# The Covid-19 Pandemic and Students' Perception on the Online Case-Based Learning: The Case of One Online Course

## SHOFIA AMIN<sup>1\*</sup>, FITRI WIDIASTUTI<sup>2</sup>, AND SUMARNI<sup>3</sup>

#### **Abstract**

Case-based learning has been applied and proven to be effective in increasing students' class participation. However, studies on how this method is used through online learning are still limited. Whereas online learning activities have been done during the Covid-19 pandemic, but most students seem to become passive during an online class. This study investigated students' perceptions of the case-based learning method and how this method could be effective. Using a mixed-method design, the data were collected through questionnaires in Google forms from 42 students of an online Change Management class and students were asked to write their thoughts and perceptions. The data, then, were analyzed using SPSS software. This study indicated that case-based learning is helpful for students' academic and characters improvement. The students found the method beneficial because the lecturers implemented the method well. This study suggested that the key success of case-based learning in an online class depends on the lectures and the online learning facilities.

### **Keywords**

Case-based learning, change management course, online learning, mixed methods

#### **Article History**

Received 9 February 2022 Accepted 4 April 2022

#### How to Cite

Amin, S., Widiastuti, F., & Sumarni. (2022). The covid-19 pandemic and students' perception on the online case-based learning: The case of one online course. *Indonesian Research Journal in Education* | *IRJE* |, 6(1), 71–90. https://doi.org/10.22437/irje.v6i1.17216

<sup>&</sup>lt;sup>1\*</sup> Associate Professor, Faculty of Economics and Business, Universitas Jambi, Jambi, Indonesia, Corresponding author's email: shofiaamin@unja.ac.id

<sup>&</sup>lt;sup>2</sup>Lecturer, Faculty of Economics and Business, Universitas Jambi, Jambi, Indonesia

<sup>&</sup>lt;sup>3</sup>Lecturer, Faculty of Economics and Business, Universitas Jambi, Jambi, Indonesia

#### Introduction

The worldwide pandemic, COVID-19, has affected every aspect of human life, including the educational field. Due to the pandemic, the government established a regulation regarding the health protocol to prevent the spread of the virus that demanded citizens reduce any direct social interaction or face-to-face teaching (Yulianti & Mukminin, 2021). The regulation, then, demands universities to carry out online learning activities. In Indonesia, online learning activities have been carried out for almost two years. Unfortunately, online teaching and learning activities do not always run well. There are many challenges that lecturers must face when teaching students online: most students become passive and less active in online classes (Hermanto & Srimulyani, 2021). This challenge might happen because of the absence of the offline classroom atmosphere where lecturers and students can interact directly and spontaneously. When students are home, they might be more relaxed and pay less attention because they only interact through their computer screens (Pelikan, Korlat, Reiter, Holzer, Mayerhofer, & Schober, 2021). In addition, technical problems such as unstable internet signals and other technical problems related to students' and lecturers' electronic devices are also challenges in online learning (Hadiyanto, Failasofah, Armiwati, Abrar, & Thabran, 2021).

For this reason, lectures or teaching staff must be more selective in choosing suitable methods to enhance students' participation during online classes. Most of the learning practiced today is lecturing. When attending lectures, students mostly only listen and take notes (Angela, Tjun, Indrawan, & Krismawan, 2018). Thus, lecturers should consider a learning method that can make every student willing to participate. One of the methods that might be the most suitable method to increase students' participation is Case-Based Learning (CBL).

Case-based learning is a constructivist-oriented learning approach with the active participation of students to form their knowledge (Silva, Bispo, Rodriguez, & Vasquez, 2018). In the CBL method, students are given a realistic problem scenario or a case to know how students interactively try to solve the case (Sherwood, 2004). By the cases, students have opportunities to practice their abilities. Cases are designed to be closely related to problems they learned and might face in workplaces (Zabit, 2010). In addition, a case might link several concepts at once for students to practice their abilities. In this case, students could solve realistic problems from their field of professional practice rather than only being taught through lectures. Students are expected to define problems, identify related gaps in their knowledge, collect relevant information, and propose solutions (Wospakrik, Sundari, & Musharyanti, 2020).

CBL has a strong history of successful implementation in medical, law, and business schools and is increasingly used within undergraduate education, particularly within pre-professional majors and the sciences (Lee, 2012; McLean, 2016; Mrudula, Rajneesh, & Challa, 2017). It has been used in higher education for more than 40 years to teach the practical application of knowledge in a real-world setting. Some studies found this method effective in higher education, especially in the business and management departments (Bossche, Segers, Gijbels, & Dochy, 2004; Silva et al., 2018). The method might fill the void

in business and management fields as the fields require multifaceted practices for real-world problems as much as or more than any other field.

Besides, the business and management departments have been increasingly criticized for being too theoretical, too specialized, and not developing the necessary expert knowledge in students over the past decades (Wospakrik et al., 2020). The critics said most business and management department is not promoting the learning needed to build essential business knowledge and competencies and not preparing students for the realities of business life (Bailey, Sass, Swiercz, Seal, & Kayes, 2005; Scherpereel & Bowers, 2006). It is found that most students become technically proficient within their discipline but never learn to effectively share, implement, and integrate the discipline-specific knowledge (Falloon, 2020). Markulis, Strang, and Howe (2005) also found that most business leaders report that graduates cannot apply the knowledge in the interdisciplinary environment. Universities are continued to be demanded to meet the needs of real work-life (Vohra, Rathi, & Bhatnagar, 2015). These demands of the real work-life that required graduates to understand theories of the knowledge and the knowledge of applying them in workplaces should make universities aware of preparing the students better.

With this situation in mind, using a case-based learning method might be helpful to accomplish the demands and increase students' participation during online learning. The method is deemed worthy of being applied in an online business and management class. However, studies of online case-based learning, specifically in the Indonesian management field, are still limited. Therefore, this study focused on students' perceptions about learning by case-based learning method in an online class and how the method could be effective for online learning. The study intended to answer the following research questions:

- 1. What are students' perceptions on case-based learning in the Change Management course?
- 2. How can the case-based learning method be effective in online classes?

