

# Case-Based Method Implementation in Taxation: Acceptance, Satisfaction, and Its Impact on Learning Outcomes

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## ABSTRACT

This study aims to examine the influence of the case-based method implementation on achieving outcome learning in Taxation courses. The population of this research is the 3<sup>rd</sup> semester of undergraduate students of the Department of Accounting at Universitas Andalas. Results show that the Case-Based Method (CBM) was more successful in increasing students' course learning outcomes acquisition than the conventional approach. The learning method encourages students to identify case situations and perform tax calculations at various calculation stages. Students also perceived that CBM is more capable of encouraging their teamwork skills. Students also show their acceptance and satisfaction with the approach. The findings of this study provide an important message that a well-designed and planned learning method and the process will provide better outcomes.

**Keywords:** Case-Based Method, Blended Learning, Taxation, Learning Outcomes, Acceptance

## 1. INTRODUCTION

The Taxation course is compulsory in the Department of Accounting, Faculty of Economics, Andalas University. This course is given to students in the third semester. Before taking this course, students must have passed the Introduction to Taxation course. After taking this course, there are several tax-related subjects, namely advanced taxation, tax accounting, tax management, and international taxes. The series of prerequisites and advanced courses in the curriculum structure make taxation courses crucial in building student competence in taxation.

Moreover, like financial accounting courses, taxation courses have the main character in the form of a need for conceptual knowledge and an understanding of regulations and calculation skills. The main focus of the Taxation course is that

students can understand the concept of tax collection and how the calculation mechanism follows the applicable provisions in Indonesia. Combining conceptual knowledge, understanding of regulations and the ability to calculate makes the learning process of taxation courses a challenge. Due to this course's high coverage of mathematical aspects, online learning requires appropriate methods to deal with computational problems.

Several teaching approaches have been developed by experts, including Case-Based Method (CBM) and Project-Based Learning (PjBL). Although both approaches are feasible to be applied to taxation courses, this study only focuses on implementing the Case-based Method. The case-based method is given to students to further understand the determination and calculation of tax values following regulations.

One of the core materials of this course

is Income Tax Article 21 (PPh Article 21), which is the tax imposed on individual domestic taxpayers (Wajib Pajak Orang Pribadi/WPOP) on income received or earned in the tax year or part of the tax year. This material is given during five lecture sessions after students understand the basic concepts of income tax.

An individual (Orang Pribadi/OP) is a subject of income tax which includes an individual who resides in Indonesia or outside Indonesia. The complexity of calculating income tax article 21, which is relatively high, makes this issue essential to be highlighted. In general, the expected abilities of students after completing this course are, (1) able to explain the introductory provisions of Income Tax (PPh), able to explain the provisions for calculating, depositing and reporting PPh, able to calculate PPh Article 21, 23, 4 paragraphs (2), 17 paragraphs (2C), 22, 24, 25, 26 payable and Value Added Tax, as well as being able to calculate the tax payable for Corporate and Individual Taxpayers reported in the Annual Income Tax Return. Regarding the previously formulated graduate profile (before it was revised to Educational Objective at the 2021 Curriculum Workshop), this course will help students to be able to do an excellent job in various tax professions such as teaching, tax officers (tax officers), tax planning (tax planners), tax consultant, and other tax related-jobs.

Recently, the implementation of the Case-Based Method (CBM) is still fresh in taxation courses, especially in the class taught by the author. Thus, not only being a challenge for students, the development and implementation of CBM is also a challenge for lecturers. In addition, the implementation of CBM is expected to improve the learning outcomes that have been set. Based on this description, several questions become problems in this study:

- 1) How do students perceive this CBM approach in improving their ability to master concepts, regulations, and calculations?
- 2) How do students perceive this CBM approach in improving their ability to work in teams?
- 3) How is the level of acceptance and student satisfaction with the implementation of CBM?

