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The Relationship Between Gender-Responsive and Culture-Based Learning on the Education Quality of Higher Education

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Abstract: The Relationship Between Gender-Responsive and Culture-Based Learning on the Education Quality of Higher Education. Objectives: This study aims to determine the relationship between gender-responsive and culture-based learning on the quality of education in tertiary institutions. **Methods:** This study involved 400 students and educators from 10 tertiary institutions. This survey study adopted a cross-sectional survey design. The data were collected using non-test methods and the data were analyzed using multiple linear regression tests. **Findings:** The results showed that (1) there is a significant relationship between gender-responsive learning and the quality of tertiary education with a percentage of 35.4%; and (2) there is a significant relationship between cultural-responsive learning and the quality of higher education with a percentage of 38.4%. **Conclusion:** There is a significant relationship between gender and cultural-responsive learning simultaneously with the quality of tertiary education with a percentage of 61.4%.

Keywords: gender-responsive learning, cultural-responsive learning, quality of education, higher education.

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INTRODUCTION

Implementing national and international education is required to provide opportunities for every individual to obtain education quality regardless of ethnicity, race, gender, religion, or economic level. The current development of education carries a mission to equalize education and intelligence for each individual, as well as the formation of character based on moral, social and local wisdom values (Fadli & Irwanto, 2020; Suharsaputra, 2010). In addition, the quality of education, which covers the learning process, graduate competencies, educators and education staff, educational facilities and infrastructure, management, and assessment that are integrated with the use of technology is one of the learning demands in the industrial revolution 5.0 era (Wahyudiati, 2023; Irwanto et al., 2023). However, according to the 2018 PISA data, Indonesia is ranked 74th, 73th and 71st out of 79 countries for reading, mathematics and science abilities (Hewi & Shaleh, 2020).

The quality of tertiary education in Indonesia is still lagging behind other developing countries due to a lack of equity and access, low management of human resources, lack of accountability, and ongoing decentralization of education (Suryana, 2020). Moreover, there has

been a shift in the function of higher education institutions, which initially prioritized aspects of public service to become exclusive education, which prioritizes commercialization, and a gender bias in educational practice (Tholani, 2013; Suryana, 2020). The practice of gender disparity in education is represented by men having more dominant opportunities and access (David, 2015; Morley, 2013; Rees, 2011; Prasetyo et al., 2013). Ironically, gender disparities are also found in the textbooks, describing women's gender-biased societal position (Mufidah, 2010; Muhammad, 2012; Grown, Caren, & Valodia, 2010). Therefore, as the various educational problems revealed, examining the practice of gender-responsive learning implementation at the tertiary level is highly encouraged.

Research conducted by David (2015) discovered an interesting fact: expanding access to education in tertiary institutions for women is part of social transformation, and feminism at the tertiary level is needed to improve the quality in education through gender equality practice. Morley's research (2013) also revealed that the implementation of gender-responsive learning would be realized if it is supported by the policies of higher education leaders in the process, implementation and evaluation of learning in tertiary institutions or gender-responsive learning. Rees (2011) found that gender bias still occurs frequently in tertiary level learning practices which impacts the quality of education. Moreover, Prasetyo et al. (2013) proved the causal factors of this inequality are caused by internal factors and external factors originating from family education, daily life experiences, and leadership policies that has not yet favour gender equality.

The success of learning in tertiary institutions is also supported by implementing innovative and contextual learning from local cultural values. The advantage of implementing culture-based learning are to develop students' soft skills, social awareness, and scientific attitudes (Ador & Norolyn, 2017; Sutrisno et al., 2020; Sumardi & Wahyudiati, 2021). However, the results of previous research indicated student low learning outcomes were caused by the absence of local wisdom-based and IT-based learning tools (Fadli & Irwanto, 2020; Wahyudiati & Fitriani, 2021; Wahyudiati, 2023). Likewise, the Wahyudiati (2020) saw lecturers' limited abilities in developing and implementing culturally responsive learning in tertiary institutions.

