Developing Critical Thinking through Critical Review: A Case Study of Issues on Linguistics Class at Universitas Brawijaya

Fatimah[1], Isti Purwaningtyas[2]
{fatimah7613@uni.sydney.edu.au[1], tyaz_wijaya@ub.ac.id[2]}

University of Sydney, Australia[1]
Universitas Brawijaya, Indonesia[2]

Abstract. This research first aims at formulating the design of critical review assignment which can develop students' critical thinking skills and student engagement in Issues on Linguistics course. Besides it also investigates the extent to which the critical review assignment can develop students' critical thinking skills and student engagement. This research is also intended to explore the students' perspective on the usefulness of critical review assignments. The data were obtained from questionnaire, document analysis and observations. This research involves three Issues on Linguistics classes with the total number of students of 42.This research revealed that critical review assignment can enhance students' critical thinking skills, academic writing skills and team work. Therefore, it is suggested that critical review assignments can be used as an alternative assignment or assessment in any content courses.

Keywords: Critical Thinking, Critical Review, Issues on Linguistics

1 Introduction

It is widely recognized nowadays that critical thinking has become a necessary ingredient in higher level of education. Educators and educational policy makers agree that one of the desirable goals of education in university level is that students are able to think critically [1]. Summarizes critical thinking as skills that are needed in daily life to acquire a full intellectual and personal development. Outcome Based Education (OBE) which focuses on providing education with long-lasting results has been currently introduced and implemented in higher education in Indonesia [2]. The concept of OBE requires courses offered in higher education expose students to higher order thinking skills. Critical thinking is a part of basic concept of OBE as pointed out by Wang [3] who summarizes OBE in three sentences, namely "learning that should last for the rest of life; practical, useable teaching and learning; and integration on learning activities that enhance developing critical thinking skills and learning resilience"(709). Some studies in critical thinking conclude that there are some difficulties to develop critical thinking skills for Indonesian students [4][5][6]. These studies imply that one of the issues in implementing critical thinking skills among students is they do not seriously do their work for their own benefits, instead, they do the classroom activities so that they pass the courses.

This current research attempts to introduce critical reviews as an alternative assignment to practice foundations of skills in critical thinking. The purpose of critical review is to summarize and evaluate a text, pointing out the strengths and weaknesses [7]. From the previous studies,

the researchers found out that those research do not expose critical reviews as a tool to enhance critical thinking. Moreover, based on the features of critical reviews, the researchers believe that critical reviews are a powerful tool to develop the students' critical thinking. Therefore, the researchers were interested in investigating the nature of critical reviews assignment in developing students' critical thinking in Issues of Linguistics course. This course is selected since the goal of this course is to deepen students' understanding and knowledge about various research topics in the area of linguistics. During the course, the students are asked to read and review journal articles to give them knowledge on the linguistics research that have been carried out in both micro and macro levels.

This research aims to answer three research questions. This research first aims at formulating the design of critical review assignment which can develop students' critical thinking skills and student engagement in Issues on Linguistics course. The second research question investigates the extent to which the critical review assignment can develop students' critical thinking skills and student engagement. The last aim of this research is to explore the students' perspective on the usefulness of critical review assignment.

2 Literature Review

2.1 Critical Thinking

Critical thinking plays an essential role in university education and real-life world. As an abstract concept, there have been different interpretation of what critical thinking is. One of the earliest definitions is given by John Dewey which is known as a father of modern critical thinking tradition. Dewey [8] defines critical thinking as "Active, persistent, careful consideration of a belief or supposed form of knowledge in light of the grounds that support it and the further conclusions to which it tends" (p. 9). A later definition is given by Scriven [9] who state that "critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action" (p.1). Ennis [10] further lists 12 abilities in his taxonomy of critical thinking dispositions and abilities. The abilities include questioning, analyzing arguments, and asking and answering questions of clarification and/or challenge, defining terms and judging definitions, identifying assumptions, judging the credibility of the source, observing and judging observation reports, deducing and judging deductions, inducing and judging inductions, making value judgments, interacting with others and deciding on an action. From all the definitions above, it can be concluded that critical thinking involves cognitive and affective domains.

