Utilization of the Student Engagement Report System in Building a Student Portfolio for Work Readiness in Indonesia

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Article Info	ABSTRACT
	This study investigates the utilization of the Student Engagement Report System (SERS) to build student portfolios and its impact on work readiness in Indonesia. Employing a quantitative approach with 200 student samples, data was collected using a Likert scale (1-5) and analyzed with SPSS version 25. The findings revealed significant positive relationships between student engagement, portfolio development, and work readiness. Regression analysis demonstrated that both student engagement and portfolio development significantly contribute to work readiness, with portfolio development showing a stronger influence. The results highlight the potential of SERS to foster educational innovation, enhance student engagement, and support the development of personalized portfolios, ultimately improving graduate employability. These insights provide valuable implications for policymakers and educators aiming to bridge the gap between education and workforce demands.

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1. INTRODUCTION

The misalignment between academic learning and industry demands in Indonesia necessitates innovative educational strategies to bridge skill gaps, particularly in critical thinking, communication, and adaptability. Educational institutions must integrate lifelong learning models, vocational education, and work-integrated learning (WIL) programs to enhance workforce readiness. Lifelong learning fosters continuous skill development and adaptability, aligning education with global employment needs [1]. Vocational education complements this by providing flexible systems for ongoing skill acquisition, fostering innovation and employability [2]. The National Skill Qualification Framework (NSQF) further bridges academic and industry gaps through competency-based education, reducing dropout rates and enhancing job readiness. Additionally, WIL programs, such as internships and industry projects, improve employability by offering real-world experience alongside academic studies [3]. These integrated approaches ensure graduates are equipped for a rapidly evolving job market.

The Student Engagement Report System (SERS) is a technology-driven platform designed to enhance student engagement by tracking participation in

academic and extracurricular activities, creating personalized portfolios that showcase achievements, skills, and competencies to align with employer expectations. By integrating SERS, educational institutions can take a holistic approach to student development, promoting skills beyond traditional classroom learning. SERS streamlines data management by digitizing academic and extracurricular records, automating data collection, and improving institutional efficiency [4]. Additionally, multidimensional engagement monitoring tools like MoTE enable real-time assessment of cognitive, affective, and behavioral engagement, providing valuable insights through dashboards and visualizations for both face-to-face and online learning [5]. Beyond classroom activities, SERS supports engagement assessment in campus and community initiatives, fostering responsibility and social awareness while strengthening student-institution loyalty [6]. Furthermore, incorporating gamification strategies such as backward grading enhances motivation and active participation, while analyzing engagement styles informs policy and teaching methodology improvements to maximize student involvement [7], [8].

Despite its potential, the adoption of SERS in Indonesia is still in its nascent stages, with limited studies examining its effectiveness in enhancing work readiness. This study seeks to address this gap by investigating the relationship between the utilization of SERS and the development of student portfolios tailored to meet the demands of the job market. The objectives of this study are threefold: first, to analyze the impact of SERS on student engagement; second, to evaluate its effectiveness in building comprehensive student portfolios; and third, to assess its overall contribution to improving work readiness among students in Indonesia.

2. LITERATURE REVIEW

2.1 Student Engagement and Its Importance

Student engagement, encompassing behavioral, emotional, and cognitive dimensions, significantly impacts learning outcomes and skill acquisition. Higher engagement levels enhance academic performance and real-world readiness, with systems like SERS aiding in monitoring and improvement. Behavioral engagement, through active participation in academic and extracurricular activities, fosters belonging and psychological well-being, especially for students with low school attachment (Hoang, 2024). Supportive classrooms and open communication further boost engagement, particularly in subjects like mathematics [9]. Emotional engagement, driven by trust and strong teacher-student relationships, enhances motivation and self-confidence, while extracurricular activities support psychological well-being despite their indirect academic impact [9], [10]. Cognitive engagement, requiring intellectual effort, thrives in a positive academic climate with meaningful activities. Additionally, action research (AR) fosters critical thinking and collaboration, further enriching cognitive engagement [11].

2.2 Portfolio Development as a Tool for Work Readiness

Portfolios in education serve as a comprehensive tool for documenting students' achievements, skills, and competencies, aligning with constructivist learning theories that emphasize active participation and self-reflection. They enhance employability by showcasing industry-relevant skills while fostering reflective and formative assessment practices that promote student agency, autonomy, and deeper engagement with learning processes, aligning with competency-based curricula and shifting away from traditional assessment models [12]. Portfolios encourage reflective cognition, enhancing learning through self and peer assessment while fostering a dynamic relationship between students and instructors [12]. They also help students demonstrate employability skills such as leadership, adaptability, and technical expertise, which are essential in a globalized job market [13]. Additionally, portfolios provide evidence of professional preparedness by linking theory with practice

and supporting students in psychologically challenging situations like final exams [14]. By bridging academic and experiential learning, portfolios enable students to apply theoretical knowledge in real-world contexts [15] and align with the Knowledge, Skills, Abilities, and Other Characteristics (KSAO) model to ensure a match between graduates' competencies and industry needs [16].

