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The Importance of Learning Model Combination Implementation of Student Accounting Learning Outcomes in Industrial Era 4.0

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Abstract

The Industrial Age 4.0 emphasizes constructivist based learning with the student center approach. The implementation of emphasis on learning is felt to be lacking if it excludes behavioristic based learning models especially in accounting learning because the characteristics in accounting learning are holistically integrated. The formulation of the problem in this study is (1). how do students perceive learning models that are appropriate for Accounting courses in the Era of Industrial Revolution 4.0? (2). How are the results of previous studies related to the implementation of a combination of learning models on accounting learning outcomes ?, (3). How important is the application of a combination of behavioristic and constructive learning models to student learning outcomes ?. Sample in this study amounted to 141 students. The research method is qualitative with data collection techniques in the form of observation, documentation and conclusion. The conclusions of the research results are student perceptions about the choice of behavioristic and constructivist based learning models, 90% stated strongly agree, and agreed. The combination of behavioristic and constructivist learning models is able to improve student learning outcomes in a holistic and integrated manner and is very important to be applied in the Accounting course.

Keywords: learning model, behavioristic, constructivistic, learning outcomes

Introduction

The era of the industrial revolution 4.0 was marked by the use of the internet in almost all lines of life. The era of advances in technology, information, and communication (ICT) simplifies, accelerates, and simplifies previously difficult and time-consuming tasks. The challenge of education in the industrial revolution era is in the form of changes in the way of learning, thinking patterns and ways of acting by students in developing creative innovations in various fields. This condition demands a revolution in the world of education in all its aspects, especially the improvement of the quality of teachers and lecturers. Lecturers and teachers innovate in improving the quality of learning so students can achieve results in accordance with learning objectives. Especially in improving learning strategies, learning methods, learning media and learning models. For decades, educators and policy makers in the education sector have argued with each other about which models, methods, learning strategies are most effectively used, for example direct learning models versus cooperative learning, lecture learning methods versus discussion, and inductive teaching versus deductive teaching. The teacher-centered learning model versus the student-centered learning model is also still being debated by supporters from both sides. According to Arends (2013) that this debate is futile and misguided, no one approach is always better than the other. The choice to use a particular approach depends on the goals to be achieved by the teacher, the characteristics of certain students and the values of society. This means that the instructor must be prepared to use a particular learning model and link the models in a creative way in one lesson or teaching unit. Effective teachers are able to use various learning models.

When teachers have a number of models and strategies, of course they have a variety of suitable choices in applying the learning model that will be used. For example, a teacher-centered learning

model that is a direct learning model is a learning model used to help students learn important skills and procedural knowledge. The learning model of acquiring concepts supports conceptual development and high-level thinking. While the student-centered learning model, namely the cooperative learning model, problem-based learning, and other student-centered learning models can lead to academic learning, but these learning models are more effective in improving problem solving and improving social skills.

Each learning model has advantages and disadvantages in learning. Learning models can be selected by the teacher according to the learning objectives, material characteristics, and student characteristics. This also applies to learning carried out in lectures in Accounting courses, especially Introduction to Accounting. Accounting is a discipline that studies measurement, translation, or certainty regarding information that will help managers, investors, tax authorities, and other decision makers to make allocation of decision resources within companies, organizations and government institutions. According to the American Accounting Association (AAA) (1966), accounting is the process of identifying, measuring, and communicating economic information and decision making by users of information. As with Accounting notions according to AAA (1966) that the Introduction to Accounting courses teach about the company's accounting cycle, the characteristics of the material series must be taught procedurally, holistically, integrated and coherently. Therefore, the appropriate learning model applied is a learning model that is expected to help students learn important skills and procedural knowledge.

Based on the results of previous studies that the lecturer-centered learning model is a direct learning model capable of increasing students' knowledge of procedural accounting cycles. This learning model is suitable when applied to provide initial knowledge (observation stage) of the accounting cycle theory of the company. The theory of learning behavior has contributed to the application of this direct learning model. Modern behavioral theorists namely Skinner (1956) about operand conditions which state that humans learn and act in certain ways as strengthening certain behaviors. With the direct learning model, lecturers teach according to the behavioral principles that they want to be taught to students, providing learning experiences such as problem exercises, where students will be monitored and given feedback and still give special attention to students. The direct learning model aims to increase the knowledge of structured knowledge and mastery of skills. Arends (2013).

However, it is not always a direct learning model applied in the classroom if the students have obtained procedural knowledge. This gives a weakness that students are less active and independent in solving problems in learning. One way that can be taken to activate students is to use a combination in learning that can motivate, arouse interest, be active and can develop students' ability to think critically and creatively in learning is to make them directly involved in learning, because then they will easy to understand the lessons taught. The combination is to use a learning model that suits the interests and development of students.

After the lecturer provides procedural reinforcement and experience, the lecturer can provide other learning models. The cooperative learning model is one example of a student-centered learning model. This learning model emphasizes more important social goals and social skills. Problem based learning learning model, project based learning, discovery learning and inquiry learning are learning models that are expected to be applied in era 4.0.

Characteristics of Accounting education students at Surabaya State University have different educational backgrounds at the high school / vocational level. For students who have a background in vocational education, when getting introductory material accounting is far more mastered than high school graduates because they have obtained more specific accounting material. Therefore, with these different characteristics, the lecturer needs to apply a learning model that fits the characteristics of all students in the class and is adapted to era 4.0. So that in this study researchers want to answer the formulation of the problem as follows: (1). how do students perceive learning models that are appropriate for Accounting courses in the Era of Industrial Revolution 4.0 ?, (2). How are the results of previous studies related to the implementation of a combination of learning models on accounting learning outcomes ?, (3). How important is the application of a combination of behavioristic and constructive learning models to student learning outcomes in the Industrial Age 4.0 ?.