#### Literature Review

### Case-based learning (CBL)

Case-Based Learning (CBL) is an instructional learning method oriented towards a learning problem-solving approach. This method involves guided inquiry and is grounded in constructivism, whereby students form new meanings by interacting with their knowledge and the environment (Lee, 2012). CBL is also an active teaching strategy that allows students to take the lead and become responsible for their learning process (Silva et al., 2018). It is an established approach used across disciplines where students apply their knowledge to real-world scenarios and promote higher levels of cognition. It uses cases – hypothetical or real-life problems – to supplement theoretical knowledge. Students are given cases to solve in this learning strategy, allowing for practical application of the concepts learned in class (Williams, 2005). Students could have the opportunity to work collaboratively and develop the ability to learn (Gwee, 2009; Hmelo-Silver, 2004; Woods, 2006), solve problems through an investigative process, analyze data and propose solutions (Silva et al., 2018).

CBL can encourage students to use their prior knowledge to make decisions focusing on problem-solving (Silva et al., 2018), making them more reflective and responsible for their learning (Hmelo-Silver, 2004). CBL allows students to be exposed to a problem and develop a sense of self-direction in search of the knowledge required to solve it (Silva et al., 2018). It is an educational strategy that considers the complex nature of learning (Savin-Baden & Major, 2004) and values the practical experience of learning.

There are several benefits of using CBL in the classroom. Williams (2005) described that CBL is useful to: utilize collaborative learning, facilitates the integration of learning, develops students' intrinsic and extrinsic motivation to learn, encourages learner self-reflection and critical reflection, allows for scientific inquiry, integrates knowledge and practice, and supports the development of a variety of learning skills. Mutmainah (2008) also mentioned four advantages of using CBL:

- Improve problem-solving skills because cases allow students to experience dealing with various problems in organizations.
- Improve students' understanding of the material because cases present a variety of relevant issues and provide incentives for students to be more involved in learning.
- Improve students' ability to interpret something because cases require students to integrate various concepts of learning materials to solve a problem.
- Improve students' contribution in learning because cases provide an opportunity to gain experience in presenting ideas to others and provide an experience that can be applied in workplaces.

Moreover, Handoko (2005) mentioned that a case is a good case if it has the following characteristics: 1) the case describes a managerial situation in which a decision must be made (immediately), but does not reveal the result; 2) the cases are written to encourage the active participation of students in analyzing the situation; 3) the case materials are written to bring out various views and analyses developed by students; 4) the case consists of the central part that discusses other issues and information; 5) the cases usually do not ask questions because understanding what should be asked is important for case analysis.

Furthermore, lecturers can choose cases from existing sources or create their own. When creating cases, lecturers must ensure that cases are short, relevant, and interesting to students, based on factual information, provoke reflection, and have a learning purpose. Lecturers are facilitators and supervisors during case-based learning, supporting and providing assistance as required. During group work, lecturers can ask groups questions to ensure that they focus on tasks to identify struggling groups. When cases provide a context for the improvement, students' understanding can also be improved. As the strategy encourages learning through action and problem-solving, student retention of information is strengthened.

#### CBL as a student-centered learning process

It is still quite difficult to change students' behavior by just being present, listening, and taking notes. Ideally, a good learning process involves a discussion or question and answer section. Hence, students must be prepared with the topics to be discussed before entering the class to achieve a good learning process. Thus, they suppose not to use the class

only as a place to sit, listen, and take notes, but to ask questions and discuss the topic of discussion. This kind of process is an ideal process to be applied in lectures. The process requires students' independence in seeking student-centered learning (SCL) (Slavin, 2008). Student-centered learning can improve the quality of students as it encourages and motivates students to develop creativity and independent learning abilities (Aliusta & Ozer 2016). One method that embeds the SCL process is case-based learning (Wospakrik et al., 2020).

Case-based learning is a student-centered learning process where students learn through problem-solving. The problems are real-world problems, and students need to identify what knowledge is required to solve the problem (Boud & Feletti, 1997; Peterson, 2004). The problems should be designed in a complex and ill-structured way so that students cannot solve them right away; the students need to find new information to analyze the situation and come up with possible solutions (Hansen, 2006; Milne & McConnell, 2001). Silva et al. (2018) emphasize that CBL can improve and optimize educational outcomes because it is student-centered and promotes reflective learning. CBL uses factors such as the subject matter, students, teachers, and organizations (Savin-Baden & Major, 2004). The method allows the student to be the center of learning and facilitates the development of self-awareness. It encourages students to use critical thinking skills to identify and narrow an issue, develop, and evaluate alternatives, and offer solutions (Nkhoma, 2017).

Furthermore, CBL is based on the assumption that students learn best in teams, engaging in cooperative and self-directed learning (Hansen, 2006; Kloppenborg & Baucus, 2004). Problem-solving as teamwork, especially in a case of a challenging and complex problem, requires all team members to participate in discussions and engage in information sharing. This process can be quite frustrating for students because they need to take an active role in learning (Peterson, 2004). However, if successful, through the CBL process, students gain a deeper understanding of the subject and, afterward, will remember what they learned (Silva et al., 2018).

### CBL in business and management education

There has been great interest in the potential of case-based learning for business and management education (Sherwood, 2004). The application of CBL can be seen as a response to criticism that business and management education is disconnected from practice and students have difficulties applying theories and concepts to complex real-world problems (Kloppenborg & Baucus, 2004; Smith, 2005). Most curricula at business and management now analyze real-world case studies. Some lecturers have involved students with real-life data and provided opportunities for students to put themselves in the decision maker's shoes (Barkley, Barkley, Cross, & Major, 2005). Business and management students will ultimately grapple with problems within their professional lives, and thus a case-based learning method presents a close-bond relationship between student needs and pedagogy. The case-based learning method offers the potential for real-life experience and the opportunities to design relevant context for the problem-solving situation (Pfeffer & Fong, 2002). The use of CBL in business and management education allows students to experience the context of professional life by solving problems related to the issues that arise in a manager's professional activity (Hmelo-Silver, 2004).

