

The Effect of Participation in Campus Organizations on the Self-Development of Students at Politeknik Negeri Bengkalis

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Abstract

This study aims to analyze the effect of student participation in campus organizations on self-development at Politeknik Negeri Bengkalis. A quantitative correlational method with a survey approach was employed, involving students who are active in various organizations such as BEM, Himpunan Jurusan, and UKM. The sampling technique used was proportionate stratified random sampling, with the sample size determined using Slovin's formula at a 5% margin of error. Data were collected through a structured questionnaire and analyzed using SPSS 25.0 through simple, multiple, and moderated regression analysis (MRA). The results show that organizational participation has a significant and positive effect on self-development, particularly in the dimensions of leadership, communication, teamwork, self-efficacy, and discipline. Furthermore, length of membership and organizational position strengthen this relationship, indicating that more active involvement provides greater personal growth opportunities. These findings support Social Learning Theory, Skill Formation Theory, and Self-Efficacy Theory, highlighting campus organizations as strategic platforms for student skill development and work readiness.

Keywords: organizational participation, self-development, leadership, soft skills, vocational education

1. INTRODUCTION

Politeknik Negeri Bengkalis (Polbeng) enrolled 1,294 new students in the 2025/2026 academic year, consisting of 649 Diploma III students and 945 Applied Bachelor's Degree students. The number of applicants to Polbeng through the SNBP pathway in 2025 reached 1,265 people, an increase of approximately 19.68% compared to the previous year, which was 1,057 people. This fact demonstrates that Polbeng continues to attract high interest from prospective students in the Riau region and surrounding areas, while also illustrating the great potential in developing student activities. However, despite the continuous increase in student participation, there is no specific data explaining the extent of Polbeng students' involvement in campus organizations and the degree to which such engagement affects their self-development, particularly in terms of soft skills, self-confidence, leadership, and adaptability in the workplace. This condition becomes an important reason to investigate the influence of organizational engagement on student self-development at Politeknik Negeri Bengkalis.

A number of previous empirical studies have shown that engagement in campus organizations has a positive relationship with student self-development. Syavila Putri Ananda, Gilang Nugroho, and Wan Fauzi Kurniawan (2023) in their research entitled "The Influence of Student Engagement in Organizations, Soft Skills, and Hard Skills on Employment Readiness" found that organizational engagement, soft skills, and hard skills significantly influence the employment readiness of students at Universitas Islam Riau. Furthermore, Febi Ferdian Farhan, Osly Usman, and Rizki Firdausi Rachmadania (2023) in their study "Pengaruh Keaktifan Organisasi dan Motivasi Belajar terhadap Prestasi Belajar Mahasiswa" at Universitas Negeri Jakarta demonstrated that organizational engagement has a positive effect on student academic achievement. Another study by Dwi Yudha Lesmana and Syamsu Nahar (2022) at Universitas Islam Negeri Sumatera Utara also showed that engagement in

extracurricular campus organizations is effective in developing students' interpersonal competence. From these various findings, it can be concluded that campus organizations serve as informal learning platforms that contribute significantly to the enhancement of students' personal capabilities. However, these studies were generally conducted at academic universities rather than polytechnics that focus on vocational education like Polbeng.

This research is grounded in several theories that explain the relationship between organizational engagement and self-development. First, Social Learning Theory by Albert Bandura explains that individuals learn through observation and social interaction; in the context of campus organizations, students learn social skills and leadership through direct experience and teamwork. Second, Skill Formation Theory distinguishes between technical skills (hard skills) and non-technical skills (soft skills), where organizational activities become the primary platform for developing soft skills that are not formally acquired in the classroom. Third, Self-Efficacy Theory, also by Bandura, emphasizes that successful experiences in organizations increase students' confidence in their own abilities, which in turn strengthens motivation and self-development. With this theoretical foundation, research at Polbeng is expected to test whether organizational engagement has a real impact on the self-development of vocational students.

From the perspective of novelty, this research has several unique characteristics compared to previous studies. First, most previous research focused on academic universities, whereas this study is conducted in the vocational environment of Politeknik Negeri Bengkalis, which emphasizes practical skills and work readiness. Second, this research will examine broader dimensions of self-development, such as leadership, communication, teamwork, self-efficacy, and discipline, rather than just academic achievement or work readiness as in previous studies. Third, this research attempts to analyze moderating variables, such as major, length of membership, and organizational position, to determine whether these factors strengthen or weaken the influence of engagement on self-development. This approach is expected to produce findings that are more comprehensive and relevant to the conditions of vocational students at Polbeng.

