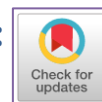


Social-emotional competence among vocational students: A gender-based comparative study



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Abstract: This study aims to analyze differences in social-emotional competencies between female and male students in vocational high schools in West Nusa Tenggara. The background of this study is based on the assumption that gender studies in social-emotional competencies need to be approached critically, rather than simplified into assumptions of natural differences. This study employs a descriptive comparative quantitative method with a sample of 711 vocational students selected through simple random sampling. Data were analyzed using cross-tabulation and Mann–Whitney tests. The findings reveal that the majority of students are in the moderate category (67.4%), indicating that social-emotional competencies are present but not yet optimally developed, while 31.4% fall into the low category, reflecting a substantial proportion of students who still require targeted support. Statistical analysis shows significant gender differences in three SEL dimensions: self-awareness ($p = 0.019$), self-management ($p = 0.000$), and relationship skills ($p = 0.036$), suggesting that gender may influence how students develop and express specific social-emotional competencies. These findings highlight the need for more responsive and inclusive approaches to Social Emotional Learning (SEL) that consider gender-related differences without reinforcing stereotypes. Practically, this implies the importance of designing SEL interventions that are adaptive, equitable, and sensitive to diverse student needs in both instructional and counseling contexts.

Keywords: Social-Emotional Learning; Vocational Education; Gender Differences; Adolescents; School Counseling.

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INTRODUCTION

Vocational education is an education system that integrates work practice and school-based learning throughout the study program (Lund & Karlsen, 2020). Vocational high schools in Indonesia function as secondary education institutions designed to prepare students to enter the workforce directly. Thus, the curriculum is aligned with industry demands, emphasizing practical competencies and field work experience (Adinata et al., 2025). Through this system, students participate in learning programs that include practical training in industry, school assignments, and exams that involve cognitive, psychomotor, and affective domains, so that they are prepared to become skilled, independent, and competitive workers (Apriliana & Suranata, 2025). This indicates that students in vocational schools are expected to have mature personal development and be job-ready, especially when compared to students in general schools

However, in reality, vocational high school students face many obstacles in entering the workforce. Research findings reveal that the business and industrial sector (DUDI) does not automatically accept vocational education graduates because they are generally perceived as lacking the expertise and skills required by the sector (Utomo, 2021). One of the challenges in vocational education is gender stereotypes, which lead individuals to choose certain careers based on social norms (Zhou et al., 2025). In Wijaya's (2020) study, gender emerged as one of the variables significantly influencing the unemployment status of vocational high school graduates. Hermawan (2023) also noted that unemployment issues among vocational high school graduates stem from gender disparities in the labor market.

Based on data from the West Nusa Tenggara Central Statistics Agency in November 2025, the unemployment rate among vocational high school graduates is the highest compared to graduates of other educational levels, at 6.47% (Kutari, 2026). Based on data from the West Nusa Tenggara Provincial Education and Culture Office in 2022, 314 vocational high school students were recorded as failing to graduate. This failure was not due to academic inability to pass school exams, but rather due to external factors, such as marriage and dropping out of school because they not actively participating in class (Adi, 2022). This problem shows that the biggest challenge for vocational high school graduates is not just a lack of technical skills. Specifically, competencies related to the emotional aspects of individuals, namely emotional competencies, may be very helpful in times of high challenge and uncertainty, such as when entering the job market for the first time (Sauli et al., 2022).

Social-emotional learning is a competency known as non-cognitive ability, emotional intelligence, or non-intellectual factors, which is gaining attention and is considered one of the core elements of human development and growth (Wang et al., 2025). Social and emotional competencies generally refer to a process in which individuals are able to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, build and maintain positive relationships, and make responsible decisions (Durlak et al., 2015). Other findings also reveal that social-emotional competence is effective for adolescents and can reduce problematic behavior and increase positive outcomes such as positive youth development (PYD), social adjustment, school participation, and academic achievement (Jagers et al., 2019). Research on social-emotional competencies in vocational students highlights the importance of these competencies as they relate to academic achievement and future job opportunities (Do, 2025). Balanced emotional maturity can help students reach their full potential, both as students and as future employees in the workplace (Gendron, 2017). These findings indicate that social-emotional competencies can contribute to improving academic achievement, social skills, emotional maturity, and career readiness among vocational high school students.

