

Factors Affecting Pre-Serviced Teachers' Satisfaction with Training Quality of the Primary Education Program at Thu Dau Mot University

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ABSTRACT: This paper examines the determinants of pre-serviced teachers' satisfaction concerning the training quality within the Primary Education program at Thu Dau Mot University. Empirical data were gathered from a sample of 303 pre-serviced teachers via questionnaires. SPSS 26 was employed to conduct Cronbach's Alpha reliability testing, exploratory factor analysis (EFA), Pearson correlation analysis, and multiple linear regression. The findings reveal that alumni satisfaction toward training quality is influenced by four distinct factors: curriculum, teaching staff, physical facilities, and student support activities. Notably, the curriculum emerged as the most critical factor driving overall satisfaction.

KEYWORDS: Primary education program training quality, pre-serviced teachers' satisfaction, Thu Dau Mot University.

1. INTRODUCTION

In the context of higher education shifting toward openness and integration, learners are afforded greater access to information and a wider range of institutional choices aligned with their individual needs. This trend intensifies competition among universities in enrollment and student attraction. In this landscape, training quality serves as a core determinant of a higher education institution's reputation, brand identity and competitiveness. Therefore, the evaluation and improvement of educational quality have become an urgent requirement to ensure the sustainable development of universities.

The assessment of training quality must be undertaken from multiple perspectives, among which student feedback plays a crucial role. As the direct beneficiaries of educational services, students possess the capacity to provide authentic information regarding the extent to which training programs meet their academic needs and career trajectories. Findings from student satisfaction surveys constitute a pivotal source of data, enabling educational administrators to identify both the strengths and limitations of training programs, thereby proposing appropriate improvement measures.

The Primary Education program at Thu Dau Mot University plays an essential role in training primary school teachers for the former Binh Duong Province in particular and the Southern region of Vietnam in general. Over the years, the program has consistently focused on internal quality assurance and implemented educational quality accreditation activities in accordance with the regulations of the Ministry of Education and Training. In addition, the collection of feedback from key stakeholders, especially students, has been regularly conducted to provide a practical foundation for the ongoing improvement of the training program.

Although numerous studies have explored student satisfaction with training quality in higher education, research findings indicate that the factors influencing learner satisfaction vary significantly depending on disciplinary characteristics, educational contexts, and institutional conditions (Santini et al., 2017). In the field of primary teacher education, particularly at local universities, empirical studies on student satisfaction, especially that of alumni, remains relatively limited. At Thu Dau Mot University, while student feedback surveys are conducted periodically, few studies have utilized quantitative analytical methods to identify and measure the specific impact of educational quality factors on the satisfaction of students enrolled in the Primary Education program. This gap highlights the need for in-depth research to provide a scientific and practical foundation for quality assurance and program improvement efforts.

Driven by the aforementioned realistic context, this study was conducted to: (1) identify the factors influencing pre-serviced teachers' satisfaction regarding training quality; and (2) measure the specific impact of each factor on pre-serviced teachers' satisfaction through a multiple linear regression model.

2. METHODOLOGY

2.1. Research Design

This study employed a quantitative methodology to identify the factors influencing pre-service teacher’s satisfaction and to evaluate the impact level of each factor. The conceptual framework was developed based on an adaptation of models from prior studies (Trang et al., 2018; Hai, 2022; Hue et al., 2026) adjusted to fit with the specific characteristics of primary teacher education programs. The proposed model comprises four factors hypothesized to influence satisfaction: curriculum, teaching staff, physical facilities, and support activities.

