

# Case Base Method: A Collaborative Learning to Improve Students' Soft Skills in Business Analytics

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## ABSTRACT

This research aims to investigate the readiness of students using a case-based method in Business Analytics course subject in the Department of Management, Universitas Andalas. Since Business Analytics is a new course subject offered to the students in 2021 at the Management Department, the readiness of students to learn this subject must be identified and prepared. Hence, the teacher will obtain information on the suitable materials and learning approach conducted in the class. Another objective of this research is to determine the extent of the case-based method has contributed to improving students' interests and soft skills. The survey has been addressed to 97 students who enroll in business analytics class by distributing questionnaires related to implementing a case-based method in the learning approach. Based on these two objectives, the finding shows that students are interested and ready to learn this subject collaboratively. Moreover, the teacher has utilized a case-based method to assist and improve students' soft skills in Business Analytics.

**Keywords:** Case-Based Method, Business Analytics, Soft Skills, Collaborative Learning

## 1. BACKGROUND

Students' soft skills must be sharpened and equipped by technological aspects to prepare valuable graduates ready to compete with others. However, during Covid-19, distance learning has changed from offline meetings into online meetings. This becomes a challenge for teachers and students who previously never do online learning. The challenge will be addressed to teachers and students where the former is to handle the technology for teaching, and the latter is self-regulation [1].

Business Analytics is a relatively new and compulsory course subject for the Management Department in Universitas Andalas. Thus, students need to prepare themselves since the course is more to computer science rather than business skills. The integrated approach of the case-based method in learning this subject is a good starting point for deep learning related to business analytics. However, students should be more familiar and ready to learn programming and coding in business analytics.

A case-based method is an approach where the learning emphasizes the continued, interactive, effective, and innovative learning process based on the needs of the real industrial world. In addition, CBM also affects an integrated approach starting from curriculum design, the

learning objectives and learning outcomes, the strategy of education, learning method design, grading procedures, and the educational environment [2].

So far, the teaching method in this subject is a mix between teacher-centered learning (TCL) and student-centered learning (SCL). The form of TCL is lecturing, whereas the teacher explains the material for 60 minutes. While SCL, presentation with a group and case study is done by students. Sometimes, if needed, students also need to do a simulation in the class to get a comprehensive understanding [3].

### 1.1. Student Grading Systems

In this course subject, the grading system uses summative and formative assessment. The summative and formative combination also creates a positive and pleasant ambiance in the class. Students are assessed not only at the examination period, which is mid-term exam and final exam, but also at the process of learning from week 1 to week 16. This learning method has become an alternative solution for the student to boost their moods and interests for every meeting due to formative and summative assessment.

In addition, Houston et.al [4] argued that summative assessment practices were broadly criticized as distanced

from the learning process. Recently, the discussion has refocused on the potential complementary characteristics of formative and summative assessment purposes since the assessment was repositioned as a communication process about learning. Through a variety of frequent assessment events, the judgment of student performance is accompanied by rich feedback. The table has been shown below to see how the grading system will contribute to the learning process.

**Table 1.** Students grading system

No	Component	Weight
<b>1. Summative Assessment</b>		
a.	Mid Term Exam	25%
b.	Final Exam	25%
c.	Group Assignments	15%
d.	Discussion Participation	10%
<b>2. Formative Assessment</b>		
a.	Interpersonal skills dimension	10%
b.	Interpersonal soft skills attribute	7%
c.	Attitude	8%
Total		100%

This year when the Covid-19 pandemic occurs, it is hoped that the online learning systems will not decrease the understanding of students to learn the course material. The teacher only needs to handle and find the solution to boost students' moods so they will study collaboratively in the assignment and independently for exams and quizzes. According to Williams and Williams [5], there are five key ingredients impacting student motivation, namely, students, teachers, content, method/process, and environment. If these five key ingredients are fulfilled and carried out properly with their responsibilities, the harmony of the learning process can be achieved in the online learning class.

### **1.2. Research Objectives**

The research objectives are to investigate students' readiness in business analytics learning and to find out the extent of case-based methods can improve students' soft skills. To make it more detailed, the research objectives are as follows;

1. To investigate the readiness of students at the Management Department to learn business analytics.
2. To seek the determinants and characteristics of students to learn business analytics
3. To explore the extent of the case-based method in improving the student's soft skills.

## **2. OUTCOME TARGETED STRATEGY**

During Covid-19, the learning method between teacher and students has been modified into long-distance learning. This method has two forms; those are synchronous and asynchronous [6], [7]. The first one consists of live synchronous and virtual synchronous, while the latter consists of self-paced asynchronous and collaborative asynchronous. Live synchronous is a learning process where both teacher and students are in the same place and time. Examples of this are lecturing, discussion, etc. Virtual synchronous is a learning method where teacher and students are at the same time but in different places. An example of this is a conference. Self-paced asynchronous is an online learning process that is done by the student himself. An example is doing an online simulation. The last one is collaborative asynchronous, where a teacher and students work collaboratively, such as discussion forum.

