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Building Future-Ready Economic Education Students at UNESA: Internship, Self-Efficacy, and Resilience in Supporting SDG 4 for Quality Education

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ABSTRACT

Objective: *This study investigates the influence of internship experiences and self-efficacy on the resilience of Economics Education students at Surabaya State University (UNESA), covering four study programs: Economics Education, Business Education, Accounting Education, and Office Administration Education.* ***Method:*** *A quantitative approach was employed, involving 173 students selected through proportionate random sampling. Instrument feasibility testing was conducted prior to questionnaire distribution using IBM SPSS 25 to assess validity and reliability. Data analysis was performed using Structural Equation Modeling (SEM) with WarpPLS 8.0. The evaluation included outer model analysis (validity and reliability), inner model analysis (path coefficients and relationships among constructs), and model fit testing (Goodness of Fit).* ***Results:*** *The findings reveal that internship experiences significantly enhance both self-efficacy and resilience, with self-efficacy serving as a partial mediator between the two. The most influential factors in strengthening resilience were perceived control and collaborative success during the internship. Furthermore, internships were found to contribute directly to career preparation, as students gained confidence in classroom management, adaptability, and pedagogical skills while simultaneously developing a stronger professional identity. This resilience was closely tied to the formation of professional identity, which in turn supported career readiness and increased motivation for long-term commitment to the teaching profession, thereby enhancing career retention. These results extend Bandura's self-efficacy theory by showing how psychological resilience and professional identity together foster readiness for the demands of teaching.* ***Novelty:*** *The novelty of this research lies in integrating internship, self-efficacy, and resilience into a single PLS-based structural model in the context of teacher education, a comprehensive approach rarely addressed in prior studies. Theoretically, this study enriches educational psychology by highlighting the role of self-efficacy and resilience in shaping professional identity and retention. Practically, it contributes to developing effective internship strategies that prepare future teachers to be academically competent, psychologically resilient, and professionally committed. This study strongly supports SDG 4 (Quality Education) by emphasizing the importance of high-quality teacher education that builds not only technical competencies but also resilience, adaptability, and sustained professional engagement.*

INTRODUCTION

Students, as agents of change, play a crucial role in improving the quality of education and preparing a resilient, adaptable generation capable of navigating the dynamics of the modern era (Akkad & Henderson, 2024) . With the rapid advancement of digital technology and the growing complexity of the job market, higher education has shifted significantly from purely theoretical approaches to competency-based, collaborative, and applied learning (Li et al., 2024). In particular, Generation Z students—who currently dominate higher education—highlight the need for more interactive and flexible learning methods. However, they also face persistent challenges, including time

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management issues, academic pressure, social interaction difficulties, and mental health concerns (Blessing, 2024; J. Zhang et al., 2024). To succeed in such an environment, students require strong psychological resilience and positive attitudes such as academic buoyancy (A.J. Martin, 2013).

Therefore, internship programmes have emerged as an effective strategy to bridge theory and practice. They enable students to gain workplace experience, apply academic knowledge, and develop transferable skills such as communication, adaptability, teamwork, and self-management (Anjum, 2020; Bolli et al., 2021; Goodenough et al., 2020; Schnoes et al., 2018). Additionally, internship experiences contribute to building self-efficacy, which is an individual's belief in their ability to complete tasks and achieve goals (Bandura, 1997). This self-efficacy has been proven to influence the development of students' resilience in facing academic and professional pressure (Sagone et al., 2020; Song et al., 2024). Unfortunately, without adequate self-efficacy, internship experiences can lead to stress and anxiety, as indicated by the UNESA student mental health survey data (2024), which reported that 21.9% of students experienced severe mental disorders and 43.5% were in the moderate category.

This situation is particularly relevant for Economics Education students who are being prepared to become professional teachers. Based on a pre-research survey of the 2021 cohort, it was found that most students do not feel ready to become teachers due to low teaching skills, weak self-efficacy, and a lack of interest and career motivation. The situation becomes more complex when students undergo an internship programme called School Field Introduction (PLP), where they must face real challenges such as classroom management, pressure from mentor teachers, and limited school resources. In this context, readiness to become a teacher is not only determined by academic mastery but also by resilience in facing pressure and obstacles (Kodama, 2017; Shengyao et al., 2024). Resilience is key to developing teacher professionalism, maintaining work motivation, and preventing the risk of burnout and the intention to leave the profession early in one's career (Brewer et al., 2019; A. Martin, 2002).

Given the importance of simultaneously strengthening self-efficacy and resilience, it is essential to conduct research that examines the relationship between internship, self-efficacy, and resilience within an integrated model. However, studies adopting such a comprehensive approach remain scarce, particularly in the field of education. This study, therefore, seeks to analyse the influence of internship and self-efficacy on the resilience of Economics Education students from the 2021 cohort at Surabaya State University. The findings are expected to contribute theoretically to the advancement of resilience studies in educational contexts and practically to the optimisation of internship programmes, thereby enhancing the work readiness of university graduates. Furthermore, this research strongly supports Sustainable Development Goal (SDG) 4 (Quality Education) by emphasising the importance of high-quality teacher education

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that not only builds technical competence but also resilience, adaptability, and sustained professional engagement.

Previous research has demonstrated relationships between internship and self-efficacy (Michos et al., 2022; Cheung et al., 2023), as well as between self-efficacy and resilience (Supervía et al., 2022; Heng & Chu, 2023). Other studies have also indicated the impact of internship on students' resilience (Goodenough et al., 2020). Nevertheless, most of these investigations have examined the variables in isolation, focused on international or non-educational contexts, and have yet to comprehensively assess the mediating role of self-efficacy in the link between internship and resilience among education students. To address this gap, the present study proposes and tests an integrated model that investigates both the direct and indirect effects of internship on resilience through self-efficacy in the context of education students at the Faculty of Economics and Business, Surabaya State University.

