



The Correlation between Lecturers' Teaching Styles in the Learning Process and the Duration of Study of Medical Students at Pattimura University, Ambon

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Abstract

Background: Lecturers' teaching styles are essential in medical education, influencing academic success and study completion, although previous studies show inconsistent relationships with students' study duration. **Aims:** To analyze the distribution of lecturers' teaching styles and to examine the relationship between lecturers' teaching styles and the study duration of students at the Faculty of Medicine, Pattimura University. **Methods:** This study employed a quantitative design with a correlational analytic approach. The sample consisted of 118 respondents. Lecturers' teaching styles were categorized into three levels: fair, good, and very good. Descriptive analysis was used to determine the distribution of teaching styles, while Spearman's rank correlation test was applied to examine the relationship between lecturers' teaching styles and students' study duration. **Results:** The findings revealed that the majority of lecturers were classified as having very good teaching