This study aims to get students' perceptions of their competencies and experiences while attending lectures for half a semester (in the first 2021/2022). Their cognitive competence is measured through the ability to identify the condition of taxpayers, calculate gross income, determining Taxable Income (PKP) or other Tax Bases, and withhold Income Tax Article 21 owed. Meanwhile, affective abilities are shown by the ability of students to be able to work in teams. Considering that the implementation and evaluation period is only up to the middle of the semester, this study only focuses on learning outcomes until the implementation of the mid-semester exam (UTS). Considering that the implementation and evaluation period is only up to the middle of the semester, this study only focuses on learning outcomes until the implementation of the mid-semester exam.

The results of this study are expected to provide insight into the application of CBM in subjects with characteristics such as taxation courses (i.e. conceptual knowledge, regulatory mastery, and calculation skills). This characteristic is quite common in accounting courses so that the findings of this study can be used as a reference in the implementation of CBM at other accounting courses. The results of this study are expected to improve the implementation of CBM in the future. It is possible because this study also provides an evaluation

through assessing student acceptance and satisfaction with the implementation of CBM in their classrooms.

## 2. THEORETICAL BASIS

### 2.1 Case-Based Method

Kim et al. (2006) stated that previous research found case-based learning is better than conventional learning methods, where case-based methods (CBM) can improve critical thinking skills and classroom interaction [1]. In the case learning method, students are challenged to analyze problems presented in cases, make conclusions based on limited information, make decisions on uncertain, ambiguous, and conflicting issues that simulate the real world. Case-based learning methods can train students to think holistically, linking concepts and disciplines. Various disciplines in their long history have used case-based learning, including the disciplines of medicine, law, business, education, and engineering. Of these various disciplines, education and medicine use the most case learning (Kim et al., 2006).

However, different conditions occur in the world of education in Indonesia, especially at the higher education level. The learning process is directed at the higher education level to think critically and solve problems. However, in reality, on the contrary, the teaching and learning process is still 'theory oriented' with conventional learning approaches and methods, namely lectures, questions and answers, and discussions (English et al., 2013) [4]. The discussion also runs in one direction, characterized by low audience participation and questions' cognitive level ranging from cognitive 1-cognitive 3 (C1-C3). Likewise, the mastery of the material by the presenter is still very limited in understanding the text (reading the text/PowerPoint) without understanding it more deeply, linking it with

other concepts or linking it to the 'real world'. If examined better, the above conditions are caused by various factors, both internal and external. Internal factors include the level of intelligence, lack of motivation to learn, limited time to study, and study habits that have not been effective. The external factors include learning methods, learning media, the availability and quality of teaching materials that are not adequate.

The selection of learning forms and methods is adjusted to the expected abilities determined in a learning stage following CPL. The forms of learning are lectures, responses, tutorials, seminars or the equivalent, practicum, studio practice, workshop practices, field practices, forms of research, community service and other equivalent forms of learning. Meanwhile, the learning methods include group discussions, simulations, case studies, collaborative learning, cooperative learning, project-based learning, problem-based learning, or other methods that effectively fulfil graduate learning outcomes.

### 2.2 Implementation in Taxation Course

For learning activities, the method used is a combination of SCL (Student-Centred Learning) and TCL (Teacher Centred Learning). The student-centred Learning (SCL) approach is a learning model in which students are the centre of the teaching and learning process. In the SCL concept, students are expected to be active and independent participants in their learning process, who are responsible and take the initiative to recognize their learning needs, find sources of information to be able to answer their needs, build and present their knowledge based on their needs and the sources they find. SCL is usually applied to classes that are held directly by the lecturer. The forms of activities of this SCL in class are:

- 1) Students present in groups with different chapters
- 2) Students discuss the cases given with the assumption that students have studied these cases first at home.
- 3) Students simulate the calculation and withholding of Income Tax article 21 payable in various subject cases/situations.

On the other hand, TCL is a method that makes teaching staff, namely lecturers, a source of knowledge for their students (Hoic et al., 2009) [5]. This method is used when the lecturer summarises what was learned in the final session. In addition to every discussion, the lecturer will answer after the students look for answers to the questions given. This method can also be used in assistance classes held to deepen students' understanding of course materials.

