

The Effect of Facilities and Infrastructure Quality on Student Satisfaction at Faculty of Social and Political Sciences, State University of Surabaya

Zahra Prima Putri Regina¹, Devi Artika Sari², Azzahra Anindya Krisna Putri³, Irma Oktavia Sari⁴,
Maghfiroh Hefril Gatmalia⁵, Tauran⁶, Ardiyansah⁷

¹⁻⁷Public Administration, State University of Surabaya

Email: 24040674258@mhs.unesa.ac.id, 24040674260@mhs.unesa.ac.id, 24040674266@mhs.unesa.ac.id,
24040674268@mhs.unesa.ac.id, 24040674281@mhs.unesa.ac.id, tauran@unesa.ac.id,
ardiyansah@unesa.ac.id

*Corresponding author: 24040674266@mhs.unesa.ac.id

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Abstract

This study examines the effect of educational facilities and infrastructure quality on student satisfaction at the Faculty of Social and Political Sciences, State University of Surabaya, recognizing that physical learning environments are essential components in supporting effective higher education services. The research employs a quantitative approach with an explanatory survey design to analyze the causal relationship between facility quality and student satisfaction. The sample consisted of 125 respondents selected through proportional random sampling from a population of 4,060 undergraduate students from the 2024 and 2025 cohorts. Data were collected using a structured questionnaire developed based on the five dimensions of the SERVQUAL model: tangibles, reliability, responsiveness, assurance, and empathy. Statistical analysis was conducted using simple linear regression with SPSS version 25. The findings indicate that the overall quality of educational facilities and infrastructure is categorized as good, although several aspects, including parking areas, student discussion spaces, and facility maintenance, require substantial improvement. Student satisfaction is categorized as moderately high, reflecting that existing facilities generally meet students' expectations and academic needs. The regression analysis produced the equation $Y = 5.020 + 0.278X$, with a t -value of 11.421 and a significance level of 0.001, confirming a positive and statistically significant relationship between facility quality and student satisfaction. The coefficient of determination ($R^2 = 0.515$) indicates that 51.5 percent of student satisfaction is influenced by facility quality. The study emphasizes the importance of continuous infrastructure improvement and responsive campus management to enhance student satisfaction and institutional reputation.

Abstrak

Penelitian ini bertujuan untuk menganalisis pengaruh kualitas sarana dan prasarana pendidikan terhadap kepuasan mahasiswa di Fakultas Ilmu Sosial dan Ilmu Politik, Universitas Negeri Surabaya, mengingat fasilitas fisik merupakan komponen penting dalam mendukung efektivitas layanan pendidikan tinggi. Penelitian menggunakan pendekatan kuantitatif dengan desain survei eksplanatori untuk menguji hubungan kausal antara kualitas fasilitas dengan tingkat kepuasan mahasiswa. Sampel penelitian terdiri atas 125 responden yang dipilih menggunakan teknik proportional random sampling dari populasi 4.060 mahasiswa strata satu angkatan 2024 dan 2025. Pengumpulan data dilakukan melalui kuesioner terstruktur yang disusun berdasarkan lima dimensi SERVQUAL, yaitu tangibles, reliability, responsiveness, assurance, dan empathy. Analisis data dilakukan menggunakan regresi linear sederhana dengan bantuan perangkat lunak SPSS versi 25. Hasil penelitian menunjukkan bahwa kualitas sarana dan prasarana secara umum berada pada kategori baik, meskipun beberapa aspek seperti area parkir, ruang diskusi mahasiswa, dan pemeliharaan fasilitas masih memerlukan perbaikan signifikan. Tingkat kepuasan mahasiswa tergolong cukup tinggi, menunjukkan bahwa fasilitas yang tersedia telah relatif sesuai dengan kebutuhan dan harapan pengguna. Hasil regresi menghasilkan persamaan $Y = 5.020 + 0.278X$ dengan nilai signifikansi 0.001, yang menegaskan adanya pengaruh positif dan signifikan antara kualitas fasilitas dan kepuasan mahasiswa. Nilai koefisien determinasi ($R^2 = 0.515$) menunjukkan bahwa 51,5 persen kepuasan mahasiswa dipengaruhi oleh kualitas sarana dan prasarana. Temuan ini menegaskan pentingnya peningkatan fasilitas kampus secara berkelanjutan dan responsivitas pengelolaan institusi untuk memperkuat kepuasan mahasiswa dan reputasi perguruan tinggi.