RESEARCH METHOD

This study uses a quantitative approach with the aim of measuring and analysing the relationship between predetermined variables (Lim, 2024). The analysis method used in this study is Structural Equation Model (SEM) based on Partial Least Squares (PLS), which is analysed using WarpPLS software version 8.0. PLS-SEM was selected over Covariance-Based SEM (CB-SEM) because it is more appropriate for predictive and exploratory research, can estimate complex models with multiple constructs, and does not require strict assumptions of multivariate normality. CB-SEM is primarily oriented toward confirmatory research to assess model fit, requires a larger sample size, and is more sensitive to violations of distributional assumptions.

Furthermore, PLS-SEM can be used to analyse both the relationships and effects among latent variables, including testing the direct and indirect effects of internship on resilience through self-efficacy. Thus, PLS-SEM not only explains relationships but also measures the magnitude of effects within the research model. This method is frequently applied in studies that are both explanatory (explaining relationships) and predictive. Considering the characteristics of this study—which involves a medium sample size of 173 respondents—PLS-SEM was deemed the most appropriate method to achieve the research objectives. The type of data used in this study is categorised as ordinal data, measured using a 1-to-5 Likert scale to represent respondents' perceptions. The data sources in this study utilise primary data obtained directly from respondents through a questionnaire instrument.

This study was conducted in the Faculty of Economics and Business, Surabaya State University, specifically in the Economics Education, Business Education, Accounting Education, and Office Administration Education Study Program, which took place from April to May 2025. This study involved 305 students from four Education Study

Programs in the Faculty of Economics and Business, UNESA, class of 2021. The sample size was calculated using the Slovin formula with a 5% error rate, resulting in 173 respondents. The sample distribution was conducted proportionally using proportionate random sampling techniques for each programme: Economics Education (46), Business Education (36), Accounting Education (43), and Office Administration Education (48).

The sampling frame was compiled from the official 2021 cohort student list of the Faculty of Economics and Business, Surabaya State University, specifically from the Economics Education, Business Education, Accounting Education, and Office Administration Education study programmes. Each student was assigned a sequential number based on their student identification number (NIM). The selection was then carried out randomly using the online platform *Wheel of Spin*. The names and numbers generated through this process were designated as the research sample. This approach was adopted to minimise selection bias and ensure proportional representation across all study programmes.

The research instrument was developed by adapting measurement indicators from established theoretical frameworks and previous empirical studies. Specifically, the internship variable was adapted from Oberman et al. (2021), self-efficacy from Yada et al. (2021), and resilience from Dalimunthe et al. (2021). All questionnaire items were refined to align with the research context and target population. Before the questionnaire was distributed to the main respondents, an instrument feasibility test was conducted using respondents outside the study sample to ensure the quality of the measurement tool. This feasibility test aimed to assess the instrument's validity and reliability, which were analyzed using IBM SPSS 25 software.

Once the instrument was confirmed to be valid and reliable, the research data were analyzed using the Partial Least Squares–Structural Equation Modeling (PLS-SEM) method. The analysis stages included the specification and measurement of the structural model, evaluation of the outer model (indicator validity and reliability), evaluation of the inner model (relationships between constructs), and assessment of the Goodness of Fit using the Average Path Coefficient (APC), Average R-squared (ARS), and Average Variance Inflation Factor (AVIF) indices. (J. F. Hair et al., 2014).

RESULTS AND DISCUSSION

Results

Model Specification

Model specification in Structural Equation Modeling (SEM) represents the preliminary stage in which the precise relationships among the variables in a study are systematically defined. The following presents the model specification used in this research.

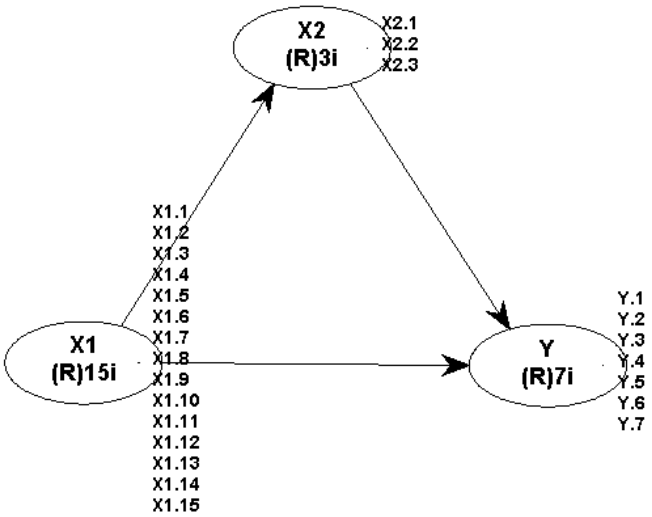

Figure 1. Model Specification

Instrument Validity and Reliability

The evaluation of the measurement model (outer model) in this study involved an assessment of convergent validity, discriminant validity, and construct reliability, carried out through a two-stage process. In the first stage, variable X1 comprised 17 items, variable X2 also comprised 17 items, and variable Y comprised 14 items. The analysis revealed that two items within variable X1 did not meet the required validity standards, specifically failing to satisfy the discriminant validity criteria. This finding suggests that these indicators were unable to clearly distinguish construct X1 from other constructs, indicating a potential construct overlap. Such overlap can lead to less precise interpretations and introduce bias, ultimately diminishing the overall quality of the measurement model.

Considering both the empirical results and the theoretical underpinnings of the study, the researcher opted to remove the two indicators. This step was intended to refine the model by improving its accuracy, enhancing conceptual clarity, and preserving the integrity of the analysis, thereby ensuring that only valid and reliable indicators were utilized in subsequent stages of the research. The results of the outer model evaluation after the refinement process and indicator removal are presented in the following section.