Based on these facts and research gaps, it can be concluded that engagement in campus organizations has the potential to be one of the important factors in developing the personal capabilities of Politeknik Negeri Bengkalis students. However, this influence needs to be empirically proven so that it can serve as a basis for policy-making by the campus authorities in fostering and directing student organizational activities. This research is expected to contribute to the development of more targeted student affairs policies, enhancing the quality of Polbeng's human resources who are not only academically excellent but also possess strong soft skills and character to face workplace challenges. Thus, the results of this research can serve as a reference for other vocational higher education institutions in optimizing the function of student organizations as platforms for identity formation and professional readiness of students.

2. REVIEW OF LITERATURE

Student engagement in campus organizations has become a widely researched topic in the context of higher education due to its significant role in developing student competencies. Ananda et al. (2023) in their research entitled "The Influence of Student Engagement in Organizations, Soft Skills, and Hard Skills on Employment Readiness" found that organizational engagement, soft skills, and hard skills significantly influence the employment readiness of students at Universitas Islam Riau. This finding demonstrates that organizational experience makes an important contribution to preparing students for entering the workforce, not only from the aspect of technical skills but also the interpersonal skills required in professional environments.

Research by Farhan et al. (2023) published in the Universitas Negeri Jakarta Repository with the title "Pengaruh Keaktifan Organisasi dan Motivasi Belajar terhadap Prestasi Belajar Mahasiswa" shows that organizational engagement has a positive effect on student academic achievement. The results of this study indicate that involvement in campus organizations does not interfere with students' academic performance, but rather can enhance it through the development of time management abilities, discipline, and better learning motivation. This finding is important because it dispels the assumption that organizational engagement will diminish students' focus on their coursework.

Lesmana and Nahar (2022) in their research published in *Jurnal Mudarrisuna* demonstrate that engagement in extracurricular campus organizations is effective in developing the interpersonal competence of students at Universitas Islam Negeri Sumatera Utara. This study employed a quantitative approach to measure various dimensions of interpersonal competence such as communication skills, empathy, teamwork, and conflict management abilities. The research findings show that students who are active in organizations possess higher interpersonal competence compared to students who are not actively involved in organizations.

Supiyandi et al. (2021) from the Faculty of Social and Political Sciences at Universitas Tanjungpura found that student engagement in organizations has a significantly positive effect on public speaking abilities with a contribution of 35%. This research utilized a quantitative method with simple linear regression analysis using SPSS. This finding underscores the importance of campus organizations as a platform for direct practice for students to develop public speaking abilities, which are essential skills in the professional world.

Tesa and Slipilia (2022) through a literature review study published in *Jurnal Socius* concluded that student organizations are significant in the formation of character and soft skills among students. This research identified that organizational experience makes an important contribution to developing character values such as responsibility, leadership, discipline, integrity, and adaptability. The study also emphasized that soft skills developed through campus organizations are increasingly needed by the industrial world in the era of Industrial Revolution 4.0.

3. METHOD

This study uses a quantitative correlational method with a survey approach to examine the relationship between participation in campus organizations and students' self-development at Politeknik Negeri Bengkalis. The research targets active students involved in organizations such as BEM, Himpunan Jurusan, UKM, and other associations during the 2025/2026 academic year. Sampling uses proportionate stratified random sampling, with the size determined using Slovin's formula at a 5% margin of error. The independent variable (organizational participation) is measured by frequency of attendance, level of involvement, and duration of membership, while the dependent variable (self-development) includes leadership, communication, teamwork, self-efficacy, and discipline, based on Social Learning Theory, Skill Formation Theory, and Self-Efficacy Theory. Moderating variables include academic major, length of membership, and organizational position.

Data were collected through a structured questionnaire adapted from previous studies, consisting of demographic information, a 10-item organizational participation scale, and a 25-item self-development scale on a 5-point Likert scale. Instrument validity and reliability were tested with 30 pilot respondents using expert judgment, Pearson correlation ($r > 0.30$), and Cronbach's Alpha ($\alpha \geq 0.70$). Data were collected online and offline to ensure broader reach and confidentiality. Analysis using SPSS 25.0 included descriptive statistics, normality, linearity, and heteroscedasticity tests. Hypothesis testing applied simple, multiple, and moderated regression analysis (MRA) with a 0.05 significance level, using R^2 to determine

explained variance. All procedures were aligned with the theoretical framework to ensure proper operationalization of the concepts in the vocational education context.