On the other hand, it was found that there is a gender gap in academic achievement, which forms the basis for long-term inequality (Urruticoechea, 2025). Other findings reveal that discussions about gender in social-emotional competence often get caught up in the dangerous simplification that women are naturally superior in emotional intelligence, while men are expected to suppress their emotions in order to fulfill stereotypes of masculinity. In fact, recent research shows that it is precisely this kind of social pressure that makes it difficult for many adolescent boys to develop empathy, while adolescent girls are often burdened by expectations to be guardians of harmony (Wang et al., 2025). This confirms that gender issues in social-emotional competence

need to be viewed critically, rather than simplified into assumptions of natural differences.

The existing literature has not provided clear conclusions regarding gender differences in social-emotional development and their varying impacts on academic achievement (Urruticoechea, 2025). Although previous studies have examined social-emotional competencies and gender separately, limited attention has been given to how these differences are manifested among vocational students, particularly in the Indonesian context. This gap has the potential to perpetuate inequality in education (Widiyastuti & Kustantinah, 2023). In fact, a clearer understanding of the role of gender is important to support education practitioners in planning and adjusting social and emotional learning curricula in school environments (McTaggart et al., 2022). The limited research on gender differences in the social-emotional development of vocational students, especially in Indonesia, shows a clear gap and highlights the importance of this study. Therefore, the following two research questions are posed: What is the distribution of social-emotional competence levels among vocational students? Are there differences in social-emotional competency aspects based on gender among vocational students?

METHOD

This study employed a quantitative method with descriptive and comparative approaches. The sampling technique used was voluntary response sampling, in which participants voluntarily agreed to complete the research instrument after it was distributed. This approach allows respondents to participate based on their willingness, which is commonly used in large-scale survey studies.

The sample consisted of 711 vocational high school students from eight vocational schools in West Nusa Tenggara (NTB), Indonesia. The participants were drawn from grades 10 to 12 and represented various study programs.

Ethical considerations were strictly observed in this study. Prior to data collection, participants were provided with informed consent explaining the purpose of the study, the voluntary nature of participation, and the confidentiality of their responses. Students participated anonymously, and they were informed that they could withdraw from the study at any time without any consequences.

Data were collected using Social Emotional Competence Questionnaire scale originally developed by Zhou (2012). In this study, the Indonesian version adapted and validated by Astuti (2024) was used. The instrument consisted of 25 items distributed across five dimensions: self-awareness, social awareness, self-management, relationship skills, and responsible decision-making, with each dimension comprising five items (Table 1).

Table 1. Dimensions of Social Emotional Learning

Dimensions	Item Number	Sample Item
Self-Awareness	1, 2, 3, 4, 5	I understand my mood and feelings.
Social Awareness	6, 7, 8, 9, 10	I can tell how someone is feeling by looking at their facial expression.
Self- Management	11, 12, 13, 14, 15	I can control my emotions when something bad happens.
Relationship Management	16, 17, 18, 19, 20	I am able to tolerate my friends' mistakes.
Responsible Decision-Making	21, 22, 23, 24, 25	When making decisions, I consider the consequences of my actions.

The categorization of scores in this study is based on a predetermined range to facilitate the interpretation of participants' levels. As presented in Table 2, the total scores are classified into five categories, namely very high, high, moderate, low, and very low. The response format used a four-point Likert scale: *Strongly Appropriate*, *Appropriate*, *Inappropriate*, and *Strongly Inappropriate*.