### 2.3 Research Hypothesis

In conducting classroom action research, several hypotheses are assumed to achieve the objectives of this case-based method (CBM) activity. The hypotheses formulated are

- H1: Students' ability in achieving CPMK is better with the application of the case-based method (CBM) than the conventional approach
- H2: Students' ability to work in teams will be better with the application of the case-based method (CBM) than the conventional approach

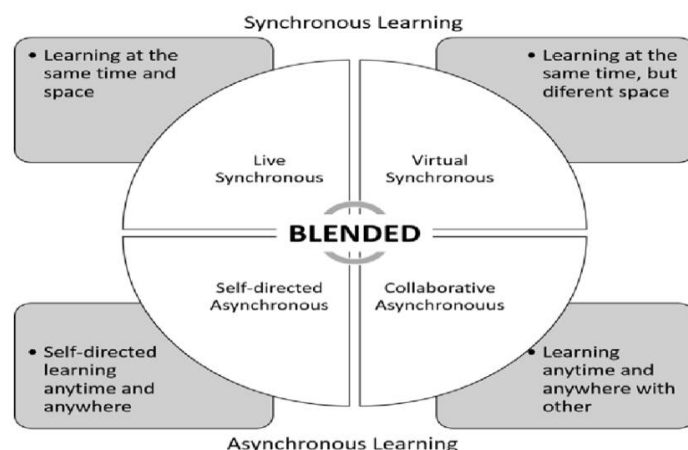
In addition to the two hypotheses above, this study has one research question to be answered. We feel that directly comparing traditional learning methods with the implementation of CBM is not appropriate for the comparison period of only a few lecture meetings. Therefore, we posed the following 1 (one) research question:

- RQ1: What is the level of acceptance and student satisfaction with implementing the case-based method (CBM)?

## 3. RESEARCH METHOD

### 3.1 Research Setting

The use of case-based learning methods and team-based project learning or a combination of both is highly preferred. Semester Learning Planning (Rencana Pembelajaran Semester/RPS) is planned by incorporating blended learning settings elements. Mixed/blended, placing the online delivery system as an integral part of the overall learning process (Martinez et al., 2003) [6]. It means that both the face-to-face process and online learning are unified. It is different from the adjunct model, which only places an online delivery system in addition (Chaeruman, 2017) [2].



**Figure 1. Learning Setting Diagram**

The learning settings above can be explained in more detail as follows:

3.1.1 Live Synchronous (LS): Learning occurs in situations where the learner and the learner are in the same location/space and time. In this case, it is the same as face to face. Learning activities in (LS) are the same as face-to-face learning activities, such as lectures, discussions, direct exposure, etc.

3.1.2 Virtual Synchronous (VS): Learning occurs in situations where the learner and the learner are simultaneously but in different places. Learning activities in VS can occur through synchronous technology such as video conferencing, audioconference or web-based seminars (webinars).

3.1.3 Self-Directed Asynchronous (SDA): learning occurs in online independent learning situations. Learners can learn anytime, anywhere, according to their respective conditions and learning speed. Learning activities in SDA include reading, listening, watching, practising, simulating, and utilizing particular relevant learning objects (digital materials). More learning activities occur online.

3.1.4 Collaborative Asynchronous (CA). Learning occurs in collaborative situations (involving more than one person), between learning participants and other learning participants or other people as resource persons. CA learning activities are facilitated by discussion forums, mailing lists, assignments, etc.

In this course, three learning settings will be used, namely Live Synchronous (LS), Virtual Synchronous (VS), Self-Directed Asynchronous (SDA), and Collaborative Asynchronous (CA). Case-based method (CBM) activities will be carried out in a blended manner, whereas for the 3-4th meeting, the conventional approach without specific manipulations will be implemented, and the case-based method (CBM) approach will be implemented at meetings 5-7. Face-to-face meetings are conducted online via the Zoom application.

### 3.2 Research Subjects

The research subjects in this activity are 3rd-semester students (first semester in

2021/2022) in the Taxation course. There are usually around 18 students enrolled in the taxation class taught by the author in this elective course. Students will be given several cases with varying tax subject conditions. After that, students will discuss adjusting to the conditions and regulations following the Income Tax Article 21 taxation rules with other classmates.