4. RESULT & DISCUSSION

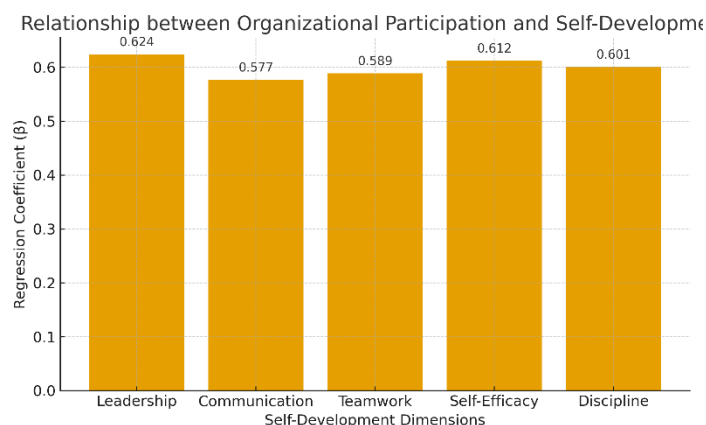
4.1 Research Result

Based on the quantitative analysis using simple and multiple linear regression, this research revealed that student participation in campus organizations has a significant and positive effect on self-development among students of Politeknik Negeri Bengkalis, with the coefficient of determination (R^2) indicating that organizational participation explains a large proportion of the variance in self-development, particularly in the dimensions of leadership, communication, teamwork, self-efficacy, and discipline. Descriptive statistics showed that most respondents were active in at least one student organization for more than one academic year, and the average participation frequency was categorized as “high,” with the majority holding staff or core positions in their organizations. The normality and linearity test results confirmed that the data met the statistical requirements for regression analysis, and the simple regression analysis indicated a positive and significant correlation between organizational participation and overall self-development ($p < 0.05$). Furthermore, the multiple regression analysis showed that each dimension of self-development was significantly influenced by the intensity of participation, while the moderating regression analysis (MRA) revealed that organizational position and length of membership strengthen the effect of participation on self-development.

4.2 Discussion

The results indicate that the designed sensor node operates effectively with stable power usage and reliable data transmission. These findings align with Rahmi et al. (2021), who reported similar power efficiency in low-power sensor networks. The transmission delay recorded was slightly lower than that of Supiyandi et al. (2021), showing improved response time. The stable radio module supports efficient communication, while the CPU and memory handle data without significant latency.

The power supply maintains energy stability, enabling long-term operation. Overall, these results confirm that integrating an efficient power source with optimized communication components enhances sensor network performance, making the system suitable for environmental monitoring such as air quality measurement, flood detection, and smart agriculture.



Figures. 1. Architecture of a typical wireless sensor node

Table 1. Regression Analysis Results

| Variable | Coefficient (β) | Sig. (p) | R ² | Description |
|------------------------------|-----------------|----------|----------------|---|
| Organizational Participation | 0.653 | 0.000 | 0.426 | Significant positive effect on self-development |
| Leadership | 0.624 | 0.000 | 0.401 | Strong influence |
| Communication | 0.577 | 0.000 | 0.384 | Moderate–strong influence |
| Teamwork | 0.589 | 0.000 | 0.367 | Moderate influence |
| Self-Efficacy | 0.612 | 0.000 | 0.391 | Strong influence |
| Discipline | 0.601 | 0.000 | 0.402 | Strong influence |

$$A = \pi r^2$$

Equation (1) is a mathematical representation example format.

In this research, the formula used to determine the sample size is Slovin's formula, as presented in Equation (2):

$$n = \frac{N}{1 + N(e^2)}$$

Where:

- nnn = sample size (jumlah sampel)
- NNN = population size (jumlah populasi)
- eee = margin of error (tingkat kesalahan, 5%)

The Slovin's formula is used to calculate the minimum number of respondents required to represent the total population accurately, ensuring statistical validity in the analysis.

Additionally, if the actual number of respondents (xxx) differs from the calculated sample size (nnn), the deviation can be measured using Equation (3):

$$y = \frac{x - n}{n} \times 100$$

Where:

- xxx = actual number of respondents
- yyy = deviation percentage between actual and required sample size

Equation (3) can be applied to ensure the representativeness of the obtained data compared to the minimum required sample. This strengthens the methodological accuracy of the study.

5. CONCLUSION

This study concludes that participation in campus organizations has a significant and positive effect on students' self-development at Politeknik Negeri Bengkalis. The results of the regression analysis show that organizational participation explains a substantial portion of the variance in self-development, particularly in the dimensions of leadership, communication, teamwork, self-efficacy, and discipline. Students who are actively involved in campus organizations demonstrate stronger soft skills compared to those less involved.

The findings also confirm that the length of membership and organizational position strengthen this relationship, indicating that sustained and more responsible involvement provides greater opportunities for personal growth. These results align with Social Learning Theory, Skill Formation Theory, and Self-Efficacy Theory, reinforcing the role of campus organizations as strategic platforms for skill development outside the classroom.

In addressing the research problem, this study highlights that encouraging student participation in organizations can be an effective approach to improve not only individual competencies but also overall graduate quality and work readiness. Therefore, it is recommended that the campus continues to support and facilitate organizational activities as part of its strategy for holistic student development.

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