

Critical Thinking and Gender: A Case in College Students

Alifiah Pratiwi¹, Ray Suryadi², Bintang Permana Listyawati³, Susi Astiantih⁴, Syamsinar⁵

^{1,2,4} Universitas Sembilanbelas November Kolaka

³ Universitas Sebelas Maret

⁵ STIE Tri Dharma Nusantara

alifiahpratiwi28@gmail.com¹, ray_suryadi@yahoo.com², bintanglist@gmail.com³,
sasiastiantih@gmail.com⁴, hinarishine@gmail.com⁵

Abstract

Critical thinking has been a serious problem for college English Education students in Universitas Sembilanbelas November Kolaka as they were required to critically write a research report for their final project. In order to know their critical thinking ability related to gender, this study described critical thinking among male students and female students. For that purpose, 6 college students (3 male and 3 female) of semester VI have been selected to participate this research by answering a Critical Thinking Mindset Self-Rating Form proposed by Facione and Facione (2014, p. 14) which consisted of 20 'yes or no' questions to measure the students' level of critical thinking. The finding indicated the disposition of college students both male and female toward critical thinking was considerably different.

Keywords:

critical thinking
gender
college students

Abstrak

Berpikir kritis telah menjadi masalah serius bagi mahasiswa pendidikan Bahasa Inggris di Universitas Sembilanbelas November Kolaka karena mereka diharuskan menulis laporan penelitian secara kritis untuk tugas akhir mereka. Untuk mengetahui kemampuan berpikir kritis mereka terkait dengan gender, studi ini mendeskripsikan berpikir kritis di antara mahasiswa laki-laki dan perempuan. Untuk tujuan tersebut, enam mahasiswa (3 laki-laki dan 3 perempuan) semester VI telah dipilih untuk berpartisipasi dalam penelitian ini dengan menjawab Critical Thinking Mindset Self-Rating Form yang diajukan oleh Facione dan Facione (2014, hlm. 14) yang terdiri dari 20 pertanyaan 'ya atau tidak' untuk mengukur tingkat berpikir kritis mahasiswa. Hasil penelitian menunjukkan bahwa disposisi mahasiswa baik laki-laki maupun perempuan terhadap berpikir kritis sangat berbeda.

Corresponding Author:

Alifiah Pratiwi

Universitas Sembilanbelas November Kolaka
alifiahpratiwi28@gmail.com

1. INTRODUCTION

Thinking is commonly deviated, changed, taken sides, given notice, prejudiced as well as the quality of life depends on the quality of thinking (Paul & Elder, 2009, p. 2). Wherefore, critical thinking skill is needed to help human encounter whatever the problems are (Hatcher & Spencer, 2005). Critical thinking has been a crucial issue in Indonesia (Depdiknas, 2001). It can also be seen in Article 3 UU No. 20 the year 2004 about the national education system that the goal of national education is to develop student's potentials (Depdiknas, 2003).

In addition, general attitude and skill formulation from National Standardized of Directorate General for Higher Education (SN DIKTI) no. 49 about general skill achieved by students of Diploma program that is students should be able to apply logical, critical, innovative, qualified, and measurable thinking in doing a particular job in line with its standard competence (Kepmendiknas, 2014).

By recognizing critical thinking level and potential, there will be many benefits for the male and female college students to get such as it can assist them enhance themselves in both of quality of their learning and life. For this reason, the lecturer as a researcher was driven to the following research objectives whether there was; 1) critical thinking amongst the college students, and 2) any difference with the critical thinking gaze between male and female college students.

The main role thinking likes to more exist in the education world (Fahim & Mirzaii, 2014, p. 4). That one of the main goals of education, at any phases, is to help explore and enhance students' general abilities to think more critically about their knowledge, actions, and beliefs (Gelder, 2005, p. 41; Alexander et al, 2010, p. 409). Recently, the needs for critical thinking as important as ever, particularly in today's information age, have been described by researchers and educators (Astleitner, 2002; MacKnight, 2000; McKendree et al., 2002) especially with the access to more and more information, students must be able to analyze the information systematically (Alexander et al, 2010, p. 409).

An ideal critical thinker criteria as described by critical thinking community (2011, p. 143) in Shalahshoor and Rafiee (2016) such as 1) lifts up issues and formulates them precisely; 2) collects and evaluates related information then uses abstract ideas to paraphrase it effectively; 3) reaches well-reasoned conclusions and solutions then testing them against related criteria and standards; 4) thinks open-mindedly within alternative systems of thought, then recognizes and assesses their assumptions, implications, and practical consequences; and 5) communicates or discusses with others in looking for solutions to problems (117–118).