Convergent Validity

This study uses reflective indicators on variables X1, X2 and Y. The results of the reflective indicator testing can be seen in the combined loadings and cross-loadings section. According to J. Hair & Alamer (2022), there are several criteria for assessing whether an indicator in the outer model meets convergent validity. One of them is by estimating the loading value (factor load) and testing its statistical significance. Ideally, the loading value should be above 0.70 and statistically significant at a significance level of $p \leq 0.05$. However, loadings with values between 0.40 and 0.70 are still acceptable,

provided that their removal does not result in a substantial improvement in construct validity.

Table 1. Convergent Validity

No	Indicator	Factor -Loading	P - Value	Description
1.	X1.1	0.657	<0.001	Fulfilled
2.	X1.2	0.678	<0.001	Fulfilled
3.	X1.3	0.652	<0.001	Fulfilled
4.	X1.4	0.585	<0.001	Fulfilled
5.	X1.5	0.584	<0.001	Fulfilled
6.	X1.6	0.726	<0.001	Fulfilled
7.	X1.7	0.755	<0.001	Fulfilled
8.	X1.8	0.658	<0.001	Fulfilled
9.	X1.9	0.564	<0.001	Fulfilled
10.	X1.10	0.610	<0.001	Fulfilled
11.	X1.11	0.634	<0.001	Fulfilled
12.	X1.12	0.739	<0.001	Fulfilled
13.	X1.13	0.690	<0.001	Fulfilled
14.	X1.14	0.615	<0.001	Fulfilled
15.	X1.15	0.523	<0.001	Fulfilled
18.	X2.1	0.909	<0.001	Fulfilled
19.	X2.2	0.911	<0.001	Fulfilled
20.	X2.3	0.919	<0.001	Fulfilled
21.	Y.1	0.735	<0.001	Fulfilled
22.	Y.2	0.774	<0.001	Fulfilled
23.	Y.3	0.821	<0.001	Fulfilled
24.	Y.4	0.743	<0.001	Fulfilled
25.	Y.5	0.820	<0.001	Fulfilled
26.	Y.6	0.733	<0.001	Fulfilled
27.	Y.7	0.789	<0.001	Fulfilled

Based on the results of convergent validity testing on variables X1, X2 and Y, all indicators showed factor loadings above 0.40 and were significant at a probability level of $P < 0.001$. Thus, all indicators in the three variables met the criteria for convergent validity.

Discriminant Validity

The criteria for assessing discriminant validity can be done by comparing the loading value of each indicator against its construct with the cross-loading value against other constructs. If the loading value of an indicator is higher than its cross-loading, then the indicator is considered to meet discriminant validity. In addition, discriminant validity can also be assessed at the construct level using the square root of the Average Variance Extracted (AVE) approach.

Table 2. Discriminant Validity X1

No	Indicator	Loading	Cross Loading		Description
		X1	X2	Y	
1.	X1.1	0.657	-0.305	0.150	Fulfilled
2.	X1.2	0.678	0.362	-0.248	Fulfilled
3.	X1.3	0.652	0.058	0.042	Fulfilled
4.	X1.4	0.585	0.317	-0.520	Fulfilled
5.	X1.5	0.584	0.551	-0.539	Fulfilled
6.	X1.6	0.726	0.084	-0.271	Fulfilled
7.	X1.7	0.755	-0.269	0.169	Fulfilled
8.	X1.8	0.658	-0.638	0.508	Fulfilled
9.	X1.9	0.564	0.430	0.135	Fulfilled
10.	X1.10	0.610	-0.639	0.454	Fulfilled
11.	X1.11	0.634	-0.252	-0.210	Fulfilled
12.	X1.12	0.739	0.277	-0.249	Fulfilled
13.	X1.13	0.690	-0.127	0.098	Fulfilled
14.	X1.14	0.615	0.403	0.040	Fulfilled
15.	X1.15	0.523	-0.166	0.512	Fulfilled

Based on the results of discriminant validity in the second test of variable X1, all indicators had loadings greater than cross loadings, thus meeting the criteria for discriminant validity.

Table 3. Discriminant Validity X2

No	Indicator	Loading	Cross Loading		Description
		X2	X1	Y	
1.	X2.1	0.909	0.366	-0.019	Fulfilled
2.	X2.2	0.911	-0.237	-0.176	Fulfilled
3.	X2.3	0.919	-0.128	0.193	Fulfilled

Based on the results of discriminant validity in the second test of variable X2, all indicators had loadings greater than cross loadings, thus meeting the criteria for discriminant validity.

Table 4. Discriminan Validity Y

No	Indicator	Loading	Cross Loading		Description
		Y	X2	X1	
1.	Y.1	0.735	-0.014	-0.129	Fulfilled
2.	Y.2	0.774	0.093	0.191	Fulfilled
3.	Y.3	0.821	0.146	-0.193	Fulfilled
4.	Y.4	0.743	-0.277	0.060	Fulfilled
5.	Y.5	0.820	-0.125	0.335	Fulfilled
6.	Y.6	0.733	0.315	-0.386	Fulfilled
7.	Y.7	0.789	-0.131	0.087	Fulfilled

Based on the results of discriminant validity in the second test of variable Y, all indicators had loadings greater than cross loadings, thus meeting the criteria for discriminant validity.

Based on the results of discriminant validity, the results show that all indicators meet the criteria for discriminant validity, as indicated by the loading values of each indicator being higher than their cross-loading values. In addition, discriminant validity analysis can be conducted not only at the indicator level but also at the variable level, as seen from the square root of the Average Variance Extracted (AVE) value.

According to J. Hair & Alamer (2022), one of the criteria for evaluating convergent validity is through the Average Variance Extracted (AVE) value. The AVE value reflects how much of the variance of the indicators can be explained by the measured construct.

Specifically, if the AVE value is ≥ 0.50, this indicates that the construct is able to explain at least 50% of the variance of its indicators. In other words, more than half of the information contained in the indicators can be explained by the construct in question. This value is considered evidence that the indicators consistently reflect the same construct and therefore meet the criteria for convergent validity.