2.3 Technology in Enhancing Employability

The integration of technology into education, particularly through systems like SERS, has the potential to transform teaching and learning by aligning academic outcomes with workforce demands. Although technology adoption is increasing in Indonesia, the implementation of systems like SERS remains limited, presenting an opportunity to explore its benefits in enhancing work readiness and providing personalized learning experiences. Digital tools and AI can offer insights into student performance and engagement, facilitating the creation of personalized portfolios crucial for employability [17]–[19]. Learning technologies positively impact cognitive development and creativity, significantly improving students' critical thinking and problem-solving skills, with regression models highlighting their transformative role in education [17]. AI-driven technologies, such as intelligent tutoring systems and adaptive learning platforms, further enhance personalized learning by tailoring educational experiences to individual needs, improving engagement and addressing learning gaps through differentiated instruction [19], [20]. However, challenges such as technological inequality, data privacy concerns, and the need for professional development for educators remain significant obstacles [18], [19]. Ethical considerations, including algorithmic bias and the balance between human and machine-driven instruction, also play a critical role in the successful integration of AI in education [20].

2.4 Theoretical Framework

This study is grounded in the Theory of Planned Behavior, which posits that individuals' behaviors are influenced by their attitudes, subjective norms, and perceived behavioral control. In the context of SERS, the system's effectiveness in building student portfolios and enhancing work readiness can be linked to its ability to positively influence students' attitudes toward engagement, institutional norms supporting portfolio development, and their perceived control over career preparation.

Additionally, Kolb's Experiential Learning Theory (1984) provides a foundation for understanding the role of portfolios in fostering work readiness. The theory emphasizes the importance of active participation and reflection in the learning process, aligning with the goals of SERS to promote student engagement and self-directed learning.

2.5 Research Gap

Although prior studies have highlighted the benefits of student engagement and portfolio development in enhancing employability, limited research has focused on the specific role of SERS in achieving these outcomes, particularly in the Indonesian context. This study addresses this gap by investigating the impact of SERS on building student portfolios and improving work readiness, offering new insights into its potential as a strategic tool for educational institutions.

3. METHODS

3.1 Research Design

This study adopts a quantitative research design to examine the relationship between the use of SERS, student portfolio development, and work readiness. A structured survey approach was employed to collect numerical data, enabling the identification of patterns and correlations among variables. The research design focuses on hypothesis testing to derive conclusions based on statistical evidence.

3.2 Population and Sample

The target population for this study comprises university students in Indonesia who are actively engaged in academic and extracurricular activities. A sample of 200 students was selected using purposive sampling to ensure that respondents had

prior experience using SERS. This sampling technique was chosen to focus on individuals who could provide relevant insights into the research objectives.

The sample size of 200 is considered sufficient for quantitative analysis, adhering to recommendations for minimum sample sizes in studies involving multiple variables. The demographic characteristics of the respondents, including age, gender, and academic background, were also collected to provide contextual insights into the findings.

3.3 Data Collection

Data were collected using a structured questionnaire measuring student engagement, portfolio development, and work readiness. Student engagement assessed participation in academic and extracurricular activities, portfolio development evaluated comprehensiveness and industry relevance, and work readiness examined technical and soft skills. The questionnaire used a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree) and was pretested with 20 respondents for clarity and reliability.

3.4 Data Analysis

Data were analyzed using SPSS version 25, following several key steps to ensure robust statistical analysis. Descriptive statistics, including means and standard deviations, were calculated to summarize central tendencies and variability. Reliability testing was conducted using Cronbach's alpha to confirm the consistency of measurement scales. Pearson's correlation analysis examined relationships between student engagement, portfolio development, and work readiness, while multiple regression analysis assessed the impact of student engagement and portfolio development on work readiness. Hypothesis testing was conducted at a 0.05 significance level, with results interpreted based on standardized coefficients and p-values.