Introduction

Educational facilities and infrastructure constitute one of the most fundamental components supporting the effective delivery of learning processes in higher education institutions. A well-equipped learning environment characterized by comfortable classrooms, adequate lighting, good air quality, and controlled noise levels has been empirically shown to foster student concentration and active engagement in academic activities (Benka-Coker, Wande Young et al., 2021). Within the broader context of higher education, universities serve as organized communities of educated individuals who collectively pursue specific academic and institutional goals. The success of educational programs is largely contingent upon multiple interacting factors, including the characteristics of students, the curriculum, teaching staff, funding, and the quality of physical facilities and surrounding environmental conditions. When these factors are adequately fulfilled, they collectively contribute to the advancement of educational quality (Pangestu et al., 2025).

In the context of public governance and educational administration, the provision and management of facilities represent a core institutional responsibility. Adequate, well-

maintained, and properly managed facilities create a safe, comfortable, and supportive environment that is conducive to effective teaching and learning (Pangestu et al., 2025). Higher education institutions, as public service providers, are therefore expected to continuously evaluate and improve their physical infrastructure in response to the evolving needs of their student population. This expectation aligns with service quality theories, particularly the SERVQUAL framework developed by Parasuraman, Zeithaml, and Berry (1988), which conceptualizes service quality as the gap between user expectations and actual perceptions of the service received.

As one of the developing public universities in East Java, Universitas Negeri Surabaya (UNESA) has continuously sought to enhance the quality of its educational services through the provision of adequate facilities and infrastructure. This institutional commitment is particularly relevant at the Faculty of Social and Political Sciences (FISIPOL), which encompasses several study programs including Communication Studies, Public Administration, and International Relations with a substantial student population. The scale and diversity of this student body necessitate sufficient and varied educational facilities to support the full range of academic activities undertaken by its members.

Despite institutional efforts to develop and improve facilities, field observations and informal student feedback have indicated the persistence of several concerns regarding the current state of physical infrastructure at FISIPOL UNESA. Reported issues include inadequate classroom comfort, limited computer laboratory facilities and internet connectivity, suboptimal library conditions, and insufficient ancillary facilities such as sanitation and parking areas. These conditions may negatively affect the quality of the learning experience and student satisfaction with the educational services provided by the faculty. This discrepancy between theoretical expectations and empirical realities in the field represents a significant research gap that warrants systematic investigation.

A growing body of scholarly literature confirms that the quality of educational facilities exerts a positive influence on student satisfaction. Studies conducted across various higher education contexts have demonstrated that adequate physical infrastructure enhances students' learning comfort and fosters positive perceptions of institutional service quality (Malik et al., 1941). However, a notable tension exists between these theoretical and empirical findings and the conditions observed in practice, particularly in developing-country university contexts where resource constraints and rapid enrollment growth may impede facilities development. This gap between the normative ideal described in service quality literature and the empirical reality experienced by students at institutions such as FISIPOL UNESA constitutes the central problematic addressed by this research.

The novelty of this study lies in its focus on a critical transitional period at FISIPOL UNESA, during which new facilities and infrastructure are being developed. As these improvements are implemented, it becomes essential to evaluate whether such enhancements genuinely translate into improved student satisfaction among the primary beneficiaries of the institution's educational services. Moreover, this study contributes to the

field of public administration by applying service quality theory within a higher education governance context, thereby extending empirical knowledge on facilities management as a dimension of public service delivery. Unlike prior studies that treat facilities quality as a peripheral variable, this research positions it as the central independent variable, enabling a more granular analysis of its direct effects on student satisfaction.

Based on the aforementioned background, this study is guided by the following research questions: (1) How is the quality of educational facilities and infrastructure at FISIPOL UNESA perceived by students? (2) What is the level of satisfaction among first-year undergraduate students of the 2024 and 2025 cohorts with regard to facilities and infrastructure at FISIPOL UNESA? (3) Is there a significant influence of facilities and infrastructure quality on the satisfaction of undergraduate students at FISIPOL UNESA? These questions are designed to generate actionable insights for institutional decision-makers responsible for planning, developing, and improving academic facilities at the faculty level.