### 3.3 Performance Indicators/Data Type

Several indicators were developed to test student abilities related to the achievement of CPMK, teamwork, and evaluation of the CBM carried out. Indicators for CMPK achievement include conceptual indicators, mastery of regulations, and calculation skills. The performance indicators in this case based method (CBM) activity are:

- a. Students can identify the condition of the taxpayer (KWP)
- b. Students can determine the taxpayer's gross income (PB)
- c. Students can calculate the taxpayer's taxable income as a basis for imposition (PKP)
- d. Students can calculate income tax payable and withhold (PT)
- e. Students show their perception of working in teams (KJS)

In addition, another indicator of the successful implementation of CBM is the perception of the students involved and their acceptance (PEN) and satisfaction (KEP) of the implementation of CBM.

### 3.4 Data Collection and Data Analysis

In carrying out this case-based method (CBM), students are expected to achieve the CPMK that the study program for taxation courses has determined. Therefore, this case-based method activity will facilitate students in achieving CPMK, which is evaluated in the middle of the semester through the following parameters:

- (i) Assessment of the ability of 5 indicators. The value of student answers is converted on a scale of 1-5.
- (ii) Students' perceptions of improving their ability to work in teams
- (iii) The success of the project-based learning carried out

In the seventh week, monitoring and evaluation of the case-based method (CBM) implemented in the taxation course were carried out. The evaluation was carried out on the acceptance and level of student satisfaction with the method applied.

Data collection was carried out using a questionnaire via Google form, which will assess the extent of students' understanding of conceptual mastery, regulation, and calculation skills in Taxation subject learning materials until mid-semester with an emphasis on Income Tax article 21. Data analysis will be carried out descriptively, and different tests (t-test) on learning achievement between the two learning approaches given. This analysis will provide an overview of the level of understanding of various indicators described previously. All assessment indicators use a Likert scale of 1-5, including students' cognitive abilities for five indicators described previously.

## 4. RESULT AND DISCUSSION

### 4.1 Respondents and Descriptive Statistics

Respondents in this study were students of taxation class (Taxation/III.Int), which the author taught. There are 18 students in the class, with seven men (38.89), while 11 women (61.11%) are. Descriptive statistics related to the perception of student performance on learning achievement on several indicators are as follows:

From table 4.1 below, it can be seen that there are differences in the total average value of all subject learning achievement indicators (CPMK). In the ability to identify the condition of taxpayers, the average perceived achievement of students is 3,574 (SD: 0.819) on the conventional approach compared to 3,981 (SD 0.826) on the CBM approach. In calculating gross income, the perceived value for conventional learning is 4.167 (SD: 0.840) compared to 4.452 (SD: 0.548) with CBM implementation. Likewise, for the ability to determine taxable income and other tax bases, it is 4,000 (SD: 0.823) in conventional learning compared to 4,306 (SD: 0.613) when CBM is implemented. Finally, there is a difference in calculating Article 21 Income Tax withheld. In learning with the conventional approach, the average score of students was 3,222 (SD: 1,104) compared to 3,556 (SD: 1,094) when the CBM approach was implemented. The standard deviation value, which tends to be smaller in the CBM approach, also shows the success of this method in encouraging the equal distribution of student abilities.

In addition to cognitive indicators, another aspect assessed from the implementation of CBM (compared to the conventional 3-4 meeting approach) is the student's perception of their ability to work in teams. Table 4.2 describes descriptively the differences between the two approaches. One of the CBM implementation actions carried out in this class is working in a team. Students who are formed in groups are asked to solve cases in groups. Compared to the initial lecture (meetings 1-4), which was completed through a full tutorial, students perceived the implementation of CBM in the learning process as increasing their cooperation (working in a group) skills. As shown in table 4.2, students perceived their teamwork skills to be higher in the CBM approach (Mean= 4.139, SD= 0.831) compared to 3,792 (SD: 0.823) in the conventional lecturing approach.