Thus, the online learning modes have made teachers focus more on how to make students achieve the concept [8]. One of the ways is to develop cases that are believed will add the understanding of the students to face the real-world issues. Zydney [9] adds that blended synchronous environments offer benefits to learners in terms of flexibility. Still, there are technological and pedagogical challenges in implementing this approach.

This course subject will use three of them, and those are virtual synchronous, self-paced asynchronous, and collaborative asynchronous. For each of them, between teacher and students will utilize this learning method through ILearn. ILearn is an LMS that eases the online learning process between teachers and students.

The outcome targeted strategy of this research is as follows;

1. The analysis of students' characteristics to learn business analytics.
2. The roles of case-based method to assist the student's soft skills.

To achieve these outcomes, the teacher does several steps to take. First, to know the readiness and the characteristics of students, the teacher will distribute questionnaires to seek preliminary information of students' ability in computer technology and programming. This is very important because the concept of understanding and implementation of business analytics relies on the basic background of students. Second, the teacher determines the suitable cases for the case-based method. This case-based method will assist students in understanding more about business analytics, especially in programming.

### 3. METHODS

This research uses a qualitative design where the author finds the answers proposed in this research through questionnaires and literature review. The respondents used in this survey are 97 students from the Management Department, Universitas Andalas. The respondents are asked to fill in the questionnaires to describe best the readiness of students to learn business analytics through the case-based method.

Based on the survey conducted to seek information about student's characteristics are depicted as follows:

1. The way of study
2. The ability in computer technology
3. The perception of business analytics
4. The acceptance of students using the case-based method in learning
5. The ability of student's self-study in this course subject.

### 4. RESULT AND DISCUSSION

#### 4.1 The Readiness of Students to Learn Business Analytics

To get a better understanding of students in learning business analytics, the teacher has asked several questions to the students as respondents. In this chart, it is depicted on how students' ability in computer technology.

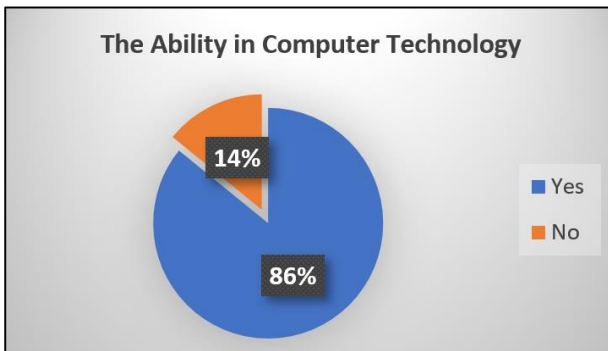


Figure 1 The ability of students in computer technology

From the chart depicted, it can be seen that students who have the ability in computer technology are only 14% while the other 86%, students have no ability at all in computer technology. It means that learning business analytic needs extra effort since most students do not have the adequate ability in computer technology.

Figure 2 shows that student who can do self-study in learning business analytics is almost 45%. Other students expect to learn the materials from lecturing, tutor, and other sources, which can assist students to understand

more. To learn programming with the basic knowledge in business is not easy. Therefore, to assist students in handling and mastering programming, the teacher should equip students with cases for all the topics. This will help students focus more on finding a solution.

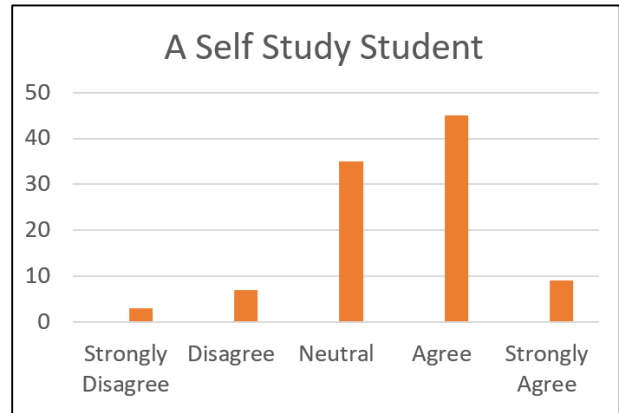


Figure 2 A self-study student

The interest of students to learn in Information and technology (IT) issues become the determinant to find out whether students can be successful in learning programming in business analytics. The student's interest will assist the concept understanding faster than students who have no interest in IT issues. Therefore, the characteristics of students to know further about the background, interest, and insights will assist the teacher to run the class using the case-based method.