Hence, by having those criteria above, it was considered to be helpful for college students especially when they were required to critically write a research report for their final project. It seemed that measuring critical thinking of college students viewed from gender is important. The word gender itself came from Latin word genus meant kind or race and was defined by the identification of one as male, female, or intersex; it might also be based on legal status, social interactions, public persona, personal experiences, and psychological setting (Ghosh, 2015). As Wilson (1989) stated that gender was a vital measurement of critical thinking skill. There was also a study carried by Ghadia et al. (2012) about determining critical thinking dispositions level between male and female students. It was found that there was no substantial deviation amongst them in this gaze.

The required data for this study was A Critical Thinking Mindset Self-Rating Form proposed by Facione and Facione (2014, p. 14). There were 20 'yes or no' questions designed to measure the disposition of college students both male and female toward critical thinking. They would be scored 5 points for every 'yes' answer on odd numbered items and for every 'no' answer on even numbered items. After those scores have been calculated, the students would be divided into 3 levels. Scores 70 or above, the disposition toward critical thinking was generally positive. Scores 50 or lower indicated a self-rating averse or hostile toward critical thinking. Scores between 50 and 70 indicated an ambivalent or mixed overall disposition toward critical thinking. The list of questions from a Critical Thinking Mindset Self-Rating Form as the questionnaire was provided in the table below.

Table 2. A Critical Thinking Mindset Self-Rating Form

Questions: "Can I give any example when I..."	Yes	No
1. Was bravely enough to convince myself?		
2. Did not believe and underestimate myself?		
3. Showed tolerance toward the beliefs, ideas, or opinions of someone with whom I disagreed?		
4. Tried to find information to build up my arguments?		
5. Tried to anticipate the consequences of my choices?		
6. Laughed at what other people said and made fun of their beliefs, values, opinion, or points of views?		
7. Was serious to analyze foreseeable outcomes of my decisions?		
8. Manipulated information to suit my own purposes?		
9. Encouraged peers not to dismiss the opinions and ideas other people offered?		
10. Did not care about the possible consequences of my choices?		
11. Tried to answer and solve a question or issue by myself?		
12. Tried to find the answer of a problem in a hurry without first thinking about how to solve it?		
13. Was confidence enough to answer some tough questions?		
14. Instead of working through a question for myself, took the easy way out and		

asked someone else for the answer?		
15. Read a report, newspaper, or book chapter or watched the world news or a documentary just to learn something new?		
16. Put zero effort into learning something new until I saw the immediate utility in doing so?		
17. Was honestly reconsider my decision?		
18. Refused to change my mind?		
19. Reconsidered variations in circumstances, contexts, and situations in making a decision?		
20. Refused to reconsider my decision in light of differences in context, situations, or circumstances?		

The researcher first showed the original form of the questionnaire in the table above through LCD projector. However, the students admitted that the language used in the questionnaire was hard to understand. Therefore, the researcher modified and translated it into Bahasa Indonesia in order that the students could answer easily to the most appropriate option to their situation. Henceforth, the questionnaire was distributed in the following day to the students in a form of a shortened link of a Google form website. Above all, the researcher chose to put the questionnaire online because it was easy to answer and the results could be seen immediately after the students sent the answer.

Table 3. A Critical Thinking Mindset Self-Rating Form (Modified)