Table 2. Categorization

Categorization	Total Score
Very High	81 - 100
High	61 - 80
Medium	41 - 60
Low	21 - 40
Very Low	0 - 20

Prior to inferential analysis, a normality test was conducted using the Kolmogorov–Smirnov test in SPSS. The results showed significance values below 0.05, indicating that the data were not normally distributed. Therefore, non-parametric statistical analysis was employed.

Descriptive statistics were used to describe the overall profile of students' social-emotional competencies and each dimension. To examine gender differences in each domain, the Mann–Whitney test was applied to determine whether the differences between male and female students were statistically significant.

RESULT AND DISCUSSION

Result

Based on Table 3, most students are at a medium level of social-emotional competence, meaning their skills are adequate but not yet optimal. A considerable number of students are still in the low category, indicating a need for support in developing basic social-emotional skills. Only a small proportion reach the high category, showing that strong competence is not yet common.

Table 3. Crosstabulation

Category	Male		Female		Total	
	Frequency	%	Frequency	%	Frequency	%
Low	96	13.5	127	17.9	223	31.4
Medium	226	31.8	253	35.6	479	67.4
High	7	1.0	2	0.3	9	1.3
Total	329	46.3	382	53.7	711	100.0

Overall, Figure 1 shows that the differences in average competencies across each social-emotional dimension between male and female students are not particularly striking. However, female students tend to score slightly higher on self-awareness and relationship skills. Meanwhile, male students score higher on self-management. Social awareness and responsible decision-making show similar levels between the two groups.

Based on the results on the Table 4, it is known that there are significant differences between males and females in three aspects of SEL, namely Self-Awareness ($p = 0.019$), Self-Management ($p = 0.000$), and Relationship Skills ($p = 0.036$). This indicates that there are differences in the levels of self-awareness, self-management, and relationship skills based on gender among vocational high school students. Meanwhile, in the aspects of Social Awareness ($p = 0.591$) and Responsible Decision Making ($p =$

0.233), no significant differences were found between male and female students. This means that the ability to understand the social environment and make responsible decisions tends to be similar between the two gender groups.