For management education, the most important CBL benefits are 1) the educational focus is on practice-relevant knowledge; 2) knowledge can be drawn from multiple disciplines that increase students' abilities to combine knowledge from different business areas; 3) problems are solved in teams, which develops students' teamwork, leadership, and interpersonal skills; and 4) students are motivated to learning (Smith, 2005). CBL is one of the active teaching strategies to make management students' learning more meaningful. It helps students reflect on their own needs (Silva, 2016) and enhances their ability to develop independence as learners (Gwee, 2009).

Moreover, there are some aspects considered to the CBL strategy that facilitate the understanding of its use in management education (Sherwood, 2004; Silva et al., 2018):

- The studied problem. Discussing a problem is the central focus of CBL, given that the search for possible solutions to a problem can contribute to the development of students' skills.
- Curriculum. The curriculum for CBL can be structured to integrate with other disciplines, grouped by thematic blocks. In management programs, CBL can be implemented in an interdisciplinary manner in various courses during the same period or semester; however, it can also be used in a specific course, as is the case with the proposal presented in this paper. The professor or instructor of a certain course that employs the CBL strategy can collaborate with teachers from other courses to enrich the problem with information drawn from true-to-life professional situations.
- Students and teachers. Unlike conventional teaching strategies, in which the student is a passive recipient of information from the teacher, CBL involves a change in these roles. The strategy requires the student to take an active role in his or her education. The teacher assumes the role of tutor and moderator, facilitating the group's work and communication among its members.
- Process. The process considers a student-centered approach that encourages students to develop their independent research skills and directly connect what they learn and their needs as learners (Macdonald & Savin-Baden, 2004).
- Assessment. In CBL, assessment "gives students a responsible role in analyzing their progress and that of classmates in their group, rather than focusing only on the teacher's assessment" (Silva et al., 2018). Moreover, it is crucial to tailor the assessment process to the type of learning desired, which requires great care and attention to the relationship between teaching and learning (Macdonald, 2005). When using this strategy, the teacher should define a teaching system focused on professional practice, considering broader principles, based on student performance according to well-defined criteria and relevant evidence (Macdonald & Savin-Baden, 2004; Woods, 2006).

Furthermore, an example of a case for business and management education can involve students working on a case study that presents the history of business success or failure. They could apply business principles learned in the classroom and assess why the venture was successful or not. Therefore, by looking for its consideration, benefits, and examples, CBL is applicable in business and management classes.

### Online learning

Online learning can be defined as a teaching-learning process that is more student-centered, more innovative, and more flexible (Cojocariu, Lazar, Nedeff, & Lazar, 2014; Singh & Thurman, 2019). It can also be defined as learning experiences in synchronous or asynchronous environments using different devices (e.g., computers, laptops, or mobile phones) with internet access (Dhawan, 2020). There are real-time interactions between educators and learners in a synchronous learning environment, and instant feedback is possible. Meanwhile, in asynchronous learning environments, learning content is not available in live lectures or classes, and instant feedback and immediate response are not possible.

During the global pandemic Covid-19, online learning is no longer an option but a necessity. The Corona Virus has made many universities go from offline mode to online mode of pedagogy. However, most universities might face some challenges in transforming all of their curricula into an online form. Distance, scale, and personalized teaching and learning are the three biggest challenges for online teaching (Dhawan, 2020). Moreover, the technologies for online education sometimes create many difficulties, ranging from downloading errors, issues with installation, login problems, and problems with audio and video. Personal attention is also a huge issue facing online learning (Dhawan, 2020). Most students might find online learning unengaging and boring because they want two-way interactions. Sometimes, online content is theoretical and does not let students practice and learn effectively (Parkes, Stein, & Reading, 2015). Therefore, online learning should be creative, interactive, relevant, student-centered, and group-based (Partlow & Gibbs, 2003). Regarding this, Dhawan (2020) suggested that:

- Efforts should be made to humanize the learning process to the best extent possible;
- Personal attention should be provided to students so that they can quickly adapt to this learning environment;
- The quality of the courses should be improved continuously, and teachers must try to give their best;
- Educators must spend much time making effective strategies for giving online instructions.
- Practical online instructions should facilitate feedback from learners, make learners ask
  questions, and broaden the learner's horizon for the course content (Keeton, 2004).
   Institutions must focus on pedagogical issues and emphasize collaborative learning, case
  learning, and project-based learning through online instructions (Kim & Bonk, 2006).

#### The effectiveness of CBL

Case-based learning is an effective learning approach that requires students to be active and creative in discussions of real-life events. It can increase students' classroom participation because it requires students' activeness. Several studies found a positive effect of using CBL in classrooms. The studies (Bansal & Goyal, 2017; Gholami, Saki, Toulabi, Moghadam, Pour, & Dostizadeh, 2016; Kantar & Massouh, 2015; Mclean, 2016; Torreda et al., 2015) found that the CBL method is very effective and have a positive impact on

motivating students to improve their knowledge in identifying problems. The CBL method also improved students' creativity and developed a positive attitude in learning to achieve better learning outcomes (Cam & Geban, 2016; Hong & Yu, 2016). In a review of the effectiveness of CBL, Thistlethwaite et al. (2012) also found several benefits of CBL: 1) students enjoyed the method and thought it enhanced their learning, 2) instructors liked how CBL engaged students in learning, and 3) CBL seemed to facilitate small group learning. Sherwood (2004) also found that learning through the CBL method can build and expand six critical thinking strategies: emotional restraint, research, questioning, distinguishing fact from fiction, searching for ambiguity, and listening.