Statements	Yes	No
1. Saya selalu yakin dengan diri saya sendiri.		
2. Saya terkadang meremehkan diri saya sendiri.		
3. Saya menunjukkan sikap toleransi terhadap keyakinan, gagasan, atau opini orang lain yang tidak sependapat dengan saya.		
4. Saya adalah tipe mahasiswa yang suka mencari informasi untuk membangun ide dalam menulis karangan.		
5. Saya selalu siap dengan konsekuensi dari setiap keputusan yang saya ambil.		
6. Saya terkadang meremehkan pola pikir orang lain yang tidak sejalan dengan saya.		
7. Saya sangat serius dalam menganalisis sesuatu sebelum mengambil keputusan.		
8. Saya pernah memanipulasi informasi agar disesuaikan dengan tujuan dan opini saya pribadi.		
9. Saya selalu mengingatkan teman untuk tidak menganggap remeh opini dan ide yang orang lain tawarkan padanya.		
10. Terkadang saya tidak peduli dengan konsekuensi apapun dari keputusan yang saya ambil.		
11. Saya selalu mencoba memecahkan masalah dengan mandiri dan tanpa bantuan orang lain.		
12. Saya sering terburu-buru dalam memecahkan masalah tanpa berpikir dahulu bagaimana cara menyelesaikannya.		
13. Saya bisa langsung menjawab pertanyaan tanpa ragu.		
14. Daripada menjawab pertanyaan sendiri, saya lebih suka meminta tolong orang lain menjawabnya untuk saya.		
15. Saya suka membaca laporan, koran, buku pengetahuan, atau menonton berita dunia dan dokumenter hanya untuk belajar suatu hal yang baru.		
16. Saya bersedia belajar hal yang baru jika terpaksa.		
17. Saya selalu mempertimbangkan keputusan yang sudah saya ambil.		
18. Saya bukan tipe orang yang suka berubah pikiran.		
19. Saat keadaan, situasi, dan kondisi tidak seperti yang diharapkan, saya akan mempertimbangkan kembali keputusan yang sudah saya ambil sebelumnya.		
20. Saya akan tetap pada pendirian dan keputusan saya apapun yang terjadi.		

As the class was not so big, it was not too difficult for the researcher to handle the students. Before distributing the questionnaire link, the researcher explained anything about the questionnaire and what to do to answer the questions in it. Afterward, the participants clicked on the link and started to answer the

questionnaire with the time allotment of 15 minutes. Nonetheless, it was surprising that most of the participants could finish answering the questionnaire less than that, in only 10 minutes approximately.

2. METHODOLOGY

This research was carried out by using the quantitative approach with descriptive quantitative analysis and took place in Universitas Sembilanbelas November Kolaka. It was the 6th semester students as the highest grade that was required to critically write a research report for their final project to pass the examination of Diploma program. There were 6 students with age ranged 24 to 40 and selected as the participants of this research. With various backgrounds of them, a brief description of the participants is as follows.

Table 1. A Brief Description of the Participants

Students	Gender	Age	Occupation
JS	Male	33	Teacher
MF	Male	28	Academic Staff
DK	Male	25	Businessman
TM	Female	39	Administration Staff
SS	Female	40	Teacher and Staff
EE	Female	24	Private Employee

3. Finding and Discussion

The result then immediately appeared on the Google form website showing the descriptive statistics of the answers of every participant as explained in the table below.

Table 3. The Students' Answers to the Questionnaire

No	JS	MF	DK	TM	SS	EE
1	YES	YES	YES	YES	YES	YES
2	YES	YES	NO	NO	NO	NO
3	YES	YES	YES	YES	YES	YES
4	NO	YES	YES	YES	YES	YES
5	YES	YES	YES	YES	YES	YES
6	YES	NO	NO	NO	NO	NO
7	YES	YES	YES	YES	YES	YES
8	NO	YES	NO	NO	NO	NO
9	NO	YES	NO	YES	YES	YES
10	YES	YES	YES	YES	NO	NO
11	NO	YES	YES	YES	YES	NO
12	YES	YES	YES	NO	NO	NO
13	NO	NO	NO	YES	YES	YES
14	NO	YES	YES	NO	NO	NO
15	YES	YES	YES	YES	YES	NO
16	YES	YES	YES	YES	NO	YES
17	YES	YES	YES	YES	YES	YES
18	NO	NO	YES	YES	YES	NO
19	YES	YES	YES	YES	YES	YES
20	YES	YES	YES	YES	YES	YES

According to Facione and Facione (2014, p. 14), the students' answers would be scored 5 points for every 'yes' answer on odd numbered items and for every 'no' answer on even numbered items. Based on the table above, it could be seen that on odd numbered items, all of the students answered 52 yes and on even numbered items 28 no. The detailed explanation of the students' answers with the score assessment was in the following table:

Table 3. The Result and Score of the Questionnaire

No	JS	MF	DK	TM	SS	EE
1	5	5	5	5	5	5
2	0	0	5	5	5	5
3	5	5	5	5	5	5
4	5	0	0	0	0	0
5	5	5	5	5	5	5
6	0	5	5	5	5	5
7	5	5	5	5	5	5
8	5	0	5	5	5	5
9	0	5	0	5	5	5
10	0	0	0	0	5	5
11	0	5	5	5	5	0
12	0	0	0	5	5	5
13	0	0	0	5	5	5
14	5	0	0	5	5	5
15	5	5	5	5	5	0
16	0	0	0	0	5	0
17	5	5	5	5	5	5
18	5	5	0	0	0	5
19	5	5	5	5	5	5
20	0	0	0	0	0	0
Score	55	55	55	75	85	75
Mean	55			78,3		

Table 3 revealed that the lowest score obtained in the questionnaire was 55 and the highest score was 85. Based on the table above, the score of all male students was the same 55. According to Facione and Facione (2014, p. 14), score 55 indicated that all male students were ambivalent or mixed overall disposition toward critical thinking. Meanwhile, the scores of female students were various. There were 75, 85, and 75. Those scores were above 70 therefore, the female students' disposition toward critical thinking was generally positive.