Conversely, if the AVE value is below 0.50, this indicates that the construct is not sufficiently able to explain the variance of its indicators, so the validity of the measurement model needs to be reconsidered. The following presents the AVE root results in this study.

Table 5. AVE

No	Variable	AVE			Description
		X1	X2	Y	
1.	X1	0.648	0.827	0.831	Fulfilled
2.	X2	0.827	0.913	0.848	Fulfilled
3.	Y	0.831	0.848	0.774	Fulfilled

Reliability Test

Reliability testing in the PLS-SEM model was conducted to ensure that each indicator in the construct (latent variable) could represent the concept to be measured. Reliability was tested using Composite Reliability and Cronbach's Alpha values. According to J. Hair & Alamer (2022), reliability testing using Composite Reliability and Cronbach's Alpha values must have a value of ≥ 0.70.

Composite Reliability

The following are the results of the composite reliability test in this study:

Table 6. Composite Reliability Coefficients

No	Variable	*Composite Reliability Coefficients*		Description
		Before	After	
1.	X1	0.921	0.915	Fulfilled
2.	X2	0.937	0.937	Fulfilled
3.	Y	0.913	0.913	Fulfilled

Based on the Composite Reliability results shown in the table above, all coefficients in the first and second tests have values greater than 0.7, so it can be concluded that each construct meets the Composite Reliability criteria.

Cronbach's Alpha Coefficients

The following are the results of Cronbach's alpha coefficients in this study:

Table 7. Cronbach's Alpha Coefficients

No	Variable	*Cronbach's Alpha Coefficients*		Description
		Sebelum	Sesudah	
1.	X1	0.908	0.900	Fulfilled
2.	X2	0.900	0.900	Fulfilled
3.	Y	0.888	0.888	Fulfilled

Based on the Cronbach's Alpha Coefficients in the table above, it can be seen that all coefficients are greater than 0.7, thus meeting the Cronbach's Alpha Coefficients criteria. Overall, the first and second tests showed that the Composite Reliability Coefficient and Cronbach's Alpha Coefficients for all variables had values above 0.70, indicating that the instrument met the reliability requirements and could be used consistently.

Model Fit

The following are the results of the model fit in this study:

Table 8. Model Fit

No	Model fit and quality indices	Criteria Fit	Analysis Results	Describtion
1.	*Average path coefficients* (APC)	P<0.05	0.583 P<0.001	Fulfilled
2.	*Average R-squared* (ARS)	P<0.05	0.731 P<0.001	Fulfilled
3.	*Average adjusted R-squared* (AARS)	P<0.05	0.729 P<0.001	Fulfilled
4.	*Average block VIF* (AVIF)	acceptable if <= 5, ideally <= 3.3	3.207	Fulfilled
5.	*Average full collinearity* VIF (AFVIF)	acceptable if <= 5, ideally <= 3.3	4.206	Fulfilled
6.	*Tenenhaus GoF* (GoF)	small >= 0.1, medium >= 0.25, large >= 0.36	0.672	Large
7.	*Sympson's paradox ratio* (SPR)	acceptable if >= 0.7, ideally = 1	1.000	Ideal
8.	*R-Squared contribution ratio* (RSCR)	acceptable if >= 0.9, ideally = 1	1.000	Ideal
9.	*Statistical suppression ratio* (SSR)	acceptable if >= 0.7	1.000	Acceptabel
10.	*Nonlinier bivariate causality*	acceptable if >= 0.7	1.000	Acceptable

Based on the model fit results in the table above, it shows that all model fit and quality indices in this study are fulfilled and in accordance with the testing criteria.

Variable Profile

The following are the variable profiles in this study:

Table 9. Variabel Profile X1

No	Indicator	Factor Loading	Average	*Recommendation For Unesa*
1.	X1.1	0.657	4.4	Recommendation to Retain
2.	X1.2	0.678	4.3	Recommendation to Retain
3.	X1.3	0.652	4.2	Recommendation to Retain
4.	X1.4	0.585	4.1	Recommendation to Retain
5.	X1.5	0.584	4.3	Recommendation to Retain
6	X1.6	0.726	4.4	Recommendation to Retain
7.	X1.7	0.755	4.3	Recommendation to Retain
8.	X1.8	0.658	4.4	Recommendation to Retain
9.	X1.9	0.564	4.3	Recommendation to Retain
10.	X1.10	0.610	4.3	Recommendation to Retain
11.	X1.11	0.634	4.3	Recommendation to Retain
12.	X1.12	0.739	4.3	Recommendation to Retain
13.	X1.13	0.690	4.4	Recommendation to Retain
14.	X1.14	0.615	4.2	Recommendation to Retain
15.	X1.15	0.523	4.3	Recommendation to Retain

Table 10. Variable Profile X2

No	Indicator	Factor Loading	Average	*Recommendation For* Unesa
1.	X2.1	0.909	4.2	Recommendation to Retain
2.	X2.2	0.911	4.1	Recommendation to Retain
3.	X2.3	0.919	4.3	Recommendation to Retain

Table 11. Variable Profile Y

No	Indicator	Factor Loading	Average	*Recommendation For* Unesa
1.	Y.1	0.735	4,2	Recommendation to Retain
2.	Y.2	0.774	4,3	Recommendation to Retain
3.	Y.3	0.821	4,3	Recommendation to Retain
4.	Y.4	0.743	4.3	Recommendation to Retain
5.	Y.5	0.820	4.3	Recommendation to Retain
6.	Y.6	0.733	4,3	Recommendation to Retain
7.	Y.7	0.789	4,2	Recommendation to Retain

Hypothesis Testing Results

The results of the hypothesis testing conducted in this study are presented below:

