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AN ANALYSIS OF CRITICAL THINKING SKILLS IN READING BETWEEN GENDERS

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Abstract. The research aims to find out and explain if English Study Program students of AWCU show any difference found between genders in critical thinking skills in reading. Five critical thinking skills, namely Interpretation, Explanation, Analysis, Inference, and Evaluation, were tested among 57 male and female respondents. The descriptive data analysis showed that the overall mean score for each critical thinking skill in reading was generally not manifested; the score was below 50 after being judged using the California Critical Thinking Skills (CCTS) scale, meaning that some efforts were needed to improve it. Oneway Anova for data analysis was used, and it was found that, from the five critical thinking skills investigated, the explanation skill showed different significance between male and female students. Its alpha value was 0,003 between males and females on this skill. The other four skills did not show any significant difference between genders, with Interpretation skill being 0.711, Analysis 0.489, Evaluation 0.920, and Inference being 0.459.

Keywords*: *analysis, explanation, critical thinking skills, interpretation, inference, and evaluation

INTRODUCTION

The main objective of National Education in Indonesia is to educate the nation, which, in particular, means improving human resources. One way is through reading. How is it in the reality? Some education practitioners still have doubts about the quality of education in Indonesia. A phrase states, "Reading is the key to success in school."

According to Kompas Daily newspaper, published June 12, 2009, students' intentions to read differ from those of earlier times. The paper states that children's literature and book publishers do not affect students' reading intention. In the old times, when the facilities were still limited, students had the spirit and motivation to read. The library's construction and purchase of many references did not seem to touch the students' intention to read some literature relating to the courses taken. Students' reading activities have decreased, which might come from the influence of information and technology, which are already highly developed.

A wide variety of entertainment media that do not include the book becomes more attractive because reading requires special attention that can not be interspersed with other activities (Siswti, 2010: p.125). Another fact is that critical thinking is still rarely taught or introduced at Universities in Kupang and is not included in the curriculum. These cause students to not display elements of critical thinking in their language skills, even though it has been stated clearly in the syllabuses and lesson plans about what to achieve. In other words, the writer could say that it may happen due to the instructional design and student's ability relating to critical thinking skills. As

Pithers & Soden (2002) and Burris and Garton, 2006) said, the current educational climate reflects the importance of learning content information and developing critical thinking skills. The need for instructional design to improve the thinking process has been substantiated in numerous reports over the last 25 years (Halpern, 2003, cited in Burris and Garton, 2006).

Recent studies by Perkins and associates (Perkins, 1989; Perkins, Faraday, & Bushey, 1991) and Kuhn (1992) in Reed (1998) have documented the faulty everyday reasoning and poor argumentation skills used by most people. Even a college education appears to have a limited effect on graduates' critical thinking abilities, including reasonably interpreting texts and formulating unbiased and well-reasoned arguments (Halpern, 1998; Keeley & Browne, 1986; Kurfiss, 1988; Perkins, 1985).

Much research has been conducted previously about reading by many researchers, but research about critical thinking in reading has not been investigated yet. Especially at the English Department of AWCU, a survey on activities that can lead students to think critically has not been done. The need to know the CT skills of students in reading needs to be realized in a research study because critical thinking skills in reading have not yet been traced, especially those relating to gender.

In conducting this research, a question to be discussed is: ***Are there differences between gender-related critical thinking skills in reading?***

The results of this study add to the body of knowledge regarding critical thinking. Second, supporting the investigation or research have been done by some experts (Kuhn 1992, Semeric 2010, Myers & Dyer 2004, and Barjes Tea & Vaseghi 2012) about critical thinking skills which show that there are differences in critical thinking skills between males and female and provides information regarding critical thinking skills in a higher education setting and is helpful for higher education practitioners in facilitating the development of critical thinking skills, especially in reading.

METHOD

The population in this study are students in the fifth semester of the English Study Program at AWCU. There are six classes (A-F) with a population of 300 students. Given the population's number, it is impossible to examine the entire population to become the sample. Thus, to determine the number of samples from the population, a formula used in this study was taken from Sekaran (2003), which stated that at least 30% of the population would be taken as the sample. So, the sample of this research was about 90 students. The sample selection technique used in this study is purposive random sampling.

The instrument used to analyze and explain critical thinking skills in reading between male and female students is a reading test in the form of multiple choice questions. The questions are of varying difficulty and format to measure all areas of critical thinking ability. The reading test and questions are adopted from CT exercise books, Watson-Glaser Critical Thinking Appraisal (WGCTA), CAAPCT(Collegiate Assessment of Academic Proficiency Critical Thinking: 2008), and California Critical Thinking Skills Test (CCTST). Reading texts, statements, and paragraphs presents different types of questions.

All the data gained are analyzed quantitatively using numerical or statistical analysis to explain the critical thinking skills in reading shown by male and female students of AWCU Kupang. Furthermore, there are steps in analyzing the data:

1. Reading test results on five CT skills done by all the samples will be evaluated based on whether the answers are correct, which refer to the answer keys provided.
2. The test results are judged based on the CCTST (California Critical Thinking Skills Test) Scale Score (100-point Version).