Moreover, Wospakrik et al. (2020) found that the motivation and learning outcomes of students became better after being given the Case-Based Learning method. There is a significant influence in applying the Case-Based Learning method on students' motivation and learning outcomes. Other studies have also reported on the effectiveness of CBL in achieving learning outcomes (Bonney, 2015; Breslin, 2008; Herreid, 2013; Krain, 2016). These findings suggested that CBL is a vehicle of instruction and facilitates an environment where students can construct knowledge. In conclusion, numerous research has proven that CBL effectively increases students' participation, motivation, skills, and learning outcomes. However, research on the implementation of CBL in online classes is still limited. For that reason, this study focuses on students' perceptions of using the CBL method in an online class, specifically in a change management class.

### Methodology

## Research design, site, and participants

This study used a mixed-method design to investigate students' perception of case-based learning and how the method could be run effectively. As Creswell (2012) mentioned that mixed-method design can give more information than other methods. The researcher chose both qualitative and quantitative designs to give in-depth information to achieve the purpose of this study. Both quantitative and qualitative data were collected concurrently through Google forms that were divided into two sections containing close-ended questions for quantitative data and open-ended questions for qualitative data.

The participants of this study were 42 students in a Change Management Class of Management Department, Faculty of Economics and Business, Jambi University, in the 2021/2022 academic year. The students were in the fifth semester of 4 concentrations; human resource management, marketing management, financial management, and entrepreneurship. The participants were purposively chosen because the class was fully run online, and it was potential to implement the case-based learning method in the class. The participants were agreed to join the research, and their identity remains a pseudonym.

#### Data collection and analysis

The data were taken based on the results from 16 meetings of CBL implementation in the online class. At the first meeting, there was an introduction between lecturers and students by asking their background of their chosen concentrations. The lectures also

explained the lesson plan, lecture rules, and assessment procedures. Then, the lecturers asked the students to make six discussion groups at the end of the first meeting. Each group was asked to choose, observe, and raise one case related to Indonesia's business world's changes. At the second until the seventh meeting, the lecturer gave a conceptual explanation about course materials of Change Management, which consisted of 1) the definition of Change Management; 2) the importance to make the change; 3) the Change Management theory; 4) the resistance to change; 5) the strategies to overcome the resistance.

At the eighth meeting, the mid-semester was held. Then, at the 9th meeting, the students presented the cases they chose until the 15th meeting. The presenting group chose a moderator from its members, while other groups that do not present are required to ask questions, provide comments, discuss, and give opinions. The discussed cases were from five companies. They are: 1) PT. Telkomsel (Persero); 2) Netflix Indonesia; 3) PT. Unilever Indonesia; 4) PT. Garuda Indonesia; and 5) PT. Gojek. At the end of each discussion, the lecturer will provide a summary and conclusion of the case material discussed.

The data were taken in the 15th meeting based on the class schedule. The students were asked to fill out Google forms containing a close-ended and open-ended questionnaire. The questionnaire contains the students' impressions and perceptions of the case-based learning method, perceptions of the lecturers and the class, and suggestions to improve the class in the next semester. The questionnaire was developed based on the actions during the classes. The closed-ended questions were 15 questions that required participants to answer yes or no and were scored based on Likert-Scale. On the other hand, the open-ended questions were 15 questions of the participants' reason for their close-ended answers. Furthermore, the quantitative data were analyzed by SPSS software to calculate the mean and frequency. Meanwhile, the qualitative data were analyzed through stages based on the guidelines that Creswell (2012) proposed: identify, classify the data, build descriptions, interpret findings, and find validation. Then, the final analysis results were categorized according to the research questions.

### Ethical considerations

In our study, all participants' information was masked in order to protect the confidentiality of their identity.

## **Findings**

## Students' perceptions on case-based learning: Helpful for academic and character development in learning

This study investigated the students' perceptions about the case-based learning method in the Change Management class and how the method can work effectively in the online class. This study showed that almost all of the students acknowledged the positive impact of the case-based learning method. Based on the data, the students admitted that they got the benefits of the case-based learning method on their academic and character development in learning. The table below presents the results of the questionnaire analysis.

**Table 1.** Students' overall perceptions of case-based learning method

	n		%	·
Perceptions	Yes	No	Yes	No
1. CBL method helps students to understand the course				_
material of Change Management	42	0	100	0
2. CBL stimulates students to think and learn autonomously	39	3	92.9	7.1
3. CBL increases students' interest in learning the course	39	3	92.9	7.1
4. Students are happy and satisfied to learn by CBL method	39	3	92.9	7.1
5. CBL trains students to be brave in expressing their opinions	39	3	92.9	7.1
6. CBL increases students' active participation through				
classroom discussions	38	4	90.5	9.5
7. CBL is helpful to expand students' insights and knowledge	42	0	100	0
8. CBL method helps students to understand the aligning of				
theories and actual practices	41	1	97.6	2.4
9. After the 14 meetings, students' understanding and level of				
mastery of the course materials have increased	41	1	97.6	2.4

### The advantages of case-based learning on students' academic development

Based on the findings, almost all participants admitted that the CBL method improves their academic abilities in the Change Management course. Table 2 below shows students' perceptions related to their academic development.

**Table 2.** Students' perceptions of the advantages of case-based learning on their academic development

			%	
Perceptions	Yes	No	Yes	No
1. CBL method helps students to understand the course				
material of Change Management	42	0	100	0
2. CBL is helpful to expand students' insights and knowledge	42	0	100	0
3. CBL method helps students to understand the aligning of				
theories and actual practices	41	1	97.6	2.4
4. After the 14 meetings, students' understanding and level of				
mastery of the course materials have increased	41	1	97.6	2.4

The data showed that all 42 participants (100%) admitted that the CBL method helped them understand the course material. The students stated that CBL helped their understanding because the CBL method encouraged them to read more to deepen their understanding of the discussed material. Some students stated their reasons in the open-ended section of the questionnaire,

"The case-based learning method made us read and search more references to help us easier understand the material and solve the case." [Student 1]

Another reason was that the material discussed could be clearly understood and applied to the cases.