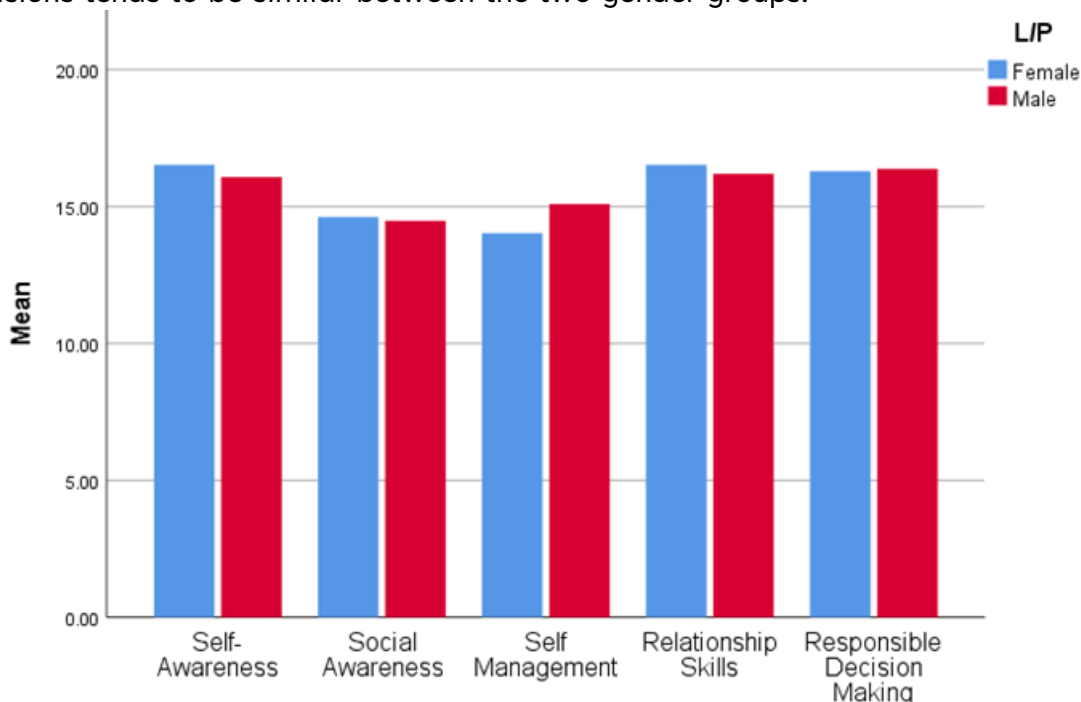


Figure 1. Clustered Bar Mean Aspect of Social Emotional Learning

Table 4. Mann-Whitney Test

Sig.	Self-Awareness	Social Awareness	Self-Management	Relationship Skill	Responsible Decision Making
Asymp. Sig. (2-tailed)	.019	.591	.000	.036	.233

Based on the effect size results (Table 5), all aspects of SEL show small effect sizes. Self-Awareness ($r = 0.09$), Social Awareness ($r = 0.02$), Relationship Skills ($r = 0.08$), and Responsible Decision Making ($r = 0.04$) fall below 0.20, indicating negligible to very small effects. Meanwhile, Self-Management ($r = 0.21$) shows a small effect, but it is still relatively weak. Overall, these findings suggest that although some differences may exist between groups, the magnitude of the differences is minimal, indicating that gender has limited practical influence on students' social-emotional competencies.

Table 5. Effect Size

Effect Size	Self-Awareness	Social Awareness	Self-Management	Relationship Skill	Responsible Decision Making
r	0.09	0.02	0.21	0.08	0.04

Furthermore, Table 6 illustrates the average differences in each aspect of social-emotional learning based on gender. The research results indicate that females (mean rank = 372.36) have a higher level of self-awareness compared to males (mean rank = 337.00). The mean rank on the self-management dimension shows that males (mean rank = 402.68) have a higher self-management ability compared to females (mean rank = 315.79). Additionally, the mean rank indicates that females (mean rank = 370.72) are superior to males (mean rank = 338.91) in the aspect of relationship skills.

Table 6. Rank Mean

Aspect	Gender	N	Mean Rank
Self Awareness	Male	329	337
	Female	382	372.36
	Total	711	
Social Awareness	Male	329	351.61
	Female	382	359.78
	Total	711	
Self Management	Male	329	402.68
	Female	382	315.79
	Total	711	
Relationship Skill	Male	329	338.91
	Female	382	370.72
	Total	711	
Responsible Decision Making	Male	329	365.54
	Female	382	347.78
	Total	711	

Discussion

Overall, the findings indicate that the social-emotional competence of vocational high school students is predominantly at a moderate level (67.4%). This suggests that most students possess adequate social-emotional skills, although these competencies have not yet developed optimally. Meanwhile, only a small proportion of students reach a high level (1.3%), indicating that strong social-emotional competence has not yet become a common characteristic among students. This phenomenon may be attributed to several conditions faced by vocational high school students. Developmentally, vocational students are similar to those in general education; however, they are exposed earlier to work-oriented contexts while simultaneously facing academic demands. This condition may foster self-awareness, yet at the same time, students may lack psychological maturity and often experience uncertainty regarding their life goals (Zhao, 2023). In addition, vocational students are exposed to intense emotional experiences, such as fear of social exclusion and pressure related to work contexts (Sauli, 2022). Zhao (2023) also found that vocational students often experience repeated rejection in their past learning experiences and tend to feel helpless when encountering difficulties in both theoretical and practical learning.