This score is qualitatively interpretable as :

Superior : range from 86 or higher
Substantial : range from 79-85
Weak : range from 63-69
Moderate : range from 70-78
Not Manifested : range from 50-62

3. Validity and reliability testing in this study was not conducted using a standard formula because the question items used in this study used Inventory questions for critical thinking, which means that the items in critical thinking questions in reading used have been universally recognized and had been repeatedly performed, and testing by the scientists or researchers who are experts in critical thinking skills.
4. Descriptive statistic analysis is done to determine the overall frequency of the answers in five CT skills shown by the sample.
5. The answers to each critical thinking question in each category done by all the samples are grouped based on gender and will be displayed in a graph or chart.
6. Finally, the ANOVA test is done to present, explain, and answer the hypothesis formulated to determine if there are any differences between gender-related critical thinking skills in reading. The analysis tool used is SPSS 18 software.

RESULTS AND DISCUSSION

There were 90 respondents, but about 31 were not included in the analysis because they provided more than one answer, while the others did not fill out the questions. It could be said that 31 respondents are corrupt. So, 59 female and male university students of the English Department at Artha Wacana Christian University filled in the questions correctly or took part in this study. In other words, about 57,63 % of the respondents were female, and 43,27 % were male-male respondents.

Tabel 1. Descriptive Research Result of Mean Score of Males and Females on 5 Critical Thinking Skills in Reading

CT skills between gender					Total Mean/Average Value	Judgment based on the CCTST Scale (100-point)
Skills	N	M	N	F		
Interpretation	25	51,84	34	53,53	52,81	Not manifested

Analysis	25	26,40	34	28,82	27,80	Not manifested
Inference	25	24,80	34	24,41	24,58	Not manifested
Evaluation	25	32,40	34	35,00	33,90	Not manifested
Explanation	25	31,60	34	20,29	58,08	Not manifested

Taking account of critical thinking skills between gender from the table above, and bring together the result into a judgment based on California Critical Thinking Scale Test (CCTST) Score (100-point Version), which the score is qualitatively interpretable as Superior: range from 86 or higher Strong: range from 79-85 Weak: range from 63-69 Moderate: range from 70-78 Not Manifested: range from 50-62 Then, it is clear enough that the finding of both male and female score on critical thinking skills in reading are not manifested because the score is fall between 50-60.

Even though the mean result on the table shows that females' scores were higher than males' in most of the CT skills, in general, there is not a significant difference between both genders. In other words, it could be inferred from the table above that the average value of interpretation skill is in the middle interval, with the average value for males 51.84 and 53.53 for females. The average value analysis skill is in the low category, namely for females 28.82 and for males 26.40. The average value of inference skill also falls into a lower category, with 24.41 for females and 24.80 for males. The average value of evaluation skill shows that both genders are in lower categories, namely for females at 35.00 and for males at 32.40. The last skill is explanation skill, which shows the results are not much different between genders, in which the female got 20.29, and the male got 31, 60.

Normality Test Figure.