"The material that has been explained can be applied directly to the specified cases in the groups." [Student 2]

The other reason was that all students were demanded to share their opinions during the discussions. Thus, they inevitably must think and study more to be able to participate and solve the cases.

"We are required to speak, to give our opinions. That is why we become motivated to explore more, to understand the material." [Student 3]

The data also showed that all of the participants (100%) agreed that case-based learning is helpful to expand their insights and knowledge, both in general and specifically about the course material.

"With the method, we become more up to date on the news and phenomena happening today, especially any information about the case and the course material." [Student 4]

This statement relates to the students' reasons why case-based learning helped them understand the course material; they are required to read more sources. To join the discussions and follow the lessons, they must read many sources or references and be more updated about the latest information related to the discussed cases. Therefore, all participants agreed that CBL helped them upgrade their insights and knowledge. Moreover, the data showed that 41 students (97.6%) agreed that the CBL method helps students understand the alignment of theories and actual practices.

"By learning with cases, students can find out how to apply the theories on the real practices, especially on the selected companies that we discussed." [Student 5]

Some students had mentioned this statement when they were asked why the CBL helped them understand the course material. They admitted that the CBL method made them more familiar with the material because the theories they learned were directly implemented in the cases that illustrated real problems in actual practices. They learned about theories and how to implement the theory into cases that they will face later in the workplace. In other words, they did not only learn the material through abstract things but also through real practices. This alignment between theories and practices is one of the advantages of the CBL method that has been proposed in some studies (Kaur, Rehncy, Kahal, Singh, Sharma, Matreja, & Grewal, 2020; Mclean, 2016; Nkhoma, 2017). It turned out that the participants of this study also got that similar advantage.

Furthermore, the data showed that the 41 students (97.6%) agreed that after 14 meetings, students' understanding and level of mastery of the course materials have increased.

In other words, the use of the case-based learning method in this study was successful. Students admitted that they understood and mastered the course material better after the 14 meetings by the learning method. The case-based learning method made the students more familiar with the course material, increased their knowledge, and was easier to link the learned theories and actual practices. Particularly, the case-based learning method was beneficial for the students' academic development.

## The advantages of case-based learning on students' character development in learning

The data indicated that the case-based learning method was beneficial for the students' academic development and the students' character development in learning. The findings showed that 92% of students agreed that case-based learning is beneficial for their character development in terms of how they think, give opinions, participate, and become enthusiastic in class. Table 3 below shows the students' perceptions related to their character development in learning

Table 3. The advantages of case-based learning on their character development in learning

Perceptions	n		%	
	Yes	No	Yes	No
1. CBL stimulates students to think and learn				_
autonomously	39	3	92.9	7.1
2. CBL increases students' interest in learning the course	39	3	92.9	7.1
3. Students are happy and satisfied to learn by CBL				
method	39	3	92.9	7.1
4. CBL trains students to be brave in expressing their				
opinions	39	3	92.9	7.1
5. CBL increases students' active participation through				
classroom discussions	38	4	90.5	9.5

92.9% (39) students agreed that the case-based learning method stimulates them to think and learn autonomously. As mentioned in the previous section, by learning with the case-based learning method, the students were required to read and learn more about the latest information related to the discussed cases. As a result, they become motivated to learn independently at home to prepare for the class discussions.

"We are required to read more about the cases and news because we need to prepare for the discussions. It made us more critical and independent to learn by ourselves at home." [Student 6]

The case-based learning method also trained students' public speaking skills. The data showed that 92.9% of students agree that the CBL method trains them to be brave in giving opinions. By learning this method, all students are demanded to provide their logical opinions to solve

the cases. Whether they like it or not, they should be brave to speak up their voices because their statements or opinions are one aspect that the lecturer assessed.

"By case-based learning, I become braver in speaking and expressing my opinions during presentations and discussions. We need to prepare our discussion materials and present them. I am happy because I can improve my public speaking ability in front of the class." [Students 7]

Another benefit of case-based learning that the students found is the increase of their interest, pleasure, and satisfaction in learning the course. The data showed that 92.9% of the students agreed that the CBL method increases students' interest in learning the course. 92.9% of students also agreed that they are happy and satisfied to learn by the case-based learning method. Some students admitted that they were happy with the learning method because it was not boring. They learned the theories and the practices of how they were supposed to solve the cases. Other students also admitted that the chosen cases were up to date, and the lecturers' instructions and explanations were clear and detailed. Thus, the method made them more enthusiastic about learning even though it was an online class.

"It is exciting to learn by the cases. It has a wider scope of knowledge." [Student 8]

"The case-based learning method made us think logically and theoretically. So we did not just listen to the lectures, but we need to think harder." [Student 9]

"The learning process did not only focus on theories, but it also made students aware of new cases and latest news" [Student 10]

Furthermore, the case-based learning method has increased the students' participation in the online classroom. The 90.5% of students agreed that the CBL increases students' active participation through classroom discussions.

"The case-based learning method is great for people who are afraid or shy to speak up or give an opinion in front of the class. For example, we can ask the presenters about the material that we have not understood during the class. Also, during the class, we are trained to be more active during the discussions, and we should be able to accept other students' opinions." [Student 11]

In other words, the case-based learning method could make the students more active and increase their participation. The method is beneficial for the students' character development in learning, even in an online class.

### How case-based learning can be effective in the online class

Based on the data, the positive responses given by all participants on the case-based learning method in the online class happened due to some reasons. First, case-based learning is a method that has never been practiced before in the Change Management class. The students found case-based learning as a useful method for their learning. They became enthusiastic

about the CBL method because, besides its many advantages, it is also a new thing that is implemented in the class.