The novelty of this research was starting to analyze the relationship between gender and culture-based learning on the quality of education in tertiary institutions. Moreover, the focus conducting research at the tertiary level prioritizes cognitive aspects or understanding concepts and has not been integrated much with culturally responsive learning or gender-based learning (Ador & Norolyn, 2017; Suryana, 2020; Wahyudiati, 2023). Thus, this research was expected to contribute positively to the scarce in mapping the factual conditions of gender and culture-based learning practices in tertiary institutions. In addition, to analyze the relationship and relevance of gender and culture-based learning to the quality of education in tertiary institutions so it could produce competent graduates to compete in the job market.

METHODS

Participants

The population of this study were all tertiary institutions in West Nusa Tenggara. The research sampling technique used purposive random sampling with a total sample of 400 students and educators at tertiary institutions in the province of NTB. The research variables consist of independent and dependent variables. The independent variables in this study were gender-responsive and culture-based learning while the

dependent variable was the quality of education in higher education.

Research Design and Procedures

This quantitative research adopts a survey design. The design fits the research objective of determining the relationship pattern between the independent and dependent variables and objectively interpreting the conditions of the research subjects (Creswell, 2016). Specifically, the research design used was a cross-sectional survey since the data collection did not involve variable manipulation and allowed researchers to examine various characteristics of the research sample, such as age, educational background, occupation, and gender or other factors (Creswell, 2016). This research was conducted for 5 months, namely from March to July 2023. The stages of the research procedure begin with distributing questionnaires to students and lecturers at Islamic universities and state universities in NTB. The collected data illustrated the relationship between gender perspective, cultural expertise in learning at NTB tertiary institutions, and the quality of education in West Nusa Tenggara. Therefore, the benefits of this research were expected to map the factual conditions of education in NTB universities in terms of gender-responsive learning and cultural-responsive learning as a way to have a more contextual planning and learning process, relevant to the characteristics of students, based on local culture, and without gender bias. Therefore, it will improve the quality of graduates in higher education to be more intellectually, morally and spiritually intelligent based on local wisdom values. In addition, the benefits of this research can be used as material for consideration for the higher education institutions and related agencies leaders in determining gender and culturally responsive education policies.

Instruments

The data were collected through non-test methods by distributing the gender-responsive learning research questionnaires (GRL), culture-based learning questionnaires (CRL), and education quality questionnaires. The preparation of Research Instruments consisted of a CRL (Cultural-Responsive Learning) questionnaire, a GRL (Gender Responsive Learning) questionnaire, and an education quality questionnaire (EQQ). The validity and reliability of the questionnaires were tested through empirical testing and expert validation. After the instruments were declared valid and feasible, they were ready to collect the data. The research instrument was developed by the researcher himself, and the validity and reliability of the instrument have been tested. For each CRL, CRG, and EQQ questionnaire item, the calculated r value > r table was obtained based on a significance test of 0.05, which ranges from 0.71-0.85, which is greater than the r table, namely 0.57, so it is declared valid. To test the reliability of the CRL, CRG, and EQQ instruments, Cronbach's alpha values were obtained at 0.82, 0.87, and 0.90, so it was declared that the instruments used were reliable.

Culture-based learning is a strategy for creating a learning environment and designing learning experiences that integrate culture into the learning process. The culture-based learning indicators consist of (1) implementing culture-based learning, (2) culturally integrated learning materials, (3) culture-based learning facilities and infrastructure, and (4) evaluation of culture-based learning. Based on these indicators, a questionnaire consisting of 20 items was prepared. Examples of questionnaire statement items include: (1) lecturers strive to use examples that are relevant to students' diverse cultural backgrounds to maximize the achievement of

learning objectives; and (2) lecturers often use culture-based learning strategies.

Gender-responsive learning is defined as a strategy for creating a learning environment and designing learning experiences that promote gender equality as part of the learning process. The culture-based learning indicators consist of (1) implementation of gender equality-based learning, (2) learning materials based on gender equality, (3) learning facilities and infrastructure based on gender equality, and (4) evaluation of learning based on gender equality. Based on these indicators, a questionnaire consisting of 20 items was prepared. Examples of questionnaire statement items include: (1) the lecturer divides the groups by considering the representation of women in each group; and (2) the available learning facilities and infrastructure are gender biased (more in favor of men or more in favor of women).