Figure1. Inferences skills between genders

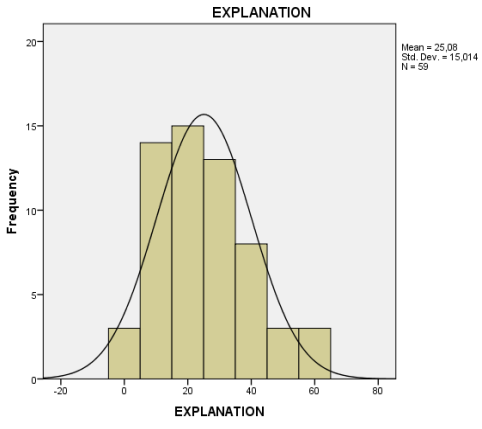

Figure 2. Explanation skills between genders

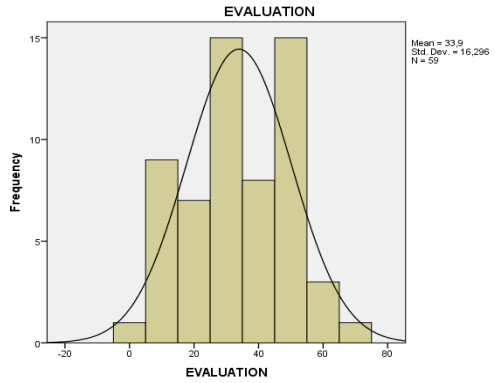

Figure 3. Evaluation skills between genders

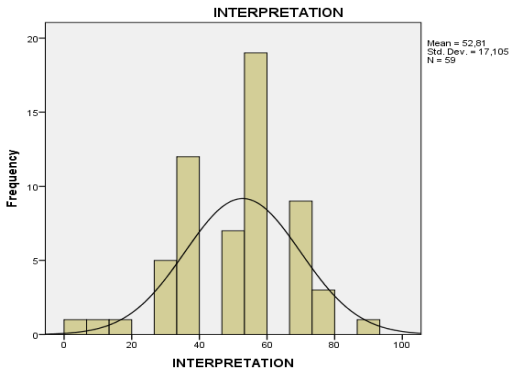

Figure 4. Interpretation skills between genders

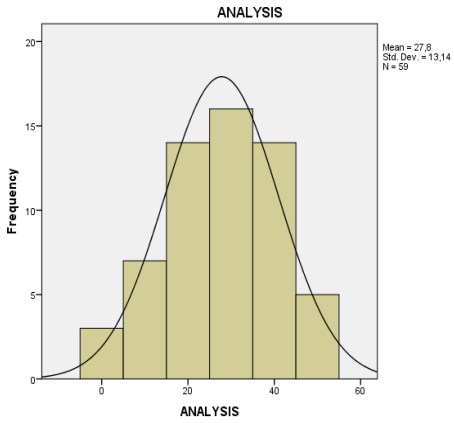

Figure5. Analysis skills between genders

Refers to the hypothesis result, it is evident that only explanation skill shows a difference between genders, in which the male group was higher than the female group. It can be seen from their sig. The value is smaller than the alpha value 0,05. In contrast, the other four skills have significant values bigger than 0,05. So, holistically, the alternative hypothesis is rejected, and the null hypothesis is accepted.

Conclusion

Based on the results obtained, after the data was analyzed and discussed, it can be stated that the Explanation skill was the only skill shown to have a difference between male and female students. Descriptively, it was found that the overall mean score for critical thinking skills in reading between male and female students of AWCU was still relatively unsatisfactory. Students' Critical thinking skills relating to Interpretation were 0.711, Analysis 0.489, Inference 0.920, Evaluation 0.459, and Explanation 0.003. Therefore, it could be stated that the Explanation skill was significantly different between genders. Moreover, the point is that the male and female students in the English Department of AWCU did very poorly or still have not manifested their critical thinking skills in reading. So, it was clear that an isolated experience does not develop critical thinking skills.

Similarly, providing reading activities with little instructor feedback is ineffective. In this case, instructors need to (1) expose students to continuous critical-thinking activities and (2) provide continuous feedback to students. Lynch and Wolcott (2001) suggest that faculty introduce students to "steps for better thinking." They state, "Students are more likely to develop skills if they understand the goals and receive explicit feedback about their performance." This challenges the English Department, who are more familiar with the traditional approach of focusing on the technical aspects of assignments. Students need to be exposed to open-ended questions that often do not have one correct answer.

Duron and Waugh (2006) mentioned the model of the steps to move students toward critical thinking, which the researcher found might be an excellent framework to be applied to the students in a classroom. These frameworks are suitable for any discipline in any area of education.

Step 1. Determine learning objectives.

Considering the importance of a course, its placement in a program of study, and its role in providing a base of knowledge to be built upon by other courses, a teacher should first identify the key learning objectives that define what behaviors students should exhibit when they exit the class. To make critical thinking happen, these learning objectives and the activities and assessments must include those tied to the higher levels of Bloom's (1956) taxonomy (Most learning objectives in the English curriculum at AWCU are still used in Bloom's Taxonomy). A well-written objective should include a behavior appropriate for the taxonomy's chosen level.

Step 2: Teach through questioning.

Questioning is a vital part of the teaching and learning process. It allows the teacher to establish what is already known and extend beyond that to develop new ideas and understandings. Questions can stimulate interaction between teacher and learner and challenge the learner to defend his or her position (i.e., to think critically). Clasen and Bonk (1990) posited that although many strategies can impact student thinking, teacher questions have the most significant impact. He indicated that the level of student thinking is directly proportional to the level of questions asked. When teachers plan, they must consider the purpose of each question and then develop the appropriate level

and type of question to accomplish the purpose. All students need higher-level questioning experience once they become familiar with a concept.

Step 3: Practice before you assess.

In the past decade, education has significantly shifted; that shift is toward active learning. Teachers who have used this approach generally find that the students learn more and that the courses are more enjoyable. Bonwell and Eison (1991) described active learning as involving the students in activities that cause them to think about what they are doing.

Step 4: Review, refine, and improve.

Teachers should strive to continually refine their courses to ensure that their instructional techniques are helping students develop critical thinking skills. To accomplish this, teachers should monitor the classroom activities very closely.

Step 5: Provide feedback and assessment of learning.

Teacher feedback, like assessment, compares criteria and standards to student performance to evaluate the quality of work. However, the purpose of feedback is to enhance the quality of student learning and performance rather than to grade the performance, and, importantly, it has the potential to help students learn how to assess their performance in the future. Feedback allows the teacher and student(s) to dialogue about what distinguishes successful performance from unsuccessful performance as they discuss criteria and standards (Fink, 2003).

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