Method

The research method in this research is qualitative descriptive research. The population is all S1 Accounting Education students - 2015 - 2018 Faculty of Economics UNESA Economic Education Study Program totaling 327 students. The sample in this study was calculated using the formula from Davis and Cosenza (1993: 234) as follows:

$$n = \frac{N.P.q}{\frac{(N-1)B^2}{z^2} + P.q},$$

So the number of samples was 141 students. Data collection techniques in this study used a questionnaire distributed to students. Before being distributed, the questionnaire must be tested for validity and reliability. Valid and reliable questionnaires will be used as real research. Data analysis techniques in the form of data reduction, data presentation and conclusion.

Results and Discussion

Students perceive learning models that are appropriate for Accounting courses in the Era of Industrial Revolution 4.0.

The results showed that behavioristic and constructivist based learning models were still considered to be applied in various eras, especially in the industrial era 4.0. The students' perceptions of the choice of learning models that are suitable for Accounting courses in the Era of Industrial Revolution 4.0 are as follows:

Table 1. Choice Perception Learning Model for Introduction to Accounting Courses

No.	Learning model	Absolutly Agree	Agree	Enough Agree	Disagree	Not Agree	Total Respondent
1.	Direct Learning Model (applied when students have never received material and need procedural explanation)	130	11	0	0	0	141
2.	Cooperative Learning Model (applied when lecturers want social and group skills)	141	0	0	0	0	141
3.	Learning Models Based on Problems: Problem Based Learning, Discovery Learning, and Inquiry (applied when lecturers want to improve problem solving skills, critical thinking, and student skills)	129	12	0	0	0	141
4.	Project Based Learning Learning Model (applied when lecturers want to give project assignments out of class)	138	3	0	0	0	141
5.	Combination of direct learning models and other models (applied at the beginning of the student getting the material procedurally and continued on the next material)	112	15	14	0	0	141

Based on the table above it can be concluded that Accounting education study program students still want the application of the direct learning model when they have never received the material before. This is because, as long as education is at a different level previously, especially those who have never received accounting material before. So that students need procedural direction and knowledge related to Introduction to Accounting material. After students have finished getting procedural theory, they assume that constructivist based learning models such as cooperative learning, Problem Based Learning, Project Based Learning, Discovery Learning, Inquiry Learning can be implemented well in accordance with the subject matter in the Introduction to Accounting. The combination of direct learning models (application of behavioristik theory) and other learning models (constructivistic) is also good applied to students because that students need a combination of integrated and integrated learning models, which can improve procedural knowledge and also provide cooperative learning experiences, and linked with real cases.

The results of previous studies related to the implementation of a combination of learning models on accounting learning outcomes

a. Susilowibowo, et al (2018)

In 2018, Susilowibowo, et al. Conducted a study of the application of the think pair share learning model to teaching materials in the form of accounting work cards for 30 undergraduate students of Accounting Education, Surabaya State University. The results showed that student learning outcomes with a class average of 97.8. The improvement in learning outcomes was due to the presence of work card teaching materials, also due to the application of syntax combinations in the Think Pair Share learning model with syntax in the direct learning model to provide procedural knowledge to students about the accounting cycle of service companies. At the beginning of learning, students observe the explanatory information from the Lecturer in the form of procedural knowledge of the service company's accounting cycle. Then proceed with discussion in groups. The results of this learning are the ability of students both cognitive, affective and psychomotor to increase.

b. Diana, et all (2015)

This research is Classroom Action Research (CAR). The subjects of this study were fifth grade students of SDN Kuin Cerucuk 3 Banjarmasin in the academic year 2014/2015 semester 2. The results of this study were the application of the Direct Instruction combination model with the Team Game Tournament (TGT), which could improve teacher activities, student activities and student learning outcomes class V of Banjarmasin SDN Kuin Cerucuk 3 on the matter of building space.

c. Crisnawati (2013)

Crisnawati conducted a research on the application of a combination of direct learning models and cooperative learning to improve the learning achievement of high school students in diponegoro Blitar, the subject of light refraction. The results showed that the increase in the class average value from the initial state was 56.78, the first cycle 61.95 increased to 75.52 at the end of cycle two. Likewise, there was an increase in the minimum standard completeness percentage from the initial state of 29%, the first cycle 37.04 increased to 70.73%. Because it can be concluded that the application of a combination of direct learning models and cooperative learning models can improve learning achievement.

Important is the application of a combination of behavioristic and constructive learning models to student learning outcomes

The importance of applying behavioristic and constructivist based learning models can be indicated by several points as follows:

1. The combination in behavioristic and constructivist based learning models can motivate, generate interest, and can develop students 'ability to think critically and creatively in learning, make them directly involved in learning, and improve students' understanding.

2. The combination of behavioristic and constructivist based learning models can be a solution to overcome the low student learning activities, so that it has an impact on improving student learning outcomes.
3. The combination of behavioristic and constructivist based learning models is able to improve the character of students in accordance with what is expected by the lecturer, without reducing real learning experiences, increasing interaction between students, improving students' critical thinking skills.

Conclusions

Based on the results of the discussion, it can be concluded several things as follows:

1. Students' perceptions of the choice of learning models that are in accordance with accounting courses are behavioristic and constructivist based learning at 90% which strongly agree, and agree.
2. The results of previous studies indicate that the combination of the behavioristic learning model is able to improve student learning outcomes in a holistic, integrated and integrated manner.
3. The combination of behavioristic and constructivist learning models is very important to be applied in Accounting courses because it can motivate, arouse interest, be active and can develop students' ability to think critically and creatively in learning, make them directly involved in learning, improve student understanding, improve character , enhance the real learning experience.

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