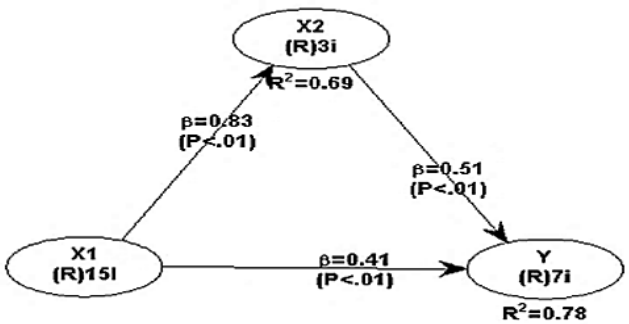

Figure 2. Hypothesis

Direct Effect Testing

Table 12. Direct Effect

No	Hubungan Antar Variabel		Koeefisien Jalur	P-Value	Description
1.	X1	X2	0.828	<0.001	Highly Significant
2.	X1	Y	0.411	<0.001	Highly Significant
3.	X2	Y	0.510	<0.001	Highly Significant

Based on the results of the hypothesis test above, the interpretation can be further explained as follows:

H1 = Effect of (X1) on (X2)

The findings reveal that variable (X1) has a statistically significant effect on variable (X2), demonstrated by a path coefficient value of 0.876 with a significance value of $p < 0.001$. Since the *p*-value is lower than the 0.01 criterion, this effect is categorized as highly significant, thereby confirming the proposed hypothesis. Furthermore, the positive path coefficient (0.828) indicates that improvements in internship quality (X1) correspond to higher levels of self-efficacy (X2).

H2 = Effect of (X1) on (Y)

The findings reveal that variable (X1) has a statistically significant effect on variable (Y), demonstrated by a path coefficient value of 0.411 with a significance value of $p < 0.001$. Since the *p*-value is lower than the 0.01 criterion, this effect is categorized as highly significant, thereby confirming the proposed hypothesis. Furthermore, the positive path coefficient (0.411) indicates that internships (X1) contribute to an increase in resilience (Y).

H3 = Effect of (X2) on (Y)

The findings reveal that variable (X1) has a statistically significant effect on variable (Y) demonstrated by a path coefficient of 0.411 with a significance value of $p < 0.001$. Since the *p*-value is lower than the 0.01 criterion, this effect is categorized as highly significant, thereby confirming the proposed hypothesis. Furthermore, The positive path coefficient (0.411) indicates that self-efficacy significantly increases resilience (X2).

Indirect Effect Testing

Indirect effect testing can be done with a 2-segment mediation test. Here are the results of indirect effect testing through 2-segment mediation:

Table 13. Indirect Effect

Variable Eksogen	Variable Mediation	Variable Endogen	Indirect Effect Coefficients	P- Value	Description
X1	X2	Y	0.422	<0.001	Mediation

Based on the results of testing the indirect effect presented above, it can be seen that: H4 = X2 as a mediator of the effect of X1 on Y. The path coefficient for the indirect effect of X1 on Y through X2 is 0.954 with a P-value < 0.001. Since the P-value is less than the significance level of 0.05, the effect is considered significant. This indicates that X2 acts as a mediating variable in the relationship between internship and resilience.

Total effect

The total effect is a combination of the indirect effect coefficient and the direct effect. In this study, the details of the total effect are as follows:

X1 to Y = $(0.839)^2$ x 100% = 0.7039 x 100%
= 70.39%

X2 to Y = $(0.510)^2$ x 100% = 0,2601 x 100%
= 26,01 %

Thus, the contribution of X1 to Y, both through direct and indirect influences, reached 70.3921%. Meanwhile, the contribution of X2 to Y, both directly and indirectly, was recorded at 26.01%.

Discussion

The Effect of Internships on Self-efficacy

The results of the study indicate that internships have a significant effect on students' self-efficacy. Thus, hypothesis H1, which states that internships affect self-efficacy, can be accepted. The positive path coefficient value indicates that the relationship between internships and self-efficacy is positive. This means that the higher the quality of the internship, the higher their confidence in completing tasks and overcoming challenges. This shows that the internship experience gained during the internship programme (PLP) can significantly increase students' confidence in performing their roles as prospective teachers. The role of the school as an internship partner provides students with opportunities to apply their knowledge directly through real tasks such as developing teaching materials, managing classrooms, actively participating in the learning process at the partner school, and interacting with students and mentor teachers.

The results of the study indicate that internships have a significant effect on students' self-efficacy. Thus, hypothesis H1, which states that internships affect self-efficacy, can be accepted. The positive path coefficient value indicates that the relationship between internships and self-efficacy is positive. This means that the higher the quality of the internship, the higher their confidence in completing tasks and overcoming challenges. This shows that the internship experience gained during the internship programme (PLP) can significantly increase students' confidence in performing their roles as prospective teachers. The role of the school as an internship partner provides students with opportunities to apply their knowledge directly through real tasks such as developing teaching materials, managing classrooms, actively participating in the

learning process at the partner school, and interacting with students and mentor teachers.

This process not only trains pedagogical skills but also shapes their belief that they are capable of pursuing a career as a teacher. The significance of this influence indicates that a structured internship programme supported by a conducive learning environment can strengthen dimensions of self-efficacy, such as belief in instructional success, emotional management, and collaboration. Based on the research results, it is shown that indicator X1.7, which represents the aspect of academic knowledge and skills, has the highest factor loading value compared to other indicators such as X1.1, X1.2, X1.3, X1.4, X1.5, X1.6, X1.7, X1, X1.9, X1.10, X1.11, X1.12, X1.13, X1.14, X1.15, X1.16, X.17. This finding indicates that the aspect of academic knowledge and skills contributes most significantly and dominantly to the formation of the self-efficacy construct.

Findings in the field support the results that students who initially felt less confident in managing the class experienced positive development over time. This is reflected in their increased ability to develop teaching materials, deliver content, and manage classroom dynamics. Direct teaching experience, receiving feedback from mentor teachers, and facing real-life situations in the classroom, such as dealing with passive students, students with difficult behaviour, and adjusting learning strategies, are important experiences that strengthen their confidence as prospective teachers. In addition, student involvement in various school activities, such as teacher meetings, extracurricular activities, and the learning evaluation process, helps broaden their professional horizons and boost their confidence in performing their roles as educators. Through these experiences, students feel more prepared and confident to teach independently in the future because they have gained a direct insight into the world of teaching.