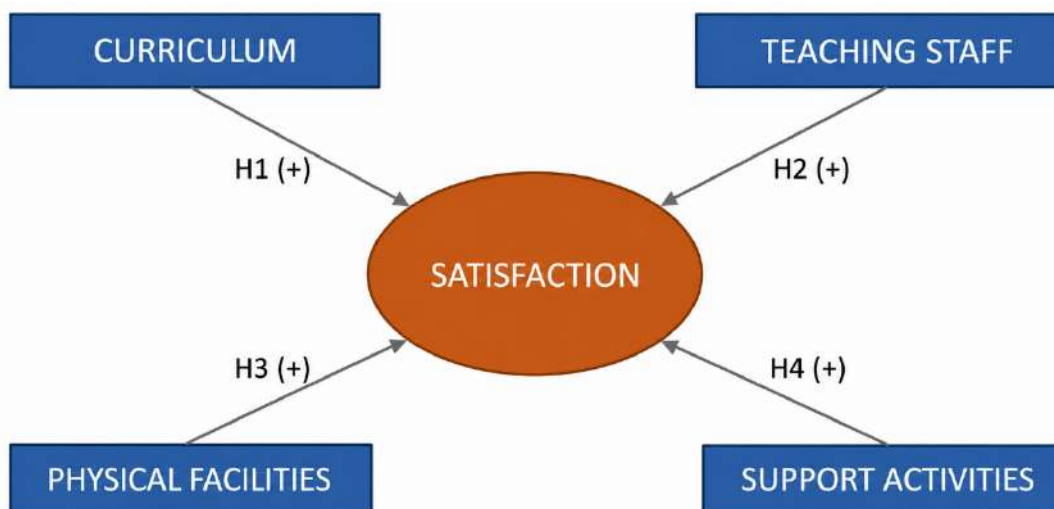


Figure 1. Research model

The hypotheses to be tested within the model are formulated as follows:

- H1: The curriculum has a positive impact on satisfaction.
- H2: The teaching staff have a positive impact on satisfaction.
- H3: The physical facilities have a positive impact on satisfaction.
- H4: The support activities have a positive impact on satisfaction.

According to the hypothesized model, satisfaction serves as the dependent variable, influenced by four independent variables: (1) Curriculum (CC), (2) Teaching staff (TS), (3) Physical facilities (PF) and (4) Support activities (SA). The proposed research model is represented by the following regression equation:

$$SS = \beta_0 + \beta_1CC + \beta_2TS + \beta_3PF + \beta_4SA + \varepsilon.$$

Where: β_0 - Constant; $\beta_1, \beta_2, \beta_3, \beta_4$ - Regression coefficients; ε - Random error.

2.2. Research subjects and sampling method

The target population for this survey consisted of recent graduates from the Primary Education program at Thu Dau Mot University. Data were collected in May 2026 through an online questionnaire.

The study sample was selected using a convenience sampling method. Out of 327 responses received, 303 valid questionnaires were retained for data analysis. This sample size meets the requirements for both exploratory factor analysis and multiple linear regression as recommended by Hair et al. (2019).

2.3. Data collection instrument

The data collection instrument was a questionnaire designed with reference to the existing scales developed by Trang et al. (2018) and Thao et al. (2024). In addition to general demographic information, the primary section of the questionnaire comprised 26 items designed to assess students' level of agreement with respect to the research factors. The observed variables were measured using a 5-point Likert scale, ranging from 1 = Strongly Disagree to 5 = Strongly Agree



Table 1. Training quality measurement scale

Scale	Observed Variables (Survey questions)	Code
Curriculum (CC)	The curriculum has clear objectives and learning outcomes that meet professional and practical requirements.	CC1
	The training program is designed in alignment with its stated objectives and learning outcomes.	CC2
	The courses are logically sequenced and clearly communicated to students.	CC3
	The number of elective courses sufficiently meets the diverse learning needs of students.	CC4
	There is an appropriate balance among general education, foundational, and specialized knowledge.	CC5
	The distribution ratio between theoretical instruction and practical/internship training is reasonable.	CC6
Teaching staff (TS)	Lecturers possess the professional qualifications required to meet teaching demands.	TS1
	Lecturers exhibit effective and easily comprehensible delivery methods.	TS2
	Lecturers utilize and integrate various teaching methodologies effectively.	TS3
	Lecturers are approachable, enthusiastic, and readily available to guide and support students in their learning and research.	TS4
	The content and format of examinations and assessments are closely aligned with the taught material.	TS5
	Lecturers assess student learning outcomes objectively and fairly.	TS6
	Lectures provide comprehensive information regarding syllabus schedules, assessment schedules and grading criteria.	TS7
	Lecturers demonstrate professional conduct befitting educators (e.g., punctuality, courtesy).	TS8
Physical facilities (PS)	Classrooms adequately meet students' in-class learning needs.	PS1
	Textbooks and learning materials are sufficient; reference resources are rich and diverse enough to support students' learning and research needs.	PS2
	Self-study spaces are spacious, well-ventilated, meeting students' academic and research requirements.	PS3
	Online platforms (e.g., E-learning, MS Teams) are useful and serve teaching and learning effectively.	PS4
	The Internet system meets the teaching, learning, and research needs of students.	PS5
Support activities (SA)	Student inquiries and difficulties arising during the course of study are resolved promptly and satisfactorily.	SA1
	Academic advising services (course registration, elective selection, accelerated study, etc.) and research support (topic registration, research supervision, competition participation, etc.) are supported enthusiastically and meet student expectations.	SA2