Second, the lecturers followed the procedures according to what the method offers. The lecturers gave a conceptual explanation about the material, gave an equal opportunity for each group to present and discuss, provided comments and feedback for each student, and ensured that each student has participated. In other words, the lecturer has provided the students with sufficient material and explanation before finally giving them full opportunities to discuss. Table 4 below shows the students' perceptions of how the lecturers handled the class.

Table 4. Students' perceptions of how the lecturers handled the online class

	N		%	
Perceptions	Yes	No	Yes	No
1. The lecturers always gave a review or conclusion of each				
discussion.	42	0	100	0
2. The lecturers were actively involved during the discussion				
process.	39	3	92.9	7.1
3. The lecturers always tried to make all students participate				
and give opinions.	39	3	92.9	7.1

How the lecturers have well handled the class is approved by the students. The data showed that 100% of the students agree that the lecturers always reviewed and concluded each discussed material in every meeting. It means that the lecturers did not just let the students take the total center of the class without guidance afterward. The lecturers always concluded the results of each discussion to clarify the students' understandings.

Moreover, 92.9% of the students agreed that the lecturers were actively involved during the discussion process. The lecturers still monitored and kept an eye on the students to make the discussions run well. In addition, 92.9% of students also agreed that the lecturers tried to make all students participate and voice their opinions. The lecturers ensured that all students must speak in the class forum, and there was no student left behind. In other words, although the case-based learning method is a student-centered learning process, the lecturers still have to take their roles in guiding students. Thus, all students' discussions, presentations, and participation could run well. Especially in online classes, lecturers must monitor the screen more often and mark students' names to ensure that every student speaks their arguments.

### Discussion

The benefits of case-based learning for students' academic development have been found in various studies (Bossche et al., 2004; Cam & Geban, 2016; Hong & Yu, 2016; Wospakrik et al., 2020). Those studies also found case-based learning as a useful learning method for improving students' knowledge and learning outcomes. Although the related studies examined the case-based learning method in offline classes, the studies indicated similar benefits with this current study. It turned out that the benefits of the case-based learning method can also be acquired in an online class. This study proved that although the

learning activities were carried out online, students still can get the advantages of the CBL method for their academic development.

The advantages of the case-based learning method for developing students' character in learning also have been found in several students. Some studies (Angela et al., 2018; Lee, Lee, Liu, Bonk, & Magjuka, 2009; Scherpereel & Bowers, 2006; Zabit, 2010) found similar benefits as this study indicated: CBL could stimulate students' autonomous learning and critical thinking. Several studies (Bansal & Goyal, 2017; Gholami et al., 2016; Kantar & Massouh, 2015; Thistlethwaite et al., 2012) also found that students were satisfied and happy with the case-based learning method because the method proposed a learning process that is not monotonous where students are required to discuss and solve different cases in every meeting. Overall, the related studies shared similar findings that indicated case-based learning as a learning method that can increase students' participation in a class. In conclusion, using the case-based learning method seems beneficial for students' academic and character development through online and offline classes.

Furthermore, some studies also found that the effectiveness of the CBL method can be achieved if the lecturer guides the discussion in a good way (Nkhoma, 2017; Silva et al., 2018; Thistlethwaite et al., 2012). Lecturers stimulate students to become independent but still guide them (Angela et al., 2018; Mutmainah, 2008; Zabit, 2010). Specifically, Lee et al. (2009) implied three aspects that should be considered on case-based learning in online environments: (1) lecturers' instructional design for case development and delivery; (2) facilitation for student engagement in online learning; and (3) technology support for effective case-based activities (Lee et al., 2009). Hadiyanto et al. (2021) mentioned that online and offline learning possesses similar methods, structure, content, strategy, and learning activities. However, a lecturer is a crucial factor in successfully organizing online learning activities, and they play a very decisive role in motivating students. Lecturers need to convey information on all aspects of learning activities. They also need to possess higher skills in operating online learning applications to optimize the facilities and features. In other words, the success of online learning depends on lecturers' ability to adapt, develop and inculcate standard learning components and have technical skills in operating online stuff (Ananga & Biney, 2017).

All in all, the findings of this study are similar to most related studies on case-based learning that implied students' positive responses. It turns out that although this study was conducted through online learning, the students could still get the benefit of the method, and the lecturers could manage to implement the method well. However, still, the findings of this study showed that not 100% of students agreed with the benefit of the method. There were still 1-2% of students who did not enjoy the method. The negative responses might happen because of the online learning vibes that made students cannot interact face-to-face with their friends. Future lecturers or researchers related to this topic might better consider consulting the students with negative responses on the method, especially if they could not follow the lesson at all with the method, and the method interfered with their understanding.

### Conclusion and Recommendations/Implications

The students agreed that case-based learning is very beneficial for their academic and character development. Case-based learning is beneficial for the student's academic development in understanding the material, expanding knowledge, and improving learning outcomes. Case-based learning is also beneficial for the student's character development in terms of how they think critically, act autonomously, speak in public, and participate in class. Furthermore, this study also found that the key to implementing the case-based learning method in online classes depends on how the lecturer handles the class and adopts the method well. Most importantly, students and lecturers need to own adequate facilities and technological skills to operate and access online learning.

From the conclusion above, the researchers of this study would like to give suggestions for the following researchers in a similar topic of interest. First, examining students' responses to case-based learning in different classes with different subjects is worthy to obtain different findings. Second, it is suggested that lecturers ensure that students have adequate online learning facilities and abilities to operate online learning well. Third, although using the case-based learning method in online learning is quite successful, the vibes of offline learning might be different because students have to discuss and speak in front of the class face to face with their friends. While in online learning, there is still a barrier between all students: distance and screens. For this reason, case-based learning indeed might be optimal if it is done in an offline class. However, the key success of the method still depends on how lecturers handle their classes.

#### Disclosure statement

No potential conflict of interest was reported by the authors.

### Acknowledgments

The authors' gratitude goes to Universitas Jambi for funding this research through the scheme of learning innovation research. Also, special thanks to the participants who helped the authors to finish this study.