In the teaching and learning process, critical thinking takes an important role. The concept of critical thinking skills resembles Bloom's [11] taxonomy particularly the higher order thinking skills. Bloom's taxonomy consists of Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation. In classroom practice, there are some foundations skills needed by students. Edward [12] proposes foundations skills to critical thinking, namely independent learning, collaborative and cooperative working, team skills, critical reading, assertiveness, logic, argumentative skills, problem solving, and time management. Those skills can be emerged into classroom teaching and learning activities. Inserting critical thinking in classroom activities should be addressed carefully as Abrami [13] has observed, "the infusion of CT requires deep, thoughtful, and well-understood subject matter instruction in which students are encouraged to think critically in the subject". As stated previously that most of

higher education institutions in Indonesia have employed Outcome-Based Education (OBE) in their curriculum. OBE highlights the importance of critical thinking as a life skill that is needed for graduates to face challenges in real world. In implementing critical thinking in higher education context, lecturers need to create an environment which encourage students to make connections by thinking critically and reflecting the lessons upon their experiences to engage the students.

2.2 Critical Review

A critical review is a review of an article that combines a summary and a critical comments [14]. Similarly, Academic Writing Center at METU School of Foreign Languages [15] defines a critical review as the summarization and evaluation of the ideas and information in an article. Reviewing an article critically refers to thinking carefully and clearly and then taking into consideration both the strengths and weaknesses in the article reviewed. A critical review is different from a literature review because critical review is a complete text which provides a comprehensive analysis on a certain type of text such as books, articles, films, reports, and websites. On the other hand, a literature review is a part of a bigger piece or writing such as thesis or dissertations.

The purpose of critical review is to summarize and evaluate a text, pointing out the strengths and weaknesses [14]. There are some benefits of writing critical thinking for students at higher education. Some of the advantages are (1) to improve students' reading confidence and efficiency; (2) develop students' analytical and evaluating skills; and (3) foster students' skills in deciding proper criteria for evaluating the materials they review [14][15]. In line with the foundation skills in critical thinking proposed by Edward [16], critical review activity can be used to enhance those foundation skills since this activity involve independent learning, collaborative and cooperative working (in a group work and classroom discussion), team skills, critical reading, assertiveness, logic, argumentative skills, problem solving, and time management. This activity can also be used to engage students with what they are reading because students need to pay attention closely to the text they review, and make use of their prior knowledge and experience when they write a critique.

A critical review usually consists of Introduction, Summary, Critique, Conclusion and References. Introduction covers a few opening sentences that announce the author(s) and the title, briefly explain the topic of the text, the aim of the text and summarize the main finding or key argument. The introduction concludes with a brief statement of evaluation of the text. The second part, summary, presents a summary of the key points along with a limited number of examples, explains briefly the author's purpose/intentions throughout the text, and describes how the text is organized. The critique part provides discussion and evaluation of the strengths, weakness and notable features of the text which is based on specific criteria. Recommendations for how the text can be improved in terms of ideas, research approach; theories or frameworks used can also be included in the critique section. The conclusion restates overall opinion of the text reviewed and presents recommendations. The reference section covers all sources that are used in a critical review.

2.3 Previous Studies

There have been numerous research investigating critical thinking since critical thinking has a crucial role in all levels of education. Some studies examine the effectiveness of various techniques implemented in classrooms to enhance students' critical thinking [17][18][19][20][21]. Other studies focus on investigating the assessment of critical thinking [22][23]. Perceptions of critical thinking among students and teachers becomes another area of

research in critical thinking [24]. Other researchers attempt to find the effect of culture on implementing critical thinking particularly in Asian contexts [25][26][5][27][28]. Those research highlight the advantages of critical thinking, the obstacles in implementing critical thinking, and the positive attitudes toward critical thinking in higher education. Having seen the previous studies, this current study investigates critical thinking and student engagement in a content course. Critical review is selected as a tool to enhance critical thinking and student engagement in Issues on Linguistics course

3 Research methods

3.1 Research paradigm and participants

This research employs a qualitative approach with some quantitative data. This study is qualitative since the data obtained were mainly explained descriptively. As described by Creswell [29], qualitative data consists of open-ended information that might be taken from interview, observation, documents, audio-visual materials. The qualitative data in this present research were obtained using two qualitative instruments, namely document analysis and observation. Beside qualitative data, this research also gathered quantitative data obtained from the questionnaire which then were partly analyzed by using a simple statistical calculation to identify some patterns of the data. The triangulation of document analysis, questionnaire, and observation contributed to the reliability and trustworthiness of data analysis.