	Career counseling services are eagerly provided and fulfill students' professional aspirations.	SA3
	Specialized workshops, academic competitions and student clubs aimed at fostering professional skills are organized regularly.	SA4
Satisfaction (SS)	Students are confident in their ability to work upon graduation.	SS1
	Students are willing to recommend the Primary Education program at Thu Dau Mot University to others.	SS2
	Students have high trust and confidence in their chosen field of study.	SS3

2.4. Data Analysis

Data were processed using SPSS software (Version 26.0) through the following sequential steps:

Descriptive statistics including frequencies, means and standard deviations were computed to determine the characteristics of the study sample and to assess the level of pre-serviced teacher’s satisfaction with respect to the surveyed factors.

Scale reliability was assessed using Cronbach's alpha coefficient. Observed variables with a corrected item-total correlation below 0.3 were eliminated. The scale was deemed acceptable when Cronbach's alpha exceeded 0.7.

Exploratory factor analysis (EFA) was employed to evaluate the convergent and discriminant validity of the scales. The conditions for conducting EFA included a Kaiser-Meyer-Olkin (KMO) measure greater than 0.5, a statistically significant Bartlett's test of sphericity (Sig. < 0.05), factor loadings greater than 0.5 and a total variance explained of 50% or above.

Pearson correlation analysis was conducted to determine the degree of linear correlation between the independent variables and the dependent variable. Two variables were considered to have a strong linear correlation if the t-test was statistically significant (Sig. < 0.05) and the Pearson correlation coefficient is greater than 0.5.

Multiple linear regression analysis was utilized to determine the magnitude of the influence of each factor on pre-serviced teacher’s satisfaction. A statistical significance level of Sig. < 0.05 was adopted. Furthermore, the assumptions of the regression model, including multicollinearity and the normality of residuals, were examined to ensure the reliability of the research findings.

3. RESULTS

3.1. Descriptive Statistics of Data

Table 2. Descriptive statistics results of the data

Observed variable	N	Frequency					Mean	St. Deviation
		1	2	3	4	5		
CC1	303	2	4	31	126	140	4.31	0.762
CC2	303	3	4	41	132	123	4.21	0.800
CC3	303	2	6	53	134	108	4.12	0.811
CC4	303	5	9	51	132	106	4.07	0.885
CC5	303	3	9	56	124	111	4.09	0.868
CC6	303	3	7	60	128	105	4.07	0.850
TS1	303	1	4	40	144	114	4.21	0.741
TS2	303	1	4	34	157	107	4.20	0.713
TS3	303	1	5	32	155	110	4.21	0.721
TS4	303	1	6	28	127	141	4.32	0.751
TS5	303	0	5	30	157	111	4.23	0.691
TS6	303	1	4	43	130	125	4.23	0.764
TS7	303	0	6	18	137	142	4.37	0.687
TS8	303	1	4	16	97	185	4.52	0.690
PF1	303	4	12	92	124	71	3.81	0.885



PF2	303	3	3	47	160	90	4.09	0.758
PF3	303	4	9	64	136	90	3.99	0.865
PF4	303	2	3	52	127	119	4.18	0.795
PF5	303	14	46	95	88	60	3.44	1.108
SA1	303	4	10	68	144	77	3.92	0.852
SA2	303	1	14	66	124	98	4.00	0.871
SA3	303	3	6	63	138	93	4.03	0.827
SA4	303	8	16	70	109	100	3.91	1.003
SS1	303	0	4	40	171	88	4.13	0.678
SS2	303	0	8	59	156	80	4.02	0.752
SS3	303	1	3	36	136	127	4.27	0.732

Descriptive statistics show that the mean value of each observed variable ranges from 3.44 to 4.52 (on a 5-point scale) and the standard deviation of the variables is less than 1.2. This means that the level of satisfaction and consistency in the students' responses is quite high.

3.2. Reliability Testing of the Scale

The reliability test results show that all variables have Cronbach's Alpha greater than 0.7 and the item-total correlation value of each observed variable is statistically acceptable (> 0.3). Thus, the scale meets the reliability requirements; the observed variables within the same scale exhibit a strong positive correlation with each other, effectively capturing the core characteristics of that variable. In conclusion, all 26 observed variables meet the necessary criteria to proceed to exploratory factor analysis.