#### References

- Aliusta, G. O., & Özer, B. (2016). Student-centered learning (SCL): Roles changed?. *Teachers and Teaching*, 23(4), 422-435.
- Ananga. P., & Biney. I. K. (2017). Comparing face-to-face and online teaching and learning in higher education. *MIER Journal of Educational Studies*, 7(2), 165–179.
- Angela, A., Tjun, L., Indrawan., Sunardi., & Krismawan, R. (2018). (Application of case-based cooperative learning method toward learning effectiveness of Universitas Kristen Maranatha accounting students). *Journal of Accounting Maranatha*, 9(2), 104-113.

- Bailey, J., Sass, M., Swiercz, P. M., Seal, C., & Kayes, D. C. (2005). Teaching with and through teams: Student written, instructor-facilitated case writing and the signatory code. *Journal of Management Education*, 29(1), 39-59.
- Bansal, M., & Goyal, M.K. (2017). To introduce and measure the effectiveness of case-based learning in physiology. *International Journal of Research in Medical Sciences*, 5, 437-445.
- Barkley, C., Barkley, E. F., Cross, K. P., & Major, C. H. (2005). *Collaborative learning techniques: A handbook for college faculty.* San Francisco, CA: Jossey Bass.
- Bonney, K. (2015). Case study teaching method improves student performance and perceptions of learning gains. *Journal of Microbiology and Biology Education*, 16(1), 21-28.
- Bossche, P. V. D., Segers, M., Gijbels, D., & Dochy, F. (2004). Effects of problem-based learning in business education: A comparison between a PBL and a conventional educational approach. Dordrecht, The Netherlands: Springer.
- Boud, D., & Feletti, G. (1997). Changing problem-based learning. Introduction to the second edition. London: Kogan Page.
- Breslin, M., & Buchanan, R. (2008). On the case-based study method of research and teaching in design. *Design Issues*, 24(1), 36-40.
- Cam, A., & Geban, Ö. (2016). Effectiveness of case-based learning instruction on pre-service teachers' chemistry motivation and attitudes toward chemistry. *Research in Science & Technological Education*, 35(1), 74–87.
- Cojocariu, V.-M., Lazar, I., Nedeff, V., & Lazar, G. (2014). SWOT analysis of e-learning educational services from the perspective of their beneficiaries. *Procedia-Social and Behavioral Sciences*, 116, 1999–2003.
- Creswell, J. W. (2012). Educational research: Planning, conducting, and evaluating quantitative and qualitative research (4th ed.). Boston, MA: Pearson Education, Inc.
- Dhawan, S. (2020). Online learning: A panacea in the time of Covid-19 crisis. *Journal of Educational Technology Systems*, 49(1), 5-22.
- Falloon, G. (2020). From digital literacy to digital competence: the teacher digital competency (TDC) framework. *Educational Technology Research and Development*, 68(5), 2449–2472.
- Gholami, M., Saki, M., Toulabi, T., Moghadam, P. K., Pour, A. H. H., & Dostizadeh. R. (2016). Iranian nursing students' experiences of case-based learning: A qualitative study. *Journal of Professional Nursing*, 33(3), 241-249.
- Gwee, M. C. E. (2009). Problem-based learning: A strategic learning system design for the education of healthcare professionals in the 21<sup>st</sup> century. *The Kaohsiung Journal of Medical Sciences*, 25(5), 231-239.
- Hadiyanto, H., Failasofah, F., Armiwati, A., Abrar, M., & Thabran, Y. (2021). Students' practices of 21<sup>st</sup> century skills between conventional learning and blended learning. *Journal of University Teaching & Learning Practice*, 18(3), 2-29.
- Handoko, H. (2005). (Case method in teaching management). Workshop papers on improving the ability to compile and apply cases to reaching).
- Hansen, J. D. (2006). Using problem-based learning in accounting. *Journal of Education for Business*, 81(4), 221-224.
- Hermanto, Y. B., & Srimulyani, V. (2021). The challenges of online learning during the Covid-19 pandemic. *Jurnal Pendidikan dan Pengajaran*, 54(1), 46–57.

- Herreid, C. H. (2013). Case studies in science: A novel method of science education. *Journal of Research in Science Teaching*, 23(4), 221–229.
- Hmelo-Silver, C. E. (2004). Problem-based learning: What and how students learn?. *Educational Psychology Review, 16*(3), 235-266.
- Hong, S., & Yu, P. (2016). Comparison of the effectiveness of two styles case-based learning thinking ability: A randomized controlled trial. *International Journal of Nursing Studies*. *68*,16-24.
- Kantar, L. D., & Massouh, A. (2015). Case-based learning: What traditional curricula fail to teach. *Nurse Education Today*, *35*(8), e8–e14.
- Kaur, G., Rehncy, J., Kahal, K., Singh, J., Sharma, V., Matreja, P., & Grewal, H. (2020). Case-based learning as an effective tool in teaching pharmacology to undergraduate medical students in a large group setting. *Journal of Medical Education and Curricular Development*, 7,1-6.
- Keeton, M. T. (2004). Best online instructional practices: Report of phase I of an ongoing study. *Journal of Asynchronous Learning Networks*, 8(2), 75–100.
- Kim, K. J., & Bonk, C. J. (2006). The future of online teaching and learning in higher education: The survey says. *Educause Quarterly*, 29(4), 22–30.
- Kloppenborg, T. J., & Baucus, M. S. (2004). Project management in local non-profit organizations: Engaging students in problem-based learning. *Journal of Management Education*, 28(5), 610-630.
- Krain, M. (2016). Putting the learning in case learning? The effects of case-based approaches on student knowledge, attitudes, and engagement. *Journal on Excellence in College Teaching*, 27(2), 131-153.
- Lee, S., Lee, J., Liu, X., Bonk, C., & Magjuka, R. (2009). A Review of case-based learning practices in an online MBA program: A program-level case study. *Educational Technology & Society*, 12(3), 178-190.
- Lee, V. S. (2012). What is inquiry-guided learning? New Directions for Teaching and Learning, 2012 (129), 5–14.
- Macdonald, R., & Savin-Baden, M.A. (2004). A briefing on assessment in problem-based learning. Heslington York: LTSN Generic Centre.
- Markulis, P. M., Strang, D. R., & Howe, H. (2004). Integrating the business curriculum with a comprehensive case study: A prototype. *Developments in Business Simulation and Experiential Learning*, 36(2), 250-258.
- McLean, S. F. (2016). Case-based learning and its application in medical and health-care fields: A review of worldwide literature. *Journal of Medical Education and Curricular Development*, *3*(3), 39-49.
- Milne, M. J., & McConnell, P. J. (2001). Problem-based learning: A pedagogy for using case material in accounting education. *Accounting Education: An International Journal*, 10(1), 61-82.
- Mrudula, C., Rajneesh, & Challa. (2017). Perception of students and faculty regarding the implementation of case-based learning in pre and para clinical MBBS students. *International Journal of Research Biology Medical*, 2(5), 6-11.