This finding aligns with Bandura's theory (1997), which states that opportunities to apply academic knowledge and skills in real-world situations, such as internships, can create direct success experiences (mastery experiences), which are the strongest factors in building self-efficacy.This is also consistent with the research by Taufik et al. (2025), which states that the success of applying theory during direct internship practice (mastery experience) can enhance students' self-efficacy. Aspects of internship practice such as classroom management and student engagement also have a positive impact on their self-efficacy as prospective teachers. However, the development of self-efficacy does not solely depend on personal experiences (mastery experiences). According to Cai et al. (2022), the development of self-efficacy is not only dependent on personal success experiences (mastery experiences) but is also influenced by observations of others' successes (vicarious experiences) and verbal support from the environment (verbal persuasion).

Therefore, it is important for students to apply their professional competencies in facing real challenges during their internship. Students also need to be facilitated to interact and share experiences with their peers and mentors. The example set by

experienced teachers can help shape students' perceptions of the ideal teacher. Reflective activities and constructive feedback before, during, and after the internship are highly recommended to strengthen the learning process and self-development of students.In line with this, Cheung et al. (2023) emphasise that internship programmes provide opportunities for students to apply theory in field practice, which has a positive impact on increasing self-efficacy. Successful teaching practice strengthens students' confidence in their abilities. Meanwhile, support from mentors and the school environment helps students engage in self-reflection to identify their potential and areas for improvement.

Furthermore, Ramaprasad et al. (2022) highlight that students' satisfaction with their internship experience also contributes to increased self-efficacy, particularly in the context of career decision-making and adaptation to the workplace.

This is reinforced by the findings of Michos et al. (2022), which show that active student involvement in field practice enhances their confidence in managing classrooms and addressing learning challenges, serving as a clear indicator of increased self-efficacy. On the other hand, according to Eğinli & Solhi (2021), strengthening pedagogical knowledge from the outset is crucial to preparing students for teaching practice. Planning authentic materials and structured learning strategies before practice can reduce anxiety and establish self-efficacy as an important foundation at the beginning of a teaching career.

This is in line with Baroudi et al. (2022), who state that the implementation of academic knowledge, the application of effective instructional strategies, and student engagement are factors that support the formation of self-efficacy in prospective teachers. Support and real-world experience during internships strengthen their confidence before they enter the professional education world. Furthermore, Pianda et al. (2024) add that applying knowledge gained in the classroom to real-world work contexts can contribute to strengthening 21st-century competencies, such as communication skills, teamwork, and adaptability to change. These competencies serve as a crucial bridge between internship experiences and students' readiness for the workforce. These positive impacts will grow further if supported by high psychological capital, such as self-confidence, hope, an optimistic attitude, and resilience in facing challenges.

According to research Terzi (2022), there is strong evidence that the academic knowledge and skills possessed by prospective teachers, when applied directly in the context of internships or practical training in schools, significantly contribute to enhancing their self-efficacy. This contribution is most evident in two main aspects: classroom management and the design and implementation of instructional strategies. Furthermore, this positive effect does not stop at the internship stage but continues to develop and strengthen with increasing practical experience in the real world, especially after entering the professional teaching phase (in-service).

The Effect of Internships on Resilience

The results of the study indicate that internships have a significant effect on student resilience. Thus, hypothesis H2, which states that internships affect resilience, can be accepted. The positive path coefficient value indicates that the relationship between internships and resilience is positive. This means that the better the quality or satisfaction with the internship programme experienced by students, the higher their level of resilience. This occurs because students face pressures during their internships, such as high workloads, professional demands, and adapting to workplace culture. However, when students receive adequate guidance, are given the trust to complete tasks, and receive constructive feedback, they experience repeated small successes. These successes strengthen their self-efficacy and help them develop resilience in facing future challenges, both during their studies and when entering the real world of work.

Based on research findings, it was shown that indicator Y.3, which represents the control aspect, had the highest factor loading value compared to other indicators, such as Y.1, Y.2, Y.4, Y.5, Y.6, and Y.7. This finding indicates that the control aspect contributes most significantly and dominantly to the formation of the resilience construct. Therefore, the control aspect is one of the key factors in encouraging students to develop resilience. Findings in the field support the results that the control aspects possessed by students during their teaching internships have a significant influence on resilience. Students who feel they have control over the learning process, such as in designing teaching materials, choosing teaching methods, and managing classroom dynamics, demonstrate higher levels of resilience. This is indicated by high scores on control indicators, which include the ability to make independent decisions, plan teaching strategies, and handle unexpected situations in the classroom. Students who have good control during their internship tend to be more capable of recovering from failure or challenges and are more confident in facing the dynamics of teaching activities.

This finding aligns with Bandura's (1997) theory on perceived control, which is one of the sources of self-efficacy, where the higher an individual's perception of control over a situation, the greater their ability to endure and overcome pressure. In this context, teaching experiences that provide autonomy and real responsibility for students have been proven to strengthen resilience. In the context of internships, Goodenough et al. (2020) found that students who participated in internships were able to adapt to changes, take an active role, and demonstrate good self-control in facing challenges. The ability to set direction, goals, and take initiative in problem-solving significantly contributes to increased resilience. Furthermore, Y. Zhang et al. (2024) emphasise that control in self-efficacy plays a crucial role as a bridge between social support and resilience enhancement. This means that control not only reflects internal self-mastery but also influences how students utilise external support.