Moreover, case study is employed in this research because this research attempts to find deep understanding about the nature of critical review to develop students' critical thinking and student engagement within Issues of Linguistics classes. In the context of this study, this design enables the researchers to explain how critical review are perceived by students. In addition, by using this design, the researchers are also able to explore how critical review can develop students' critical thinking and their perception on the assignment. This research involves three Issues on Linguistics classes with the total number of students of 42.

3.2 Data Collection and Data Analysis

To obtain the data, the researchers need to design the research instrument that is questionnaire. The questionnaire is written in English considering that the participants have sufficient language proficiency to understand the questionnaire since they are in the sixth semester. Besides, the language used in the questionnaires is not complicated. The questionnaire is designed by the researchers and it has three sections. The first and second parts consist of 30 multiple-choice-questions and they focus on investigating participants' background information, the clarity of guidelines and instruction for the students to do the assignment, the usefulness of critical reading to develop students' critical thinking, and the implementation of this assignment in class. The third part is an open-ended question section which consists of six questions to reflect the students' experience in completing their critical review assignment.

Having designed the questionnaire, the researchers together with the lecturer design the critical review assignments for the students. Then, the next step is assigning critical review task to students. Afterwards, the researchers observed the students' progress while they were doing their critical review assignment. After the students submitted their work in Google Classroom, the researchers checked the students' critical review based on the rubric. Finally, the researchers distributed questionnaires measuring student engagement and their perceptions on critical review assignment. The questionnaires were given in online mode in Google Form. The survey

was opened starting from 1st July until 12th July 2021. The researchers gave a brief explanation about the questionnaire and how to complete the questionnaire in the first page of the Gform to avoid misunderstanding.

4 Result and Discussion

The discussion section is divided into three parts. The first part is about the design of a critical review assignment and the procedures to implement the critical review in class. The second part discusses nature of students' critical thinking skills in completing critical review assignment. The last part talks about their perspective on the critical review assignment.

4.1 The design of a critical review assignment and its implementation in classroom

The critical review assignment was a collaborative project meaning the students did the assignment in groups. The decision to design this assignment as a collaborative project instead of individual project because the students never experienced or performed such assignment before. Thus, the researchers and the lecturer believed that by having collaborative work, the students could scaffold and learn from each other, build their confidence in accomplishing the assignment and eventually they would engage with their assignment. The researchers formulated the objectives of having a critical review assignment into 6 objective. (1) Giving opportunities to students to understand current research and issues in the field of linguistics. (2) Giving opportunities to students to understand how concepts of linguistics are applied in research. (3) Developing students' critical thinking and analytical skills needed to evaluate an academic text. (4) Developing students' collaborative skill especially in sharing ideas, incorporating ideas with other students in both oral and written form. (5) Demonstrating students' understanding on some concepts in the field of linguistics that they are interested in. (6) Enhancing students' writing skills especially in paraphrasing, summarizing, synthesizing and writing ideas using proper academic English. From these objectives, the researchers believed that critical review could enhance students' critical thinking in both cognitive and affective domains.

The next step after designing the assignment and formulating the guideline was introducing the critical review assignment in class. The lecturers introduced how to write a critical review, discuss the rubric and an exemplar to give an overview of a critical review and assist them to understand what they were expected to write. Having introduced the critical review, then they were assigned to do the project. The students were grouped based on their interest on linguistics. They searched a current article in their field, reviewed it, wrote the critical review based on the structure given on the guideline, had their peer review their work, and revised their critical review based on feedback given by peers and lecturers. Finally, the students presented their critical review in class and submitted the work in Google Classroom. To guarantee that all students in the groups participated actively and contributed in completing the critical review assignment, the researchers together with the lecturer designed a rubric measuring their teamwork. Having written the critical review, each of the student had to fill the teamwork rubric in which they had to assess each of their teammates' contribution and active participation during the process of completing the assignment. They are required to submit their assessment in Google Classroom.

4.2 The nature of students' critical thinking skills in completing critical review assignment

Regarding critical thinking skills, the students claimed that critical review assignment developed their critical thinking skills such as problem solving, evaluating, synthesizing, summarizing, and analytical skills. Table 1 portrays the students' responses taken from the questionnaire which are related to critical thinking.