Table 3. Results of the reliability test of the scale

Observed variable	Corrected Correlation	Item-Total	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
CC1	0.660		0.856	
CC2	0.736		0.843	
CC3	0.732		0.843	
CC4	0.656		0.857	0.874
CC5	0.733		0.842	
CC6	0.557		0.873	
TS1	0.739		0.919	
TS2	0.753		0.918	
TS3	0.776		0.916	
TS4	0.785		0.915	
TS5	0.770		0.917	0.928
TS6	0.726		0.920	
TS7	0.742		0.919	
TS8	0.729		0.920	
PF1	0.688		0.803	
PF2	0.691		0.807	
PF3	0.693		0.802	0.845
PF4	0.611		0.824	
PF5	0.624		0.831	
SA1	0.725		0.842	0.874



SA2	0.779	0.820	
SA3	0.752	0.833	
SA4	0.685	0.864	
SS1	0.629	0.786	
SS2	0.732	0.679	0.816
SS3	0.648	0.767	

3.3. Exploratory Factor Analysis (EFA)

Exploratory factor analysis for the independent variables: the KMO and Bartlett test results show a KMO value of 0.937 > 0.5 and a Sig. value of 0.000 < 0.05. These metrics confirm that the data are highly suitable for EFA.

Table 4. Results of KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.937
Bartlett's Test of Sphericity	Approx. Chi-Square	4497.715
	df	253
	Sig.	0.000

The results of the principal component analysis (PCA) in Table 5 show that there are 4 components that satisfy the condition of eigenvalue greater than 1, with a total extracted variance of 66.739% (> 50%). Thus, 4 components were extracted from the original 23 observed variables.

Table 5. Results of PCA extraction for independent variables

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	10.518	45.729	45.729
2	1.774	7.715	53.444
3	1.735	7.541	60.985
4	1.323	5.754	66.739
5	0.856	3.723	70.462
6	0.685	2.980	73.441
7	0.678	2.949	76.390
8	0.595	2.589	78.979
9	0.493	2.142	81.121
10	0.472	2.051	83.173
11	0.427	1.856	85.029
12	0.402	1.746	86.774
13	0.378	1.645	88.419
14	0.352	1.532	89.950
15	0.323	1.405	91.356
16	0.312	1.357	92.713
17	0.292	1.268	93.981
18	0.289	1.255	95.236
19	0.261	1.134	96.370
20	0.240	1.043	97.413
21	0.215	0.934	98.347
22	0.204	0.886	99.234
23	0.176	0.766	100.000



The varimax rotation results showed that the factor loadings of all observed variables were statistically significant (> 0.5). Therefore, no variables were removed. Simultaneously, the 23 observed variables were grouped into four separate components. The first component explains the TS factor because the observed variables TS1, TS2, TS3, TS4, TS5, TS6, TS7, TS8 have the highest factor loadings in this component. Similarly, the second, third, and fourth components sequentially explain the CC, SA and PF variables.

Table 6. Varimax rotation results

	Component			
	1	2	3	4
TS4	0.773			
TS2	0.759			
TS3	0.755			
TS6	0.752			
TS8	0.749			
TS5	0.705			
TS1	0.676			
TS7	0.669			
CC3		0.796		
CC5		0.785		
CC2		0.739		
CC4		0.714		
CC1		0.682		
CC6		0.517		
SA2			0.805	
SA4			0.782	
SA3			0.773	
SA1			0.735	
PF1				0.812
PF5				0.786
PF3				0.704
PF2				0.607
PF4				0.550

EFA analysis for the dependent variable: the exploratory factor analysis was validated by the KMO and Bartlett’s test results, which yielded a KMO value of 0.937 (> 0.50) and a significance level of Sig.=0.000 (< 0.05). These statistical indicators confirm that executing an Exploratory Factor Analysis (EFA) is entirely appropriate for this dataset.

Table 7. Results of KMO and Bartlett's Test for the dependent variable

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.696
Bartlett's Test of Sphericity	Approx. Chi-Square	322.559
	df	3
	Sig.	0.000



The analytical results presented in Table 8 indicate that a single component satisfied the extraction criteria, yielding an eigenvalue of 2.531 (greater than 1) and a cumulative variance extracted of 73.129% (exceeding 50%). The factor loadings of the three observed variables onto this component were all greater than 0.50, ranging from 0.831 to 0.892; consequently, no variables were excluded. Thus, one distinct component was successfully extracted from the three observed variables (SS1, SS2, and SS3).