Literature Review

The quality of educational services is one of the key aspects of higher education, particularly as it relates to the provision of facilities and infrastructure to support students' academic activities. Students are viewed as the primary users of educational services; therefore, student satisfaction levels can serve as an indicator of an institution's success in delivering quality services. According to Philip Kotler and Kevin Lane Keller, satisfaction arises from the comparison between user expectations and the actual performance received (Philip Kotler, 2016). Consequently, higher education institutions are expected to provide adequate educational facilities to meet students' needs and expectations.

The concept of service quality is closely related to the SERVQUAL model developed by A. Parasuraman, Valarie Zeithaml, and Leonard Berry. The SERVQUAL model explains that service quality is measured based on the gap between the service expected and the service perceived by the user (Parasuraman et al., 1988). This model consists of five main dimensions: tangibles, reliability, responsiveness, assurance, and empathy. The tangibles dimension relates to the physical condition of facilities such as classrooms, laboratories, libraries, internet access, and various other supporting facilities that can support the students' learning process.

Previous research indicates that the quality of facilities and infrastructure significantly influences student satisfaction levels. A study by (Gloria et al., 2019) demonstrates that the quality of campus infrastructure and support services has a positive impact on student satisfaction and can foster a more conducive learning environment. Another study conducted (Restiawati & Dwiyono, 2025) also confirms that adequate learning facilities, comfortable classroom conditions, and good academic support resources can enhance student and faculty satisfaction in higher education institutions. The findings of

this study indicate that the physical dimension is one of the primary factors in evaluating the quality of educational services.

Furthermore, (Dunggio, 2023) research explains that facilities and infrastructure, along with service quality, collectively influence student satisfaction. The availability of good facilities and responsive academic services can create a more positive learning experience for students. In line with this, research by (Santi et al., 2024) shows that the quality of educational services and facilities has a strong and significant influence on student satisfaction through a quantitative approach using SmartPLS. These findings reinforce the assumption that improving the quality of educational facilities is a crucial component in efforts to enhance the overall quality of higher education services.

Although various studies indicate a positive relationship between the quality of facilities and infrastructure and student satisfaction, there remains a gap between the ideal conditions in theory and the empirical conditions in the field, including at FISIPOL UNESA. Based on initial observations, various student complaints regarding classroom comfort, internet access, laboratory facilities, restroom cleanliness, and parking areas which are considered suboptimal are still being reported. These conditions indicate that the improvements made by the institution have not fully met the expectations of students as users of educational services. Therefore, this study was conducted to analyze the influence of facility and infrastructure quality on the satisfaction of undergraduate students from the 2024 and 2025 cohorts at FISIPOL UNESA. This study is also expected to contribute to the development of research on the quality of educational services, particularly the application of the SERVQUAL model in higher education institutions.

Research Methods

The present study employs a quantitative approach with an explanatory survey design to analyse the effect of facilities and infrastructure quality on student satisfaction at the Faculty of Social and Political Sciences (FISIPOL), Universitas Negeri Surabaya (UNESA). The present study adopts a quantitative approach, as its objective is to measure the relationship and influence between the quality of educational facilities and infrastructure and the level of student satisfaction through statistical analysis (Sugiyono, 2013). The research was conducted at the Faculty of Social and Political Sciences, Universitas Negeri Surabaya, located in Surabaya, East Java. The present study focuses on undergraduate students (S1) from the 2024 and 2025 cohorts across various study programmes within FISIPOL UNESA. The selection of this research setting is based on the importance of educational service quality and supporting facilities in influencing students' academic experiences and satisfaction in higher education institutions. The population of this study comprised 4,060 undergraduate students enrolled at FISIPOL UNESA. The sample size was determined using the Slovin formula with a 10% margin of error, resulting in a minimum sample requirement of 98 respondents. However, the study successfully obtained responses from 125 students.

The sampling technique employed was proportional random sampling, ensuring proportional representation from each study programme (Sugiyono, 2013).

The data were collected using a structured questionnaire developed based on the SERVQUAL dimensions proposed by Parasuraman, Zeithaml, and Berry, namely tangibles, reliability, responsiveness, assurance, and empathy. The level of student satisfaction was measured using indicators of expectation conformity, intention to reuse, and willingness to recommend. The measurement of all questionnaire items was conducted using a five-point Likert scale, ranging from 'strongly disagree' to 'strongly agree'. In addition to the administration of questionnaires, a range of other research methods were employed to support the findings of the study. These included the analysis of documentation and the conducting of literature studies.