Similar research by Felita Alysia Putri (2022) reveals that interns are able to manage stress, remain productive, and demonstrate proactive attitudes in the learning process. They are also able to plan and take initiative in completing tasks and challenges they

face, reflecting control over the learning process and impacting resilience enhancement. Additionally, self-reflection formed through internship or teaching experiences is important. According to Heng & Chu (2023), self-reflection can enhance self-efficacy, which ultimately strengthens students' psychological resilience. In this context, control encompasses not only direct actions but also metacognitive skills such as reflection. Li (2023) adds that emotional regulation is another form of control that is important in the internship process. Students who can remain calm and focused in difficult situations demonstrate increased self-efficacy and emotional resilience.

Meanwhile, Baatz & Wirzberger (2025) emphasise that resilience is not an innate trait but a professional competence that can be developed through real-world experiences, such as teaching internship programmes. One important aspect of this process is the control or autonomy that students possess. This control serves as a source of psychological resilience because it not only enhances self-efficacy but also supports the ability to cope with stress, recover emotional well-being, and create a collaborative and supportive learning environment through active participation. In line with this, Di Pietro (2022) states that mastering control in internship situations that are outside one's comfort zone significantly strengthens students' resilience. Success in facing new challenges is an important foundation in the development of intrapersonal skills, especially mental resilience and adaptability.

Research by Ocampo et al. (2020) found that students who felt they had control over tasks and decisions during their internships showed significant development in career adaptability. Aspects such as self-confidence, flexibility, and resilience in facing challenges are closely related to resilience or psychological resilience. Ultimately, Krisdianata & Mbato (2022) highlight that the resilience of prospective teachers during teaching practice is formed through abilities such as perseverance, reflection, adaptive help-seeking, responding to negative emotions, and emotional regulation. These five aspects reflect self-regulation, which plays a crucial role in shaping resilience and professional identity among teachers. Therefore, educational institutions must support the development of self-regulation and emotional management among students, in addition to equipping them with pedagogical skills.

The Effect of Self-efficacy on Resilience

The results of the study indicate that self-efficacy has a significant influence on student resilience. Thus, hypothesis H3, which states that self-efficacy influences resilience, can be accepted. This means that the higher the self-efficacy (students' confidence in completing tasks and facing challenges), the higher the level of resilience (the ability to persevere and adapt) that students possess. This occurs because self-efficacy plays an important role in encouraging students to believe in their ability to solve various problems, remain motivated even under pressure, and view failure as a challenge to be overcome, not as a threat. This can be seen when students face various challenges during their teaching internship, such as unresponsive students, difficult-to-understand lesson material, limited learning resources, and a busy teaching schedule. Nevertheless,

students continue to seek solutions and adapt to the school environment. The ability to persevere and adapt in such situations reflects strong resilience, making them more resilient and prepared to face the pressures and demands of the real world of education.

Based on the research results, it is shown that the X2 indicator, which represents the aspect of success in collaboration, has the highest factor loading value compared to other indicators such as X2.1 and X2.2. This finding indicates that the aspect of success in collaboration contributes most significantly and dominantly to the formation of the resilience construct. Therefore, the aspect of success in collaboration is one of the important factors in encouraging students to have resilience. Field findings support the results that during the teaching internship, it was found that the collaboration between student teachers, mentor teachers, peers, and students at the school had a positive influence on the resilience of students. Students who actively discuss, share experiences, and collaborate in developing teaching materials demonstrate better ability to cope with challenges during the teaching process.

Some students reported that support from mentors in the form of regular feedback and evaluation gave them confidence and clear direction in improving their teaching performance. In addition, collaboration among students within a single internship group provided a platform for mutual encouragement and sharing of effective teaching strategies, thereby reducing stress and emotional burden. Students who initially felt stressed or hesitant about facing the classroom demonstrated increased motivation and adaptive abilities after experiencing the benefits of teamwork and open communication with the school. This indicates that effective collaboration during the internship plays a crucial role in developing students' resilience in coping with academic and professional pressures throughout the internship process.

These findings align with Bandura's (1986) social-cognitive theory, which states that social environments, such as interactions with others, can strengthen self-confidence and resilience through social learning processes. In this context, students learn through observing mentor teachers, receiving positive reinforcement from collaboration, and building self-efficacy through shared success within the team. Additionally, based on Reivich and Shatté's (2002) resilience model, collaboration during internships also strengthens key aspects of resilience, such as emotional control, empathy, and positive thinking. For example, students who receive moral support and solutions from their team when facing difficulties are more capable of managing stress, demonstrating flexible thinking, and remaining optimistic in the face of teaching challenges.

Thus, collaboration in an internship environment not only supports the technical aspects of teaching but also serves as an important protective factor that strengthens the resilience of prospective teacher students. This finding aligns with the views of Wang & Pan (2023), who state that self-efficacy in a collaborative context plays a crucial role in shaping students' resilience during their internship programme. Students who have confidence in working together tend to be better able to manage stress, build positive social relationships, and adapt to various challenges. These abilities significantly enhance their resilience in facing pressure and resolving conflicts in the workplace.

In this context, Salvo-Garrido et al. (2024) explain that collaboration serves as an important link between self-efficacy and resilience. The ability to collaborate effectively not only strengthens self-confidence but also enhances an individual's personal resilience, especially when facing complex professional challenges. Furthermore, Nissim & Danial-Saad (2023) emphasise that collaborative practice models play a vital role in shaping prospective teachers who are more optimistic, resilient, and highly committed to their profession. Their study found a positive relationship between self-confidence and the intention to continue a career in education, which impacts long-term retention, increased professional motivation, and the strengthening of the teaching profession's image. Additionally, collaborative programmes have proven effective in enhancing the quality of training and professional development, while also improving graduates' readiness to assume their roles as educators in the workplace.

In line with these findings, Flores et al. (2025) state that collaborative practices contribute to improved professional learning and the strengthening of students' social-emotional resilience, which are crucial aspects of resilience within the context of internship experiences. Teekens et al. (2021) also highlight that team collaboration involving shared understanding and interdependence of tasks can enhance students' resilience when facing pressure and challenging situations. According to Cassaretto et al. (2024), self-efficacy plays a crucial role in shaping students' resilience, enabling them to complete academic tasks, understand course material, manage time effectively, and remain motivated in fulfilling their responsibilities while demonstrating mental toughness when facing stressful situations. Additionally, collaborative support that includes positive interactions and cooperation with peers also significantly contributes to enhancing resilience.