The factor analysis reduced the total number of variables from 26 down to 5. These variables, comprising four independent variables (TS, CC, SA, and PF) measuring training quality and one dependent variable (SS) measuring satisfaction, will be utilized in the subsequent regression analysis to test the proposed research hypotheses.

Table 8. Results of PCA extraction

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	2.194	73.129	73.129
2	.486	16.191	89.320
3	.320	10.680	100.000

Table 9. Results of the varimax rotation

	Component
	1
SS2	.892
SS3	.842
SS1	.831

3.5. Linear Correlation Analysis

The results of the linear correlation analysis indicate that the dependent variable (SS) has a statistically significant and positive correlation with all independent variables in the research model (Sig. = 0.000 < 0.05). The Pearson correlation coefficients are all greater than 0.50, demonstrating a relatively strong linear relationship between the dependent variable and each of the independent variables.

Table 10. Results of the Pearson linear correlation analysis

		CC	TS	PF	SA	SS
CC	Pearson Correlation	1	0.635	0.500	0.537	0.724
	Sig. (2-tailed)		0.000	0.000	0.000	0.000
	N	303	303	303	303	303
TS	Pearson Correlation	0.635	1	0.617	0.545	0.706
	Sig. (2-tailed)	0.000		0.000	0.000	0.000
	N	303	303	303	303	303
PF	Pearson Correlation	0.500	0.617	1	0.549	0.591
	Sig. (2-tailed)	0.000	0.000		0.000	0.000
	N	303	303	303	303	303
SA	Pearson Correlation	0.537	0.545	0.549	1	0.670
	Sig. (2-tailed)	0.000	0.000	0.000		0.000
	N	303	303	303	303	303
SS	Pearson Correlation	0.724	0.706	0.591	0.670	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	
	N	303	303	303	303	303



3.4. Regression Analysis

The F-test for overall model fit yielded a significance level of Sig.= 0.000 < 0.05, leading to the rejection of the null hypothesis that R² = 0. Consequently, this demonstrates that the constructed regression model is statistically appropriate and fits the data well.

Table 11. Results of the model fit test

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	79.355	4	19.839	166.494	0.000
	Residual	35.508	298	0.119		
	Total	114.863	302			

The adjusted R² value of 0.687 indicates a relatively strong relationship between the independent variables and student satisfaction. In other words, 68.7% of the variance in student satisfaction regarding training quality can be explained by the independent variables included in the model. The Durbin–Watson statistic is 1.887. Since this value falls within the acceptable range of 1.5 to 2.5, it confirms the absence of autocorrelation among the residuals (Yahua Qiao, 2011).

Table 12. Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.831	0.691	0.687	0.345	1.887