The data analysis techniques employed in this study encompassed both descriptive and inferential statistical analyses. The instrument was subjected to a series of validity and reliability tests, employing Pearson Product Moment correlation and Cronbach's Alpha analysis. In addition, classical assumption testing was conducted through the Kolmogorov - Smirnov normality test to ensure that the data were normally distributed. The relationship between facilities and infrastructure quality and student satisfaction was analysed using simple linear regression analysis. This analysis was conducted in order to determine the significance and magnitude of the influence between variables. The analysis was conducted utilising the Statistical Product and Service Solutions (SPSS) software version 25. The validity and reliability of the data were ensured through instrument testing and consistency analysis of respondents' answers. The questionnaire items were all found to meet the validity criteria, with significance values below 0.05 and reliable results, as indicated by Cronbach's Alpha values above 0.70. This finding suggests that the research instrument was appropriate for measuring the variables examined in this study.

Results and Discussion

Validity Test

The validity of instrument was tested using SPSS software with a sample of 125 respondents. The test results showed that the correlation coefficient (calculated r) for all 15 items in the Facilities and Infrastructure Quality variable (X) and the 6 items in the Student Satisfaction variable (Y) exceeded the critical value in the r table ($N = 125$, 5% significance level, $r = 0,176$). This confirms that all questionnaire items used are valid and suitable for measuring the research variables.

Table 1. Result of the Validity Test for Variable X

| Item | R-count | R-table | Sig. | Description |
|------|---------|---------|-------|-------------|
| X1.1 | 0,685 | 0,176 | 0,001 | Valid |
| X1.2 | 0,716 | 0,176 | 0,001 | Valid |
| X1.3 | 0,718 | 0,176 | 0,001 | Valid |
| X1.4 | 0,657 | 0,176 | 0,001 | Valid |

| | | | | |
|-------|-------|-------|-------|-------|
| X1.5 | 0,694 | 0,176 | 0,001 | Valid |
| X1.6 | 0,720 | 0,176 | 0,001 | Valid |
| X1.7 | 0,638 | 0,176 | 0,001 | Valid |
| X1.8 | 0,712 | 0,176 | 0,001 | Valid |
| X1.9 | 0,656 | 0,176 | 0,001 | Valid |
| X1.10 | 0,565 | 0,176 | 0,001 | Valid |
| X1.11 | 0,655 | 0,176 | 0,001 | Valid |
| X1.12 | 0,681 | 0,176 | 0,001 | Valid |
| X1.13 | 0,727 | 0,176 | 0,001 | Valid |
| X1.14 | 0,621 | 0,176 | 0,001 | Valid |
| X1.15 | 0,645 | 0,176 | 0,001 | Valid |

Source: Data processed by researchers, 2026

Table 1. Result of the Validity Test for Variable Y

| Item | R-count | R-table | Sig. | Description |
|------|---------|---------|-------|-------------|
| Y1 | 0,692 | 0,176 | 0,001 | Valid |
| Y2 | 0,806 | 0,176 | 0,001 | Valid |
| Y3 | 0,700 | 0,176 | 0,001 | Valid |
| Y4 | 0,748 | 0,176 | 0,001 | Valid |
| Y5 | 0,825 | 0,176 | 0,001 | Valid |
| Y6 | 0,791 | 0,176 | 0,001 | Valid |

Source: Data processed by researchers, 2026

Reliability Test

The reliability test of the instrument yielded a Cronbach's Alpha value of 0,913 for the Quality of Facilities and Infrastructure variable and 0,852 for the Student Satisfaction variable. Since both values are well above the minimum threshold of 0,60, this research instrument is deemed highly reliable and has good internal consistency for use in data collection.

Table 2. Reliability Test Results

| No | Variabel | Cronbach Alpha | Standart | Keterangan |
|----|--|----------------|----------|------------|
| 1 | Quality of Facilities and Infrastructure (X) | 0,913 | 0,60 | Reliabel |
| 2 | Student Satisfaction (Y) | 0,852 | 0,60 | Reliabel |

Source: Data processed by researchers, 2026

Normality Test

The normality test in this study was conducted using the Kolmogorov-Smirnov test with a significance level of 0,05. The test result for the residual data showed a significance value (Asymp. Sig. 2-tailed) of 0,200. Since this significance value is greater than 0,50, it

can be concluded that data are normally distributed and the regression model satisfies the classical assumptions.