Finally, the mean score of both male students and female students then could be compared in order to figure out whether there was any difference in the critical thinking gaze between male and female college students. The mean score of male students obtained was 55 and the mean score of female students obtained was 78,3. It could be seen that the female students' score was higher than the male students' score of A Critical Thinking Mindset Self-Rating Form proposed by Facione and Facione (2014, p. 14). The result of this comparison was shown in Figure 1.

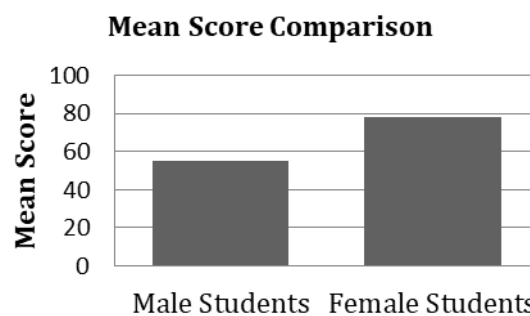


Figure 1. Mean Score of Male and Female Students on the Questionnaire

4. CONCLUSION

From the description, it could be concluded that disposition toward critical thinking of male students was ambivalent or mixed overall. In contrast, the disposition toward critical thinking of female students was generally positive. To compare the students' critical thinking viewed from gender, the mean score of the questionnaire both male and female was obtained. It was indicated that the disposition of college students both male and female toward critical thinking was considerably different.

REFERENCES

- Alexander, Martha E, et al. (2010). *Using the Four-Question Technique to Enhance Critical Thinking in Online Discussion*. Journal of Online Learning and Teaching, 6 (2), 409–415.
- Astleitner, H. (2002). *Teaching Critical Thinking Online*. Journal of Instructional Psychology, 29 (2), 53–76.
- Depdiknas. (2001). *Program Pembangunan Nasional (Propenas)*. Undang-undang Tahun 2000–2004. Jakarta: Depdiknas.
- Depdiknas. (2003). *Sistem Pendidikan Nasional*. Undang-undang Nomor 20 Tahun 2003. Jakarta: Depdiknas.
- Facione, Peter., & Facione, Noreen. (2014). *Stronger Reasoning and Decision Making: Training Tools and Techniques*. CA USA: Hermosa Beach.
- Fahim, M., & Mirzaei, M. (2014). *Improving EFL Argumentative Writing: A Dialogic Critical Thinking Approach*. International Journal of Research Studies in Language Learning, 3 (1), 3–20.
- Gelder, T. V. (2005). *Teaching Critical Thinking: Some Lessons from Cognitive Science*. College Teaching, 53 (1), 41–46.
- Ghosh, Shuvo. (2015). *Gender Identity*. Retrieved on March 30th, 2018 from <https://emedicine.medscape.com/article/917990-overview>.
- Hatcher, D. L. & Spencer, L. A. (2005). *Reasoning and Writing: From Critical Thinking to Composition*. 3rd ed. Boston: American Press.
- Kepmendiknas. (2014). *Panduan Penyusunan Capaian Pembelajaran Lulusan Program Studi*. Jakarta: Direktorat Pembelajaran dan Kemahasiswaan.
- MacKnight, C. B. (2000). *Teaching Critical Thinking through Online Discussions*. Educause Quarterly, 23 (4), 39–41.
- McKendree, J., Small, C. & Stenning, K. (2002). *The Role of Representation in Teaching and Learning Critical Thinking*. Educational Review, 54 (1), 57–67.
- Paul, R. & Elder, L. (2009). *The Miniature Guide to Critical Thinking Concepts and Tools*. Dillon Beach, CA: Foundation for Critical Thinking.
- Salahshoor, N. & Rafiee, M. (2016). *The Relationship between Critical Thinking and Gender: A Case of Iranian EFL Learners*. Journal of Applied Linguistics and Language Research, 3 (2), 117–123.