This form of collaboration includes group discussions, sharing learning strategies, providing emotional support, and lecturer involvement in providing guidance and constructive feedback. Such social collaboration creates a supportive learning environment, which not only strengthens students' self-efficacy but also increases their sense of belonging and social connectedness, ultimately strengthening their psychological resilience.

The Effect of Internships on Resilience Through Self-efficacy

The results of the study indicate that self-efficacy is a significant mediating variable in the relationship between internships and resilience. Therefore, hypothesis H4, which states that internships affect resilience through self-efficacy, is accepted. These results indicate that internships not only have a direct effect on resilience but also an indirect effect through increased self-efficacy. Since the direct effect of internships on resilience remains significant even through the mediation of self-efficacy, this relationship is categorised as partial mediation. This means that self-efficacy only partially explains the mechanism of the relationship between internships and resilience. These findings confirm that internship experiences not only strengthen students' psychological resilience indirectly through increased self-efficacy but also have a direct contribution in

shaping students' resilience in facing learning challenges and field practice. Therefore, strengthening internship programmes and developing self-efficacy simultaneously are important strategies in building students' overall resilience.

Field findings support the results that Based on observations and reflections during teaching internships, it was found that direct practical experience in schools had a significant influence on increasing students' self-efficacy and resilience, particularly in three main aspects: academic knowledge and skills, control, and confidence in collaboration. First, in terms of academic knowledge and skills, students showed an increase in their understanding of how to develop learning tools, manage classrooms, and deliver material interactively. Through direct learning processes in the classroom and guidance from mentor teachers, students feel more confident in fulfilling their roles as prospective educators. This reflects the mastery experience component in Bandura's (1997) self-efficacy theory, where success in completing tasks directly enhances self-confidence. Second, in terms of control, students have begun to demonstrate the ability to manage emotions, time, and learning strategies independently. Some students who initially felt anxious and lacked confidence gradually became able to handle pressure and make decisions independently in unexpected situations in the classroom.

This indicates that internship experiences contribute to the development of resilience, as explained by Reivich & Shatté (2002), who identify control as one of the key pillars in building individual resilience. Third, in terms of collaborative confidence, students feel more comfortable and confident working in teams, both with mentors and fellow interns. This collaboration not only facilitates task completion but also serves as a source of social support that strengthens self-efficacy and helps students cope with pressure during the internship. This social interaction aligns with vicarious experience and social persuasion in Bandura's theory, where social environmental influences strengthen individual self-confidence through observation and positive encouragement from others. Thus, it can be concluded that teaching internships not only equip students with professional competencies but also play a crucial role in building self-efficacy and resilience through enhanced academic knowledge, self-control skills, and confidence in collaborating within a real-world work environment.

The role of self-efficacy as a mediator is reinforced by the findings of Supervía et al. (2022), which show that self-efficacy is a significant mediator in transforming resilience into positive performance. In the context of internships, this model indicates that meaningful internship experiences not only build resilience but also strengthen it indirectly through increased self-efficacy. Students who actively participate in internships tend to build self-confidence in facing challenges, making self-efficacy an important pathway bridging the positive influence of internships on their psychological resilience. In addition, Heng & Chu (2023) also state that self-efficacy plays a significant mediating role in the relationship between professional experience and students' psychological resilience. The higher the level of self-efficacy students possess during their internship programme, the stronger their resilience in coping with stress and

changes in the workplace. Therefore, strengthening self-efficacy through internship experiences is one of the key strategies in effectively building students' resilience.

CONCLUSION

Fundamental Finding: This study confirms that internships, specifically through the School Field Introduction Program, have a positive and significant influence on students' self-efficacy. Practical field experiences enhance students' confidence in overcoming learning challenges. Moreover, the School Field Introduction Program directly contributes to student resilience, as those who participate effectively tend to demonstrate greater adaptability and the ability to cope with pressure. Self-efficacy has a strong influence on resilience. Students with high self-confidence are better able to endure difficulties during the internship process and learning. Self-efficacy acts as a mediator in the relationship between the School Field Introduction Program and resilience. This means that the experience of the School Field Introduction Program can indirectly increase students' resilience through improved self-efficacy. **Implication:** This study extends Bandura's social cognitive theory by showing that internship experiences not only enhance self-efficacy but also foster greater resilience, highlighting the interconnection among internship, self-efficacy, and resilience. The findings emphasize that self-efficacy functions both as an outcome of mastery experiences and as a mediator in dealing with academic pressures. Practically, the results suggest that well-structured internship programs (PLP) should be designed not only to strengthen technical competencies but also to cultivate students' self-efficacy and resilience, particularly in stress management and emotional regulation. Institutions are therefore encouraged to provide pre-internship preparation, continuous mentoring, and supportive learning environments to ensure students are better equipped to face academic and professional challenges. **Limitation:** This study is limited to students from four teacher education study programs at the Faculty of Economics and Business, UNESA—namely Economics Education, Business Education, Accounting Education, and Office Administration Education—who participated in the internship program (PLP) during the 2024/2025 academic year. The scope of the research includes three variables: internship (X1), self-efficacy (X2), and resilience (Y), and it employs a quantitative approach. **Future Research:** Based on the research findings, it is recommended that the self-efficacy and resilience measurement tools used in this study be further refined, particularly by eliminating items that do not meet discriminant validity criteria. The revision process of the instruments is important to enhance the reliability and validity of measurements in future research. For future researchers, it is recommended to expand the sample size and characteristics to make the findings more generalisable. It is also hoped that other factors that may influence resilience, such as social support, intrinsic motivation, or emotional intelligence, will be explored to provide a more comprehensive understanding. This could help delve deeper into the factors causing low resilience among students.

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