**Table 4.1**  
**Descriptive Statistics for Learning Outcomes Indicators**

Construct	Item Code	Min (Pre)	Min (Post)	Max (Pre)	Max (Post)	Mean (Pre)	SD (Pre)	Mean (Post)	SD (Post)
<b>TPC</b>	<b>TPC 1</b>	2	3	5	5	3.500	1.225	4.167	0.820
	<b>TPC 2</b>	3	3	5	5	3.833	0.820	4.167	0.820
	<b>TPC 3</b>	3	3	4	5	3.389	0.412	3.611	0.837
	<b>Total</b>					<b>3.574</b>	<b>0.819</b>	<b>3.981</b>	<b>0.826</b>
<b>GI</b>	<b>GI 1</b>	3	5	5	5	4.722	0.885	5.000	0.000
	<b>GI2</b>	2	3	5	5	3.889	0.818	4.222	0.823
	<b>GI3</b>	3	3	5	5	3.889	0.818	3.833	0.820
	<b>Total</b>					<b>4.167</b>	<b>0.840</b>	<b>4.352</b>	<b>0.548</b>
<b>TI</b>	<b>TI 1</b>	3	4	5	5	4.222	0.823	4.556	0.409
	<b>TI 2</b>	3	3	5	5	3.778	0.823	4.056	0.817
	<b>Total</b>					<b>4.000</b>	<b>0.823</b>	<b>4.306</b>	<b>0.613</b>
<b>TP</b>	<b>TP 1</b>	3	3	5	5	3.500	0.850	3.944	0.817
	<b>TP 2</b>	2	3	5	5	3.333	1.227	3.611	1.226
	<b>TP 3</b>	1	3	4	5	2.833	1.235	3.111	1.238
	<b>Total</b>					<b>3.222</b>	<b>1.104</b>	<b>3.556</b>	<b>1.094</b>

**Table 4.2**  
**Descriptive Statistics for Perceived Cooperation Skill**

Konstruk	Kode Item	Min (Pre)	Min (Post)	Max (Pre)	Max (Post)	Mean (Pre)	SD (Pre)	Mean (Post)	SD (Post)
<b>COOP</b>	<b>COOP1</b>	3	5	3	5	3.889	0.818	4.111	0.818
	<b>COOP2</b>	3	5	3	5	3.778	0.823	4.000	0.816
	<b>COOP3</b>	3	5	3	5	3.833	0.820	4.111	0.818
	<b>COOP4</b>	3	5	3	5	3.667	0.831	4.333	0.831
	<b>Total</b>					<b>3.792</b>	<b>0.823</b>	<b>4.139</b>	<b>0.831</b>

## 4.2 Hypothesis Testing Results and Discussion

This study aims to test implementing the Case-Based Method approach in taxation courses. Taxation courses are subjects with conceptual mastery, regulation, and calculation skills. Hypothesis 1 predicts that the CBM approach will result in better course learning outcomes than the conventional approach through tutorials. Descriptive data as described in Tables 4.1 and 4.2 have shown that student learning outcomes on four indicators are higher than the achievements of the conventional approach. Likewise, students' perceptions of the ability of

the CBM approach encourage students' ability to work in teams. A summary of the results of hypothesis testing is presented in table 4.3 below:

**Table 4.3**  
**t-test result**

Construct	t-value	p-value	Decision
KWP	2.301	0.042	Supported
PB	1.303	0.210	Not Supported
PKP	2.021	0.037	Supported
PT	2.344	0.048	Supported
LO's (ALL)	2.024	0.036	Supported
KJS	2.675	0.002	Supported

As can be seen in table 4.3 above, of the four indicators of cognitive ability, only the ability to calculate the gross income of taxpayers in various case conditions does not differ significantly, while the ability to identify the situation of taxpayers, calculate PKP or other tax bases, and Article Income Tax 21 payables differ significantly. Students' perceptions of the ability of the CBM approach to building teamwork are also statistically significant. In general, these findings show support for hypothesis 1 and hypothesis 2.