In terms of gender differences across dimensions, the findings reveal that differences exist between female and male students in self-awareness, self-management, and relationship skills. Female students tend to demonstrate higher levels of self-awareness and relationship skills, whereas male students show stronger self-management abilities. This finding is consistent with Urruticoechea (2025), who reported that women tend to have higher levels of metacognitive self-regulation, intrinsic motivation, and empathy, while men exhibit higher levels of self-control and emotional regulation. Similarly, Salgueoro (2012) found that women demonstrate stronger abilities in recognizing emotions, empathizing with others, and building and maintaining positive relationships. These differences may be explained by gender roles that are socially constructed through cultural and environmental influences, resulting in distinct patterns of socialization (Wang et al., 2025). In the context of vocational education, such differences may also be linked to gender segregation in fields of specialization, where males and females are often distributed across different sectors (Zhou, 2025). This

condition may shape different learning experiences, which in turn influence the development and prominence of specific social-emotional competencies across genders.

However, the effect size analysis provides a more meaningful interpretation of these findings. Although several statistically significant differences were identified, all dimensions demonstrated small to negligible effect sizes. Most values were below 0.20, with only self-management reaching a small effect ($r = 0.21$). These results indicate that the differences between male and female students are minimal, suggesting that, in practical terms, both groups exhibit relatively comparable levels of social-emotional competence. In general, gender differences in social-emotional competence are not solely rooted in biological factors but are also shaped by socially constructed roles and expectations (Garner et al., 2014). In the context of vocational high school students, both males and females are exposed to similar educational systems, curricula, and competency demands, including work readiness that emphasizes social-emotional soft skills. As a result, although statistical differences may appear in certain dimensions, the influence of gender tends to be less dominant. Nevertheless, these findings should be interpreted with caution, given the limited body of literature that comprehensively examines gender differences across social-emotional dimensions at different developmental stages, particularly during early to middle adolescence (Lee, 2025). Furthermore, previous studies have reported inconsistent results, indicating that gender differences in social-emotional competence remain inconclusive and require further investigation (Salavera, 2019).

This study has several limitations that should be considered when interpreting the findings. First, the study did not differentiate participants based on their fields of specialization within vocational education. The use of self-report instruments may also introduce subjective bias in students' responses. Additionally, this study did not account for other contextual factors, such as family environment, industrial work experience, and school climate, which may influence students' social-emotional competence.

The findings of this study have important implications for educational practice in vocational high schools, particularly for subject teachers and school counselors. Given that most students demonstrate moderate levels of social-emotional competence, more systematic efforts are needed to integrate social-emotional learning into classroom instruction. Teachers can incorporate social-emotional components through active learning strategies, such as group work, self-reflection, case discussions, and project-based learning that emphasize collaboration, emotional regulation, and decision-making. Meanwhile, school counselors play a strategic role in designing targeted interventions, including classroom guidance, group counseling, and social-emotional skills training tailored to the needs of vocational students and workplace demands. The findings also suggest that gender is not a dominant factor, indicating that interventions can be designed to be broadly applicable while remaining sensitive to individual student needs.

CONCLUSION

This study found that the social-emotional competence of vocational high school students is generally at a moderate level, indicating that students possess basic competencies but have not yet developed them optimally. In addition, gender differences were identified in several dimensions, namely self-awareness, self-management, and relationship skills. However, based on the effect size analysis, these differences were

small, suggesting that, in practical terms, the social-emotional competencies of male and female students are relatively comparable. These findings contribute to the existing literature on social-emotional competence in the context of vocational education, particularly by highlighting that gender is not a primary factor in explaining variations in students' social-emotional abilities.

Nevertheless, this study has several limitations, particularly the absence of differentiation based on students' fields of specialization and the use of a cross-sectional design. Therefore, future research is recommended to examine social-emotional competence more specifically across different vocational majors and to employ longitudinal designs to capture students' developmental trajectories more comprehensively. Furthermore, it is important to consider additional contextual factors, such as industrial work experience, family environment, and school climate, in order to gain a deeper understanding of the factors influencing students' social-emotional competence.

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