Quality of higher education is the level of conformity between the administration of higher education and higher education standards consisting of national and higher education standards set by universities. Education quality indicators consist of (1) content standards, (2) process standards, (3) educator and education staff standards, (4) management standards, and (5) educational assessment standards. Based on these indicators, a questionnaire consisting of 20 items was prepared. Examples of questionnaire statement items include: (1) the level of lecturers' understanding of gender responsive and culture-based learning can improve the quality of education in higher education; and (2) gender responsive learning processes (paying attention to gender equality) do not have a positive impact on the quality of education in higher education.

Data Analysis

The data were analyzed using linear regression test (to test the relationship between one independent variable and one dependent variable; the formulation of problems 1 and 2), as well as multiple linear regression tests, which aimed to determine the relationship pattern between two independent variables and one dependent variable (Hair, Black, Babin, & Anderson, 2010); the third formulation of the problem. The prerequisite test (assumption test) of the research hypothesis consisted of the normality, homogeneity, and linearity tests. The statistical hypothesis of the research were the alternative hypothesis (there is a significant relationship between culturally responsive and gender-based learning and the quality of higher education in NTB and the null hypothesis (there is no significant relationship between culturally responsive and gender-based learning and the quality of tertiary education in NTB) which was tested from the calculated F value at a significance level of 5% using SPSS 24.

■ RESULTS AND DISCUSSION

The Results of the Relationship Between Culture-Based Learning and the Quality of Higher Education Test

The first research objective was to determine the relationship between gender-responsive learning and the quality of higher education, which was tested by linear regression analysis. Before carrying out the linear regression test, a prerequisite test was first carried out, with the results of the normality and homogeneity tests meeting the requirements, namely that the data was distributed normally and homogeneously. The significance value was higher than 0.05, or 0.456, which indicated that the data were normally distributed according to the findings of the normality test. The results of the homogeneity test indicated that the data were homogeneous because the GRL aspect's significance value, which was 0.651, was greater than 0.05. Therefore, a parametric statistical analysis test of simple linear regression was carried out because the data were homogeneous and the results of the preliminary test were normally distributed.

Table 1. Results of a regression analysis test

Aspect	R	R Square	F	Sig.
GRL	0.524	0.354	768.473	0.000

A significant value of 0.000, less than 0.05, is shown in Table 1. It implies that there is a strong connection between gender-responsive learning and the standard of higher education. A correlation or relationship (R) value of 0.524 and a coefficient of determination (R Square) value of 0.354 were also obtained based on the data analysis findings, indicating a 35.4% influence of the independent variable (gender-responsive learning) on the dependent variable (quality of education). Thus, research findings proved a significant relationship between gender-responsive learning and the quality of higher education, with a percentage of 35.4%.

The Results of the Relationship Between Gender-Responsive Learning and the Education Quality of Higher Education Test

The second research goal was to establish a correlation using linear regression analysis between culturally responsive learning and higher education quality. Prior to doing the linear regression analysis, the Box's M test was used to determine normality, and the Levene test was used to assess homogeneity. Tables 8 and 9 display the results of the tests for normalcy and homogeneity. The significance value was larger than 0.05, or 0.486, which indicated that the data were normally distributed according to the findings of the normality test. Since the significance value was greater than 0.05 (0.751), the homogeneity test results indicated that the data were homogeneous. As a result, a simple linear regression was carried out because all preliminary test findings were normal and uniform.

The outcome of the regression test had a significance value of 0.000, which was less than 0.05. It implies that there is a strong link between culturally sensitive instruction and the standard of higher education. A relationship (R) value of 0.568 and a coefficient of determination (R Square) of 0.384 were also validated by the data analysis, indicating that the independent variable (culturally responsive learning) had a 38.4% influence on the dependent variable (quality of education). Thus, the findings proved a significant relationship between culturally responsive learning and the quality of higher education, with a percentage of 38.4%.