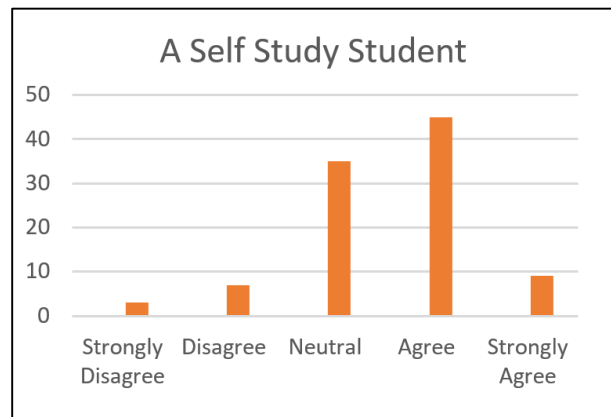
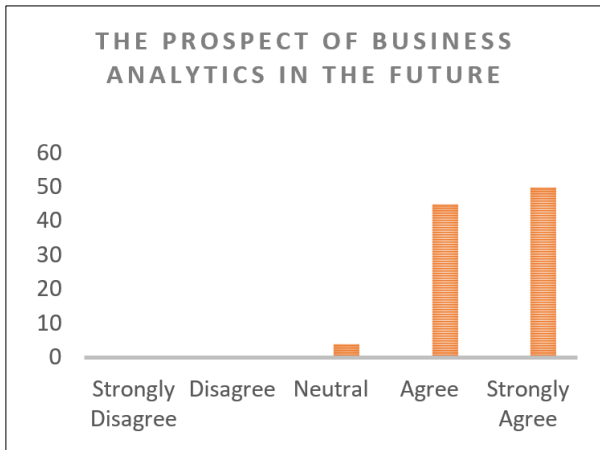
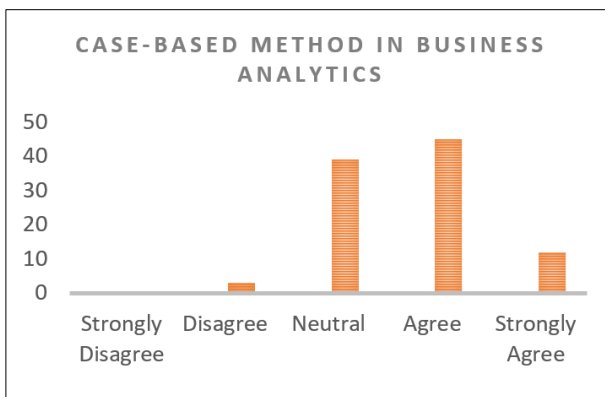


Figure 3 Student's interest in IT



**Figure 4** The prospect of business analytics in the future

The prospect of business analytics in the future is promising since digital technology has lured all disciplines nowadays. Therefore, to equip the ability of students in business and management, the concept of business analytics needs to be introduced and taught to students. This is very crucial because when students graduate from their studies, they will compete with other graduates from national and international. Hence, their soft skills also need to be trained and improved. From the chart, it can be seen that almost 96% of students believe that business analytics will improve their competencies since this knowledge will be used in the future.



**Figure.5** Implementation of CBM in business analytics

To improve student's understanding and concept about business analytics, the learning approach using the case-based method has been chosen in the class. More than 65% of students agree that using CBM will help them to learn more collaboratively within a group. Thus, the teacher will assign some cases in several meetings to assess and evaluate students understanding about business analytics.

**4.2 Implementation of Case-Based Method to Improve Students' Soft Skills**

Case-based methods have been widely used in business course subjects. The aim of learning through

CBM is to ease and implement the theory and concept of students obtain while learning into real-world cases. Hence, the teacher should focus on how CBM will improve students' ability and soft skills in learning business analytics.

The use of CBM in daily learning will improve students' understanding by almost 65%. In this course subject, the teacher will add some cases related to what students have learned to assess the student's competencies. The cases will be one of the teacher justifications in grading the students. Students who can answer correctly and give any solution in their answers will be marked twice. The first one is related to the competencies about the course subject, and the second one is the use of their soft skills in answering and giving solutions.

In brief, the case-based method improves students' soft skills as follows:

1. Analytical thinking in answering and giving solutions for each case
2. Public speaking in arranging words and sentences to explain what the model and program interpretation
3. Collaborative work with other members since the case-based method can not be conducted by himself.
4. Leadership in a team since the case-based method will have some scenario which need to be role played by the team.

These soft skills will contribute value to students since they are trained to be well prepared in class to answer all the cases given.

In addition, based on the information gathered from the literature review, the semester learning plan will be revised accordingly to online distance learning using technology development in materials delivery. It is hoped that the semester learning plan will be implemented in the online learning mode after considering several factors that have been mentioned and explored previously.

**5. CONCLUSION**

The conclusion that can be withdrawn from this research is; the readiness of the student to learn business analytics is quite high, but unfortunately, this is not supported by the background of the students in computer technology. Moreover, it is the very limited student who can do self-study, while self-study is essential to encourage students ability in learning programming. One of the best solutions that can be offered to overcome this issue is by giving a case-based method in the learning approach.

Using the case-based method in the class will improve students' soft skills in terms of analytical thinking, public speaking, collaborative working, and leadership in a team. This soft skill will be a value-added for students when they graduate and seek job vacancies. Therefore, the use of the case-based method in learning mode, either online or offline, will be beneficial for both teachers and students.

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The author has contributed equally to this research. The first author has conducted to manage the semester learning plan from the indicators which have been set up in this research, while the second author also creates the focus on learning development, especially in the technology tools. Both authors create case-based method to make students understand more to the course subject and to boost students' moods in online learning.