Table 3. Kolmogorov-Smirnov Normality Test

| Unstandardized Residual | |
|--------------------------------|----------------------------------|
| N | 125 |
| Test Statistic | 0,064 |
| Asymp. Sig. (2-tailed) | 0,200 |
| Conclusion | The data is normally distributed |

Source: Data processed by researchers, 2026

Distribution of Quality Variables of Facilities and Infrastructure

The Quality of Facilities and Infrastructure variable (X) consists of 15 statement items answered by 125 respondents using a Likert scale of 1-5. A summary of the average (mean) values for each indicator is presented in Table 5.

Table 4. Distribution of quality facilities and infrastructure

| Indicator | N | Mean |
|---|----------|-------------|
| X1 (Availability of adequate facilities) | 125 | 3,00 |
| X2 (Physical cleanliness and comfort) | 125 | 3,30 |
| X3 (Condition of class supporting facilities) | 125 | 3,03 |
| X4 (Operational facility functions) | 125 | 3,16 |
| X5 (Availability eligibility) | 125 | 2,98 |
| X6 (Accessibility during class hours) | 125 | 2,98 |
| X7 (Availability when needed) | 125 | 3,03 |
| X8 (Campus response time) | 125 | 2,62 |
| X9 (Speed of damage response) | 125 | 3,02 |
| X10 (Complaint Channel Information) | 125 | 2,75 |
| X11 (Simplicity of the complaint procedure) | 125 | 2,95 |
| X12 (Comfortable learning facilities) | 125 | 3,00 |
| X13 (Feasibility of using the facilities) | 125 | 2,94 |
| X14 (Facilities that cater to needs) | 125 | 3,37 |
| X15 (Ease of use of facilities) | 125 | 3,38 |

Source: Data processed by researchers, 2026

Based on Table 5, indicator X15 received the highest average score (3,38), indicating that the majority of students agree that campus facilities are easy to use in supporting academic activities. Conversely, indicator X8 recorded the lowest average score (2,62). This indicates a high level of student complaints regarding the institution's slow response in addressing reports of facility damage. Overall, physical availability is viewed positively, but the dimension of responsiveness still requires significant managerial improvement.

Distribution of Student Satisfaction Indicator

The level of student satisfaction as users of educational services was evaluated using 6 statement indicators. A summary of respondent's ratings is presented in Table 6.

Table 5. Distribution of student satisfaction

| Indicator | N | Mean |
|---|-----|------|
| Y1 (Consistency with ideal expectations) | 125 | 2,75 |
| Y2 (Overall satisfaction with the service) | 125 | 2,89 |
| Y3 (Interest in using the facilities again) | 125 | 3,26 |
| Y4 (The convenience of sustainable use) | 125 | 3,19 |
| Y5 (Willingness to recommend to others) | 125 | 2,97 |
| Y6 (Positive perception of the facility's reputation) | 125 | 3,00 |

Source: Data processed by researchers, 2026

Indicator Y3 recorded the highest average score (3.26), reflecting students' strong interest in continuing to utilize the support facilities provided by the campus. However, the lowest score on indicator Y1 (2,75) indicates a gap; the current quality of facilities is not yet fully aligned with students' ideal expectations.

Simple Linear Regression Analysis and T-test

Simple linear regression was used to examine the influence of facility quality (X) on student satisfaction (Y). The regression equation obtained is:

$$Y = 5,020 + 0,278X + e$$

The constant value of 5,020 indicates that in the absence of facility quality input, baseline student satisfaction stands at 5,020. The regression coefficient of 0,278 means that every one-unit increase in facility quality corresponds to a 0,278 unit increase in student satisfaction. Table 6 presents the complete regression coefficients.