Table 2: Results of a regression analysis test

Aspect	R	R Square	F	Sig.
GRL	0.568	0.384	778.476	0.000

The Result of the Relationship between Cultural-Based Learning and Gender-Responsive Learning with the Quality of Higher Education Test

Finding the link between gender, culturally responsive learning, and the standard of higher education was the third goal of the study. A multiple linear regression analysis was used to test it. Prior to running the linear regression test, the normality and homogeneity of the data were checked using Box's M and Levene tests, respectively. The data were regularly distributed with a significance value greater than 0.05 (0.586). Because the significance value was greater than 0.005, the homogeneity test findings indicated that the data were homogeneous. For the CRL aspect, they

were 0.751, and for the GRL aspect, they were 0.651, indicating that the data were homogeneous and regularly distributed. The outcome of a multiple linear regression test compiled in Table.

Table 3. Regression test result

Aspect	R	R Square	F	Sig.
GRL dan CRL	0.784	0.614	555.057	0.000

The regression analysis revealed a strong correlation between gender, culturally relevant instruction, and higher education quality (Sig 0.000–0.005). Data analysis also revealed a relationship (R) value of 0.784 and a coefficient of determination (R Square) value of 0.614, indicating a 61.4% influence of the independent variables (gender and culturally responsive learning) on the dependent variable (quality of education). Thus, with a percentage of 61.4%, it showed a substantial correlation between gender, culturally relevant learning, and the quality of higher education. Based on the research results, it shows that there is a significant relationship between gender-responsive learning and culture-based learning and the quality of learning in higher education. This relationship exists because culture-based education has relevance to gender-responsive learning (Shawna & Christen, 2021; Masnun & Fadli, 2023, Morris, 2008). Gender refers to the roles and responsibilities of women and men determined by society, which is a reflection of culture, where the behavior of female and male students adapted to their roles and responsibilities (femininity and masculinity) in learning activities greatly influences the achievement of objectives. learning so that it can improve the quality of learning in higher education (Colvin et al., 2014; Masnun & Fadli, 2023; Qurniati & Wahyudiati, 2023). Cultural practices that can be implemented in practical learning practices in everyday life can be explored using culture-based learning combined with gender-responsive learning to make learning more meaningful and relevant to the needs and characteristics of male and female students so that they are able to carry out their roles and responsibilities. answer optimally in the learning process (Cahyani & Wahyudiati, 2023; Rizfi, 2004; Singh, 2016). The benefits of culture-based learning combined with gender-responsive learning can foster an active and collaborative learning environment that combines students' cultural background, experience, and previous knowledge so that it can make it easier for students to understand concepts and construct attitudes and skills, which can ultimately improve the quality of education in higher education (Aldian & Wahyudiati, 2024; Ador & Norolyn, 2017; Morris, 2008; Wahyudiati, 2023).

The existence of gender equality as well as the provision of equal opportunities for men and women to participate actively and fairly in the political, sociocultural, legal, educational, and economic spheres, as well as having the same rights and obligations in regards to enjoying and participating in those spheres, can be defined as gender equality. The most important indicator of gender equality is the lack of prejudice and unfairness toward men and women in all spheres of life. It implies that neither men nor women should have a set, unchanging role, shoulder two different responsibilities, or be sidelined. Three key areas can be addressed, according to Marhumah (2010), Ghofur (2008), and Mufidah (2010), in order to create policies for gender equality in national education: (3) providing women with equal and extensive chances to participate actively in all facets of society. (1) increasing more just and equitable educational

opportunities at all levels of education; (2) decreasing all types of inequality and gender gap practices at all levels of education.