Table 1. Students' responses in relation to critical thinking skills

Statements	SD (%)	D (%)	A (%)	S A (%)
I think critical review assignment developed my critical thinking skills.	0	2.4	19	78.6
I think critical review assignment developed my problem solving skills.	0	11.9	47.6	40.5
I think critical review assignment developed my evaluating skills	0	0	40.5	59.5
I think critical review assignment developed my synthesizing skills	0	4.8	47.6	47.6
I think critical review assignment developed my summarizing skills	0	0	40.5	59.5
I think critical review assignment developed my analytical skills	0	0	47.6	52.4
I think critical review assignment developed my team working skills	0	7.1	50	42.9

It can be seen from Table 1 that most of the students (78.6%) strongly agreed that critical review built their critical thinking skills. In detail, the students claimed that this assignment trained them a lot in evaluating, summarizing and analytical skills. It happened because in writing a critical review, students were required to summarize the authors' ideas before they evaluated (both strengths and weaknesses). Interestingly, students perceived that critical review did not really help them in problem solving skills (no 6). This might be because in writing their critical review, they were not directly asked to find solutions to a problem. Instead, they were asked to give suggestion to improve the article.

The results of the questionnaire were in line with the results of the researchers' observation in Issues on Linguistics classes. During the discussion, students were enthusiastic in sharing the weaknesses or strengths of the articles. Most of the students were able to elaborate their evaluation and give justification whether the article they read was recommendable or not. Moreover, the students were also able to briefly inform their friends what the article was about. When the researchers evaluated the students' work, it was found out that there were only few students who had problems in summarizing the article. In making evaluation, the majority of the students already knew how to evaluate a journal article. They tend to evaluate the article based on the completeness of the article, the language use (e.g. whether it was easy to understand or not, to what extent the article had grammatical errors, whether there were too many terms used), and clarity of the information given (e.g. whether the research method or procedures were clearly stated or not, whether the author mentioned the research gap or not). However, the researcher noticed that the students had difficulty in elaborating their analysis and supporting their points with credible sources. They had a tendency to give evaluations based on their

opinion without considering to support their arguments with other relevant sources. During the students' presentation sessions, the students actively listened to their friends' presentation and responded to it by asking questions or sharing similar points that they found in their article. Their thoughtful analysis, good preparation for their presentation and active participation during discussion indicated that they were engaged in completing the assignment.

4.3 The students' perspective on the critical review assignment

The third research question deals with the students' perspective on the critical review assignment. The following Table 2 depicts the students' responses in regard to their perspective on the assignment.

Table 2. Students' perspectives on the critical review assignment

Statements	SD (%)	D (%)	A (%)	S A (%)
I think that instructions and guidelines for conducting the critical review assignment were clear.	0	4.28	42.9	52.4
I think instructions and criteria to select an article to review were clear.	0	0	47.6	52.4
I think the explanation sessions and the materials presented helped me to do the critical review assignment.	0	4.8	38.1	57.1
I think critical review assignment is very useful for the development of my future projects.	0	0	35.7	64.3
Students get to choose topics to work on in the critical review assignment.	0	0	31	69
The lecturer told us how we could plan to meet the critical review assignment.	0	0	40.5	59.5
Students were given a chance to correct their mistakes in completing the critical review assignment.	0	4.8	28.6	66.7
The lecturer provided suggestions and guidance for organizing and managing activities and assignment the critical review assignment.	0	2.4	28.6	69

Regarding the guidelines and instruction to do the assignment, majority of the students (40 students or 95.3%) stated that the guideline and instruction were clear. The table also suggested that the students were well guided by their lecturers starting from selecting the article to review, planning their critical review and even while they were writing their critical review. It can be inferred that lecturers' played an important role in engaging students with their critical review assignment. Students needed their lecturers' guidance and clear instruction so that they could do the task well. Based on the students' reflection on the questionnaire, they mentioned that they learned various things from this assignment. Fig. 1 illustrates students' opinion regarding the lessons that they had learned from doing a critical review assignment.
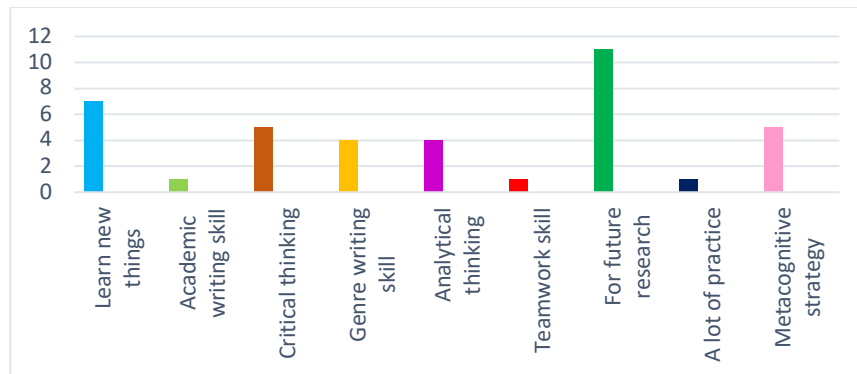
Fig. 1. The benefits of critical review assignment