These findings indicate that the CBM approach is more successful in improving students' cognitive and affective abilities than conventional learning approaches. The case-based learning approach makes students better trained to identify problems and situations given, including the underlying regulation in a specific situation. In addition, practice through cases has proven to support students' knowledge and skills, including map calculation formulas and determining tax payable. This study shows that the expected final result (determination of income tax payable) becomes more precise through understanding the calculation map. Although this study was only conducted in taxation classes, the findings of this study can be a reference for various other accounting courses that have similar characteristics.

In addition to supporting learning achievement in the cognitive aspect, the study results also show that students also perceive the implementation of CBM as being more able to encourage their cooperative abilities. Group work in learning is a method that brings together several learners to carry out assignments, discussions and solve cases given by the teacher

so that the learning objectives are achieved. According to Gordon (Moeslicatoen, 2004: 138), group work is a learning activity that allows children to learn to be able to organize themselves in order to build friendships, participate in group activities, solve problems faced by groups and work together to achieve common goals.

Misra and Mazelfi (2020) [3] identify various advantages of group learning. Among these advantages is that learning in teams will provide ample opportunities for students to express ideas, responses, and experiences. As a consequence, students will be more active in the learning process. Furthermore, this situation will create learning activities that will be more interesting. These various benefits will be obtained optimally through learning with CBM appropriately.

In addition to testing case-based learning method effectiveness, this study also aims to obtain student opinions about its implementation in their classrooms. As shown in Table 4.4 below, it can be seen that students are very accepting of the implementation of this learning approach in their classrooms. This result is indicated by the total mean score of 4,537 (SD: 0.422) out of a scale of 5. Although we did not classify these perceptions into several categories, the number 4,537 indicates a very high level of acceptance. Their responses about the acceptance (PEN) and satisfaction (KEP) on the implementation carried out by lecturers are presented in table 4.4 below:

**Table 4.4**  
**Descriptive Statistics for Acceptance and Satisfaction**

Construct	Item Code	Min	Max	Mean	SD
ACC	ACC 1	4	5	4.222	0.429
	ACC 2	4	5	4.667	0.416
	ACC 3	4	5	4.722	0.421
	Total			4.537	0.422
SAT	SAT 1	3	5	4.000	0.816
	SAT 2	2	5	3.500	1.225
	SAT 3	2	5	3.611	1.226
	Total			3.741	0.956

Table 4.4 also presents student satisfaction with the implementation of CBM in their classrooms. On average, the level of

student satisfaction is 3,741 (SD = 0.956) out of a scale of 5. This level of satisfaction is relatively high, although not as high as student acceptance of the learning method. The level of satisfaction at this level can be rationalized considering that this study is the initial implementation of the CBM method in the taxation subject taught by the author. Predictably, the level of satisfaction is influenced by the structure of the case, the timing of application, and other factors. These findings provide an important message for the implementation of CBM more comprehensively and with a more precise structure.

## 5. CONCLUSION

This study examines the effectiveness of case-based learning methods in achieving course outcomes. In a classroom action study for half a semester, empirical evidence was obtained that the case-based learning method was more successful in increasing students' CPMK acquisition than the conventional approach through tutorials without a particular design such as CBM. The learning method encourages students to identify case situations and perform tax calculations at various calculation stages. In addition, this method is perceived by students to be more capable of encouraging their teamwork skills.

The findings of this study provide an important message that specially designed and planned learning, one of which is through a case-based method, will provide better outcomes. The structured arrangement of cases with different situations and complexities has encouraged students to work more creatively and better. The findings of this study imply that the application of the CBM approach is feasible and highly for taxation courses in universities.

Several limitations can be identified from this study. First, the evaluation is conducted in the middle of the semester, so the implementation of CBM is still minimal. This condition may affect students' perceptions, especially regarding the ability to cooperate and evaluate (acceptance and satisfaction) on CMB implementation. Second, the number of class

participants is limited because it is only carried out in 1 tax class that the author supervises. More comprehensive application is not possible because the implementation of CMB is not yet uniform between classes/between lecturers.

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