4. RESULTS AND DISCUSSION

4.1 Demographic Profile of Respondents

The demographic characteristics of the 200 respondents in this study provide insights into the student sample used for analysis. In terms of gender distribution, 58% were male (116 respondents), while 42% were female (84 respondents). The age range of respondents was 18 to 25 years, with the largest group being 18–20 years (46%), followed by 21–23 years (39%) and 24–25 years (15%). Educational backgrounds were diverse, with the highest proportion from Business and Management (31%), followed by Engineering (27%) and Information Technology (22%), while Social Sciences and other fields accounted for 13% and 7%, respectively. Regionally, the majority of respondents were from Java (55%), followed by Sumatra (20%), Kalimantan (11%), Sulawesi (9%), and other islands (5%).

The descriptive analysis provided insights into respondents' perceptions of student engagement, portfolio development, and work readiness. The results showed high mean scores across all variables, with student engagement at 4.12 (SD = 0.58), portfolio development at 4.05 (SD = 0.62), and work readiness at 4.08 (SD = 0.60), indicating that students generally perceived high levels of engagement, portfolio comprehensiveness, and workforce readiness, as reflected by mean scores above 4 on a 5-point Likert scale.

4.2 Correlation Analysis

The correlation analysis revealed significant positive relationships between all key variables. Table 1 shows the correlation coefficients.

Table 1. Correlation

Variable	Student Engagement	Portfolio Development	Work Readiness
Student Engagement	1.000	0.782**	0.695**
Portfolio Development	0.782**	1.000	0.742**
Work Readiness	0.695**	0.742**	1.000

The results suggest strong positive correlations between student engagement and portfolio development (r = 0.782), as well as between portfolio development and work readiness (r = 0.742).

4.3 Regression Analysis

Multiple regression analysis was conducted to assess the impact of student engagement and portfolio development on work readiness. Table 2 presents the results.

Table 2. Multiple Regression

Predictor	Standardized Coefficient (β)	t-value	p-value
Student Engagement	0.421	6.245	< 0.001
Portfolio Development	0.503	7.403	< 0.001

The regression model explained 65.8% of the variance in work readiness (R^2 = 0.658). Student engagement (β = 0.421, p < 0.001) and portfolio development (β = 0.503, p < 0.001) both significantly contributed to work readiness, with portfolio development having a marginally stronger effect.

DISCUSSION

The Role of Student Engagement in Work Readiness

The findings highlight the importance of student engagement to equip students for the workplace. Students actively participating in in-school and out-of-school activities are likely to gain important skills such as collaboration, problem-solving, and communication that are indispensable in employability. The findings support [21]–[23], who emphasized the multidimensional nature of engagement and its implications on learning.

The strong positive correlation between student engagement and portfolio development also attests that engagement permits the creation of comprehensive and meaningful portfolios. By documenting their experiences and achievements, students are more aware of their strengths and weaknesses, thus being more ready to address challenges in real-life situations.

The Impact of Portfolio Development on Work Readiness

Portfolio development was also a significant predictor of work-readiness, having the highest standardized coefficient when performing the regression analysis. This supports the significance of portfolios as means of presentation of skills and abilities to potential employers. These results are in line with those of [24], who highlighted the role of portfolios in promoting self-reflection and bridging academic achievement with industry requirements.

In Indonesia, the use of SERS to facilitate portfolio development offers a promising solution to bridging gaps in graduates' skills. Using the system's data-driven intelligence, students can create their own personalized portfolios highlighting their unique strengths and addressing employers' requirements.

Contribution of SERS to Educational Innovation

The integration of SERS in educational practices can radically transform how institutions educate and prepare students to join the job market. The ability of the system to track and analyze students' interaction provides teachers with information that can guide them in fulfilling individual learning needs. SERS also fosters a culture of responsibility and continuous improvement, as students are encouraged to take active participation in their learning and development.

Overcoming Work Readiness Issues

In spite of the encouraging results, there are challenges in ensuring that all students are able to take advantage of the application of SERS. Technology access, digital literacy, and institutional support are essential determinants of the success of such systems. Future studies should investigate ways of overcoming these challenges, especially in under-resourced institutions.

5. CONCLUSION

The research highlights the necessity of integrating the Student Engagement Report System (SERS) into teaching and learning practices for increasing work-readiness among Indonesian students. The research validates that student engagement and portfolio development significantly influence preparing the students for professional challenges, of which portfolio development is particularly decisive. By the capacity to record students' achievements and align skills with industry requirements, SERS is a powerful employability facilitator. Additionally, the system enhances education innovation by providing teachers with meaningful evidence to guide student development. To maximize the impact of SERS, institutions must overcome challenges such as access to technology and digital literacy. There must be forthcoming research to discover means to encourage the adoption and application of SERS in schools with inadequate resources. This study establishes a foundation for educational practice development and graduate preparation to address the demands of a changing job market.

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