Based on the collected data portrayed in Fig. 1, participants mentioned that their analytical and critical thinking skill had improved as they finished the critical review assignment. In addition, students mentioned that critical review enables them to practice Metacognitive strategy, learn how to review a journal article, and improve writing skills particularly their summarizing and synthesizing skills. In other words, the students suggested that critical review assignments had great impact on their critical thinking and analytical thinking skills. It is interesting to notice that this assignment is also beneficial in building their teamwork skill since they had to do the assignment in groups and they also had to do peer review. The students believed that this assignment was not only beneficial for their current work, but it was also for their future research or undergraduate thesis.

Despite the benefits that the students got from this assignment, they also faced some difficulties in doing the assignment. Those difficulties are summarized in Fig. 2.
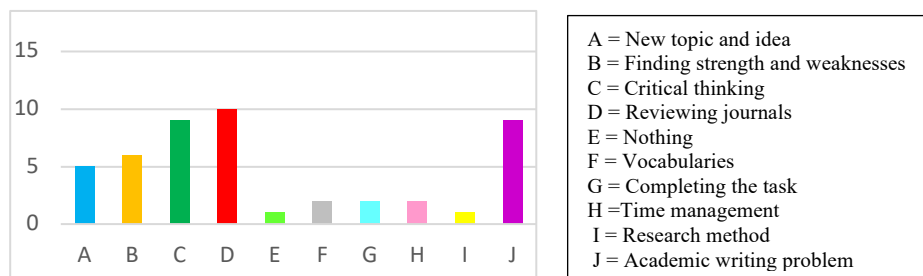

A = New topic and idea
B = Finding strength and weaknesses
C = Critical thinking
D = Reviewing journals
E = Nothing
F = Vocabularies
G = Completing the task
H = Time management
I = Research method
J = Academic writing problem

Fig. 2. Difficulties faced by the students in completing the critical review assignment

Fig. 2 suggests that in completing the critical review assignment, students also face some difficulties. The most difficult thing that the students experienced is reviewing articles because they did not have sufficient sources to read and help them understand the context. The students also had difficulties to evaluate the strengths and weaknesses of an article. Another common difficulty was thinking critically. Even though the students claimed that critical review assignment developed their critical thinking, they struggled to do it. Students took time to critically evaluate an article since they were not accustomed to do it. In addition, students also struggled with their writing even though they had passed their writing courses. Some students commented that it was not easy for them to organize their ideas, elaborate their ideas, and find

supports for their evaluation. Beside those three major difficulties, time management was another problematic issue among students. They stated that limited time in doing the assignment and other workload made them difficult to focus on this assignment and yield the best results.

5 Conclusion

Based on the finding and discussion above, it can be inferred that the critical review assignment can enhance students' critical thinking skills, academic writing skills and team work. The results of the questionnaire supported by the students work and their behavior observed during the class suggested that students had a positive attitude towards critical review assignment since they got a lot of benefits from this assignment, not only for their subject matter but also for their future research. Therefore, the researchers suggest that critical review assignment can be used as an alternative assignment or assessment in any content courses.