Answering the second research objective, which is to determine the relationship between culturally responsive learning and the quality of higher education in West Nusa Tenggara, the results revealed a significant relationship between culturally responsive learning and the quality of tertiary education in West Nusa Tenggara. This finding confirms Bakhri, Faryati, and Rozak's (2016) studiy, proving that gender-non-responsive learning does not significantly affect student learning outcomes and values of justice in semesters 1, 3, and 5. Gender inequality is manifested in various aspects (Adriana, 2009): (1) Marginalization, which has an impact on economic poverty; (2) Subordination caused by the belief that one gender occupies a more important position and role than the other sex; (3) Stereotypes, or absolute irrelevant images to existing factual conditions; (4) Violence is an attack on a person's psychic, mental and physical; (5) Double burden is interpreted as an excessive burden and responsibility that must be carried out and obeyed by one particular gender. Gender equality will be realized if there is an equal distribution of roles, rights, obligations and responsibilities for men and women in all aspects of life. In other words, gender equality will lead men and women to obtain justice, equality, and equal opportunities and enjoy their rights and obligations as individuals so they can participate actively in all life aspects to enjoy the development results fairly and equitably.

Academic attainment positively correlates with student learning environments that are gender- and culturally responsive. This criterion is supported by the finding that culturally relevant learning experiences and scientific attitudes influence student achievement because they make learning more meaningful (Patonah et al., 2021; Wahyudiati, 2022). As a result, its adoption at the primary, secondary, and postsecondary levels of education depends on the formation of scientific attitudes and culturally relevant learning opportunities. To enhance learning outcomes (both hard and soft skills) at the tertiary level, institutions of higher learning must also help teachers design and implement culture-based learning initiatives.

To accomplish learning goals at tertiary institutions, culture-based and gender equality-focused learning must be applied. Additionally, culture-based education fosters a greater appreciation for regional culture, which has changed as a result of globalization. Cultural practices that can be implemented in practical learning practices in daily life can be explored by using culture-based learning (Singh, 2016). The benefits of culture-based learning also center on implementing contextual teaching and learning by fostering an active and collaborative learning environment that incorporates the students' cultural background, experiences, and prior knowledge (Ador & Norolyn, 2017; Singh, 2016; Wahyudiati, 2023). Culture-based learning (Culturally Responsive Teaching) is a new learning approach that is being developed in planning, implementing, and evaluating learning in science and social humanities. Culture is integrated into the curriculum as learning media, teaching materials, and learning tools to generate student interest and motivation in applying knowledge and integrating culture with various fields of knowledge (Giroux, 2006; Saliman, 2007). Culture-based learning could create integrative, active, collaborative, illustrative, and creative learning and can increase love for local culture. Additionally, the benefits of culture-based learning include the development of an interactive and collaborative learning environment that incorporates student characteristics, cultural background, experiences, and prior knowledge (contextual teaching and learning). In learning activities, the role of the educators transforms and

is no longer the sole provider of information that dominates learning activities but becomes a designer, implementer, guide and evaluates learning activities.

Thus, culturally responsive learning is a contextual learning practice and relevant to students' lives to facilitate transferring knowledge to achieve learning objectives (affective, cognitive, and psychomotor). Gender inequality in education also occurs in the West Nusa Tenggara region. The 2016 analysis of educational performance data in the Province of NTB records the imbalance in the APK gender parity index (IPG APK), where male students have higher access to education than female students. Thus, further research in this field is encouraged, especially in analyzing the planning, implementation, and evaluation of culture-based and gender equality-oriented learning from the elementary, secondary, and tertiary levels.

■ CONCLUSIONS

Based on the research findings, it can be concluded that: (1) there is a significant relationship between gender-responsive learning and the quality of tertiary education with a percentage of 35.4%; (2) there is a significant relationship between culturally responsive learning and the quality of higher education with a percentage of 38.4%; and (3) there is a significant relationship between gender and cultural responsive learning simultaneously with the quality of tertiary education with a percentage of 61.4%. Thus, it is hoped that the practice of learning in tertiary institutions will prioritize the implementation of learning that is gender responsive and culturally responsive to improve the quality of the process and learning outcomes to welcome the era of the Industrial Revolution 5.0. Likewise, further research is highly encouraged, especially those aimed at analyzing the planning, implementation and evaluation of culture-based and gender equality-oriented learning from the elementary, secondary and tertiary levels.

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