 9    | Formulate the problem with a clear statement                                       | 37.04       | 40.74      | 85.19      | 100        |
| 10   | focus on the main issues                                                           | 18.52       | 59.26      | 66.67      | 92.59      |
| 11   | Use credible sources and mention them                                              | 22.22       | 44.44      | 70.37      | 96.3       |
| 12   | consistent with the main idea                                                      | 37.04       | 51.85      | 74.07      | 96.3       |
| 13   | responsive to the feelings and level of knowledge and abilities of the other party | 14.81       | 48.15      | 74.07      | 77.78      |
| Mean |                                                                                    | 25.93       | 47.29      | 72.65      | 91.74      |

Table 1 explains that before being given treatment there were only 25.93% of students who had the ability to think critically. Conventional learning patterns (face to face) in the classroom where lecturers have a habit of giving lecture material in tutorials with various lecture methods cause students to lack a critical attitude. This condition can be explained by only a few students who have a responsive attitude to feelings and the level of knowledge and abilities of other parties (14.93%), always focus on the main idea (18.52%), determine various alternatives in problem solving (18.52%). The habit of lecturers applying the lecture learning method varies by giving lecture material directly, and students can ask directly to the lecturer if there is material that is not understood, and the lecturer gives answers to students resulting in students becoming less independent, as a result students cannot complete the assignments given by lecturer. However, after being given treatment the score obtained became 91.74%. As shown in table 1, after being given treatment in the third cycle, all elements that constitute the criterion for critical thinking skills experienced a significant increase in scores. Thus it can be concluded that the

implementation of blended learning in learning Public Sector Accounting courses can improve students' critical thinking skills.

Table 2 presents the results of the analysis of the implementation of blended learning on the learning completeness of the Public Sector Accounting course in each cycle. In the first cycle the level of student learning completeness was still very low at 40.74% or in other words most (59.26%) students did not meet the criteria for completeness in learning, meaning that most students had a low level of understanding of teaching material. The reason for not achieving complete learning is due to several obstacles experienced by students, namely: limited internet connection, not understanding the steps of the blended learning strategy in learning, independent study habits are still lacking, and student literacy in the use of information technology is still insufficient.

Table 2. Results Of Blended Learning Implementation Analysis

| No | Assessment Component                                    | Incomplete scores (%) | complete scores (%) | Number of Students |
|----|---------------------------------------------------------|-----------------------|---------------------|--------------------|
| 1  | The average scores of tasks and participation - Cycle 1 | 59.26                 | 40.74               | 27                 |
| 2  | The average scores of tasks and participation - Cycle 3 | 25.93                 | 74.07               | 27                 |
| 3  | The average scores of tasks and participation - Cycle 3 | 7.41                  | 92.59               | 27                 |
| 4  | end of semester exam scores (UAS)                       | 3.7                   | 96.3                | 27                 |

In the second cycle there was a fairly high increase. The number of students who met the learning completeness criteria reached 74.07% from the previous 40.74%. The number of students who were declared to have completed their studies further increased in the third cycle, reaching 92.9%. Based on the results of the final semester exam (UAS) it was stated that almost all students (96.30%) met the learning completeness criteria and only 3.70% had not achieved learning mastery. Thus it can be concluded that the implementation of blended learning besides being able to improve critical thinking skills can also improve student achievement.

#### IV. CONCLUSION

Based on the data analysis as previously described, it can be concluded that the implementation of blended learning in learning Public Sector Accounting courses is effective for increasing 21st century skills which are proxied by students' critical thinking skills. The increase in critical thinking skills occurred in all indicators consisting of 13 indicators of critical thinking skills that were measured in this study. In addition, the implementation of blended learning can also improve student learning achievement in the Public Sector Accounting course as measured based on learning completeness criteria.

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