References

[1]   J. A. Boss, "Think: Critical thinking and logic skills for everyday life," 2010.
[2]   A. Blust, "The Debate Over Outcome Based Education," *News &Views*, 1995.
[3]   J. Wang, "The Comparison and Inspiration of Outcome-based Curriculum Design in Canada and Higher Vocational Education in China," in *2nd International Conference on Management Science and Industrial Engineering (MSIE 2013)*, 2013, pp. 709–712.
[4]   E. Emilia, *Teaching writing: Developing critical learners*. Rizqi Press Bandung, Indonesia, 2010.
[5]   R. N. Indah and A. W. Kusuma, "Factors affecting the development of critical thinking of Indonesian learners of English language," *J. Humanit. Soc. Sci.*, vol. 21, no. 6, pp. 86–94, 2016.
[6]   U. Samanhudi and P. Sampurna, "Researching students' critical thinking in EFL writing class (a case study in English education department, Untirta)," *TEFLIN 57th Revital. Prof. ELT as a Response to Glob. World. Bandung Indones. Univ. Educ.*, 2010.
[7]   University of New England, "Writing a critical review," 2021. https://www.une.edu.au/__data/assets/pdf_file/0006/276423/WE_Writing-a-critical-review.pdf.
[8]   J. Dewey, "Experience and education," in *The educational forum*, 1938, vol. 50, no. 3, pp. 241–252.
[9]   M. Scriven and R. Paul, "The critical thinking community. Retrieved November 28, 2005." 2004.
[10]   R. H. Ennis, "A taxonomy of critical thinking dispositions and abilities.," 1987.
[11]   B. S. Bloom, M. D. Engelhart, E. J. Furst, W. H. Hill, and D. R. Krathwohl, "Handbook I: cognitive domain," *New York David McKay*, 1956.
[12]   E. Sallis, "A Framework for Quality Management UU No. 20 Tahun 2003 Tentang Sisitem Pendidikan Nasional," 1993.
[13]   P. C. Abrami *et al.*, "Instructional interventions affecting critical thinking skills and dispositions: A stage 1 meta-analysis," *Rev. Educ. Res.*, vol. 78, no. 4, pp. 1102–1134, 2008.
[14]   UNSW, "Writing a critical review," 2020. https://student.unsw.edu.au/writing-critical-review.
[15]   METU School of Foreign Languages, "Writing critical review." https://awc.metu.edu.tr/handouts.
[16]   R. Edwards, "Critical thinking skills in the process of academic writing," *Mod. English Teach.*, vol. 22, no. 1, pp. 5–10, 2013.
[17]   G. Borglin, "Promoting critical thinking and academic writing skills in nurse education," *Nurse Educ. Today*, vol. 32, no. 5, pp. 611–613, 2012.
[18]   H. Yusoff, W. N. W. Daud, and Z. Ahmad, "Effectiveness of nutrition education vs. non-nutrition education intervention in improving awareness pertaining iron deficiency among anemic

adolescents," *Iran. J. Public Health*, vol. 42, no. 5, p. 467, 2013.

[19]   Y. Nadri and A. Azhar, "Self-assessment of critical thinking skills in EFL writing courses at the university level: reconsideration of the critical thinking construct," 2017.

[20]   D. M. Pegram, "' What If?' Teaching Research and Creative-Thinking Skills through Proposal Writing," *English J.*, pp. 18–22, 2006.

[21]   X. Zhang, "Developing college EFL writers' critical thinking skills through online resources: A case study," *SAGE Open*, vol. 8, no. 4, p. 2158244018820386, 2018.

[22]   L. K. Niedringhaus, "Using student writing assignments to assess critical thinking skills: A holistic approach," *Holist. Nurs. Pract.*, vol. 15, no. 3, pp. 9–17, 2001.

[23]   P. Stapleton, "Assessing critical thinking in the writing of Japanese university students: Insights about assumptions and content familiarity," *Writ. Commun.*, vol. 18, no. 4, pp. 506–548, 2001.

[24]   M. Vyncke, "The Concept and practice of critical thinking in academic writing: An investigation of international students' perceptions and writing experiences." King's College London, 2012.

[25]   S. Ahlfeldt*, S. Mehta, and T. Sellnow, "Measurement and analysis of student engagement in university classes where varying levels of PBL methods of instruction are in use," *High. Educ. Res. Dev.*, vol. 24, no. 1, pp. 5–20, 2005.

[26]   V. M.-C. Lun, R. Fischer, and C. Ward, "Exploring cultural differences in critical thinking: Is it about my thinking style or the language I speak?," *Learn. Individ. Differ.*, vol. 20, no. 6, pp. 604–616, 2010.

[27]   E. Manalo, T. Kusumi, M. Koyasu, Y. Michita, and Y. Tanaka, "To what extent do culture-related factors influence university students' critical thinking use?," *Think. Ski. Creat.*, vol. 10, pp. 121–132, 2013.

[28]   P. D. Sundari, P. Parno, and S. Kusairi, "Students'critical Thinking Ability In Integrated Learning Model," *J. Kependidikan Penelit. Inov. Pembelajaran*, vol. 2, no. 2, pp. 348–360, 2018.

[29]   J. W. Creswell and V. L. Plano Clark, "Choosing a mixed methods design," *Des. Conduct. Mix. methods Res.*, vol. 2, pp. 53–106, 2011.