- Mutmainah, S. (2008). (The effect of the application of student-centered case-based cooperative learning methods on the effectiveness of behavioral accounting learning). Simposium Nasional Akuntansi XI, 1-27.
- Nkhoma, M. (2017). Using case method to enrich students' learning outcomes. *Active Learning in Higher Education*, 18(1), 37-50.
- Parkes, M., Stein, S., & Reading, C. (2015). Student preparedness for university e-learning environments. *The Internet and Higher Education*, 25, 1–10.
- Partlow, K. M., & Gibbs, W. J. (2003). Indicators of constructivist principles in internet-based courses. *Journal of Computing in Higher Education*, 14(2), 68–97.
- Pelikan, E., Korlat, S., Reiter, J., Holzer, J., Mayerhofer, M., & Schober, B. (2021). Distance learning in higher education during COVID-19: The role of basic psychological needs and intrinsic motivation for persistence and procrastination—a multi-country study. *PLOS ONE 16*(10).
- Peterson, T. (2004). So you're thinking of trying problem based learning? Three critical success factors for implementation. *Journal of Management Education*, 28(5), 630-647.
- Pfeffer, J., & Fong, C. T. (2002). The end of business schools? Less success than meets the eye. *Learning & Education*, 1(1), 78-95.
- Savin-Baden, M., & Major, C.H. (2004). Foundations of problem-based learning. New York: Mc-Graw Hill Education.
- Scherpereel, C., & Bowers, M. (2006). Using critical problem-based learning factors in an integrated undergraduate business curriculum: A business course success. Developments in Business Simulation and Experiential Learning, 33, 13-21.
- Sherwood, A. L. (2004). Problem-based learning in management education: A framework for designing context. *Journal of Management Education*, 28(5), 536-557.
- Silva, A. (2016). Action learning: Lecturers, learners, and managers at the center of management education in Brazil. London: Palgrave Macmillan.
- Silva, A.B.D., Bispo, A.C.K.d.A., Rodriguez, D.G., & Vasquez, F.I.F. (2018). Problem-based learning: A proposal for structuring PBL and its implications for learning among students in an undergraduate management degree program. Revista de Gestão, 25(2), 160-177.
- Singh, V., & Thurman, A. (2019). How many ways can we define online learning? A systematic literature review of definitions of online learning. *American Journal of Distance Education*, 33(4), 289–306.
- Slavin, R. (2008). (Cooperative learning theory, research, and practice). Bandung: Nusa Media.
- Smith, G. F. (2005). Problem-based learning: Can it improve managerial thinking?. *Journal of Management Education*, 29(2), 357-378.
- Thistlethwaite, J. E., Davies, D., Ekeocha, S., Kidd, J. M., MacDougall, C., Matthews, P., ... & Clay, D. (2012). The effectiveness of case-based learning in health professional education. A BEME systematic review: BEME Guide No. 23. *Medical teacher*, 34(6), e421-e444.
- Torredà, R. M., Pujol, J. O., Collado, À. R., Aguilera, M. C. M., Masó, P., & Bagué, A. B. (2015). Case-based learning and simulation: Useful tools to enhance nurses' education? Nonrandomized controlled trial. *Journal of Nursing Scholarship*, 47(1), 34-42.

- Vohra, N., Rathi, N., & Bhatnagar, D. (2015). Developing leadership skills among EMBA students: innovations in design. *Vikalpa*, 40(1), 15–27.
- Williams, B. (2005). Case based learning A review of the literature: Is there scope for this educational paradigm in prehospital education? *Emergency Medicine Journal*, 22(8), 577–581.
- Woods, D. R. (2006). Preparing for PBL. Hamilton: McMaster University.
- Wospakrik, F., Sundari, S., & Musharyanti, L. (2020). (The effect of applying the case learning method based learning on student motivation and learning outcomes). *Journal of Health Studies*, 4(1), 30-37.
- Yulianti, K., & Mukminin, A. (2021). Teaching and learning during Covid-19 pandemic: A qualitative study on elementary school teachers in Indonesia. *The Qualitative Report,* 26(12), 3900-3910.
- Zabit, N. (2010). Problem-based learning on students' critical thinking skills in teaching business education in Malaysia: A literature review. *American Journal of Business Education (AJBE)*, 3(6), 19-32.

### **Biographical Notes**

**SHOFIA AMIN** is an associate Professor, Faculty of Economics and Business, Universitas Jambi, Jambi, Indonesia, Corresponding author's email: <a href="mailto:shofiaamin@unja.ac.id">shofiaamin@unja.ac.id</a>

**FITRI WIDIASTUTI** is a lecturer, Faculty of Economics and Business, Universitas Jambi, Indonesia.

**SUMARNI** is a lecturer, Faculty of Economics and Business, Universitas Jambi, Jambi, Indonesia