Table 6. Simple Linear Regression and T-test Coefficients

| Variable | B | Std. Error | t | Sig. |
|----------------------|-------|------------|--------|-------|
| (Constant) | 5,020 | 1,174 | 4,277 | 0,001 |
| Facility Quality (X) | 0,278 | 0,024 | 11,421 | 0,001 |

a. Dependent Variable: Student Satisfaction

Source: Data processed by researchers, 2026

The partial t-test result shows $t\text{-count} = 11,421 > t\text{-table} = 1,979$ with a significance value of $0,001 < 0,05$. Therefore, H_0 is rejected and H_1 is accepted, confirming that facility quality has a positive and significant effect on student satisfaction among 2024-2025 cohort students at FISIPOL UNESA.

Coefficient of determination (R^2)

The coefficient of determination (R^2) was used to measure the proportion of variance in student satisfaction explained by facility quality. As shown in Table 7, the R^2 value is 0,515, indicating that 51,5% of the variability in student satisfaction is explained by facility and infrastructure quality. The remaining 48,5% is influenced by other variables not examined in this study, such as instructional quality, administrative services, or digital learning support.

Table 7. Coefficient of Determination

| Model | R | R Square | Adjusted R Square | Std. Error |
|-------|-------|----------|-------------------|------------|
| 1 | 0,717 | 0,515 | 0,511 | 3,017 |

a. Predictors: (Constant), Facility Quality (X)

Source: Data processed by researchers, 2026

Discussion

Based on the research findings, the quality of facilities and infrastructure at FISIPOL UNESA is generally categorized as good. Most students stated that facilities such as classrooms, LCD projectors, internet access, and the campus environment have been able to support academic activities and the learning process effectively (Wider et al., 2024). However, several aspects still need improvement, including parking areas, student discussion rooms, and the maintenance of supporting facilities. From the SERVQUAL perspective, these findings indicate that the tangibles dimension is the most dominant aspect because it is directly related to physical facilities, while responsiveness and assurance also play important roles in the quality of campus services (Liu et al., 2025). Therefore, continuous improvement of facilities and services is necessary to optimally meet students' needs.

The level of student satisfaction with facilities and infrastructure is categorized as fairly good because the available facilities are considered to be in accordance with students' needs and expectations. Student satisfaction arises when service performance is able to meet users' expectations (Qi, 2025). The results of the simple linear regression analysis show that the quality of facilities and infrastructure has a positive and significant effect on student satisfaction, with a coefficient of determination (R^2) value of 0.515. This means that the quality of facilities contributes 51.5% to student satisfaction, while the remaining percentage is influenced by other factors outside this study. Therefore, improving facilities and infrastructure can be an important strategy to enhance student satisfaction and strengthen the institution's image (Thuy et al., 2025).

Conclusion

This study concludes that the quality of facilities and infrastructure at the Faculty of Social and Political Sciences, State University of Surabaya, is generally perceived as good and plays an important role in supporting students' academic activities. Most respondents indicated that classrooms, internet access, learning equipment, and general campus facilities

have adequately met their academic needs. However, several aspects still require improvement, particularly in the responsiveness of the institution in addressing facility-related complaints, maintenance of supporting infrastructure, and the availability of collaborative spaces such as student discussion rooms and parking areas. These findings indicate that although the tangible dimension of service quality has been relatively well fulfilled, continuous improvements in service responsiveness and facility management remain necessary to achieve higher institutional performance.

The level of student satisfaction is categorized as moderately high, suggesting that students generally appreciate the existing facilities and are willing to continue using them. The highest satisfaction indicator reflects students' interest in repeatedly utilizing campus facilities, demonstrating that available infrastructure contributes positively to their educational experience. Nevertheless, a noticeable gap remains between students' ideal expectations and their actual perceptions of facility quality, indicating that satisfaction has not yet reached its optimal level. This highlights the importance of aligning institutional service delivery more closely with student expectations through regular evaluation, feedback mechanisms, and strategic infrastructure development.

Furthermore, the statistical analysis confirms that the quality of facilities and infrastructure has a positive and significant effect on student satisfaction. The regression results show that facility quality contributes 51.5% to the variation in student satisfaction, while the remaining percentage is influenced by other factors outside the scope of this study, such as instructional quality, administrative services, and digital academic support. These findings affirm that improving physical infrastructure is not merely an operational necessity but also a strategic institutional investment to enhance service quality, strengthen student trust, and improve the university's competitive image. Therefore, universities should prioritize sustainable facility management and service innovation as part of broader efforts to improve educational quality and student-centered governance.

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