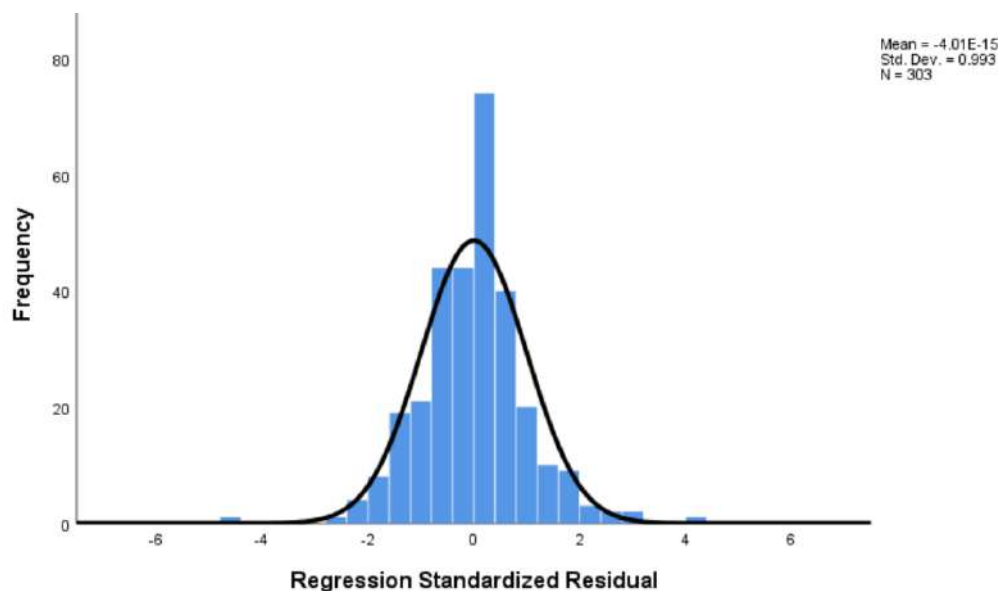


Figure 2. Histogram of the residual

The Variance Inflation Factor (VIF) values for all independent variables are strictly less than 5 (Table 12), indicating that multicollinearity can be safely ignored in this model (Hair et al., 2019). Furthermore, the mean of the residuals in the regression model is approximately zero (Mean = -4.01×10^{-15}) and the standard deviation is 0.993 (close to 1), demonstrating that the residuals follow an approximately normal distribution. The assumption of normality for the residuals is not violated (Figure 2). In conclusion, the constructed regression model fits the dataset well and can be generalized to the broader target population.



Table 13. Results of regression analysis

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	0.301	0.155		1.946	0.053		
CC	0.338	0.042	0.356	8.127	0.000	0.540	1.851
TS	0.284	0.050	0.270	5.701	0.000	0.464	2.157
PF	0.081	0.038	0.091	2.103	0.036	0.550	1.817
SA	0.229	0.034	0.282	6.704	0.000	0.588	1.700

Dependent Variable: SS

The regression analysis results indicate that the t-tests evaluating the statistical significance of the regression coefficients all yielded Sig. less than 0.05. This means the null hypotheses postulating that the model's regression coefficients equal zero are rejected. In other words, the curriculum, teaching staff, physical facilities and support activities all exert a statistically significant impact on student satisfaction. All regression coefficients are greater than zero (Table 12), demonstrating that all four factors are positively correlated with pre serviced student’s satisfaction. Consequently, the research hypotheses H1, H2, H3, and H4 proposed in the conceptual model are all fully supported.

The model evaluating student satisfaction with the training quality of the Primary Education program at Thu Dau Mot University is expressed by the following standardized regression equation:

$$SS = 0.356CC + 0.270TS + 0.091PF + 0.282SA + \epsilon$$

The regression equation reflects a positive linear relationship between student satisfaction and four factors: curriculum (CC), teaching staff (TS), physical facilities (PF) and support activities (SA). All standardized regression coefficients yield positive values, indicating that as pre-serviced teachers’ evaluations of these factors increase, their overall satisfaction with training quality rises concurrently.

Among the investigated factors, the curriculum exerts the most profound influence on pre-serviced teacher’s satisfaction, with a standardized regression coefficient of $\beta = 0,356$. This implies that, holding all other variables constant, a one-unit increase in the evaluation score for the curriculum corresponds to an expected 0.356-unit increase in pre-serviced teacher’s satisfaction. This finding indicates the pivotal and central role that curriculum plays in meeting learning needs, professional development and expectations of leaners.

The factor with the second-highest level of influence is support activities ($\beta = 0.282$). This result indicates that academic advising, research consulting, administrative services and career counseling play an important role in enhancing pre-serviced teachers' learning experiences and overall satisfaction.

The next most influential factor is the teaching staff, with a standardized regression coefficient of $\beta = 0.270$. This reflects that instructors' professional competence, pedagogical methods, sense of responsibility and assistance significantly shape students' perceptions of training quality.

Lastly, physical facilities exert a positive impact, albeit at a lower magnitude compared to the other variables ($\beta = 0,091$). Nevertheless, this finding still indicates that learning conditions, instructional equipment and the learning environment remain essential components contributing to the improvement of training quality and pre-serviced teachers’ satisfaction.

4. CONCLUSION

In summary, the research findings demonstrate that all four factors exert a statistically significant and positive influence on pre-serviced teachers’ satisfaction. Among these, the factors directly related to the learning process and training experience are the curriculum, support services and the teaching staff. These three determinants exhibit a stronger magnitude of impact compared to physical facilities. These outcomes offer a critical foundation for the Primary Education program at Thu Dau Mot University to prioritize measures aimed at improving the curriculum, developing the capability of the teaching staff, enhancing the quality of support activities and improving physical facilities to further relevant pre-serviced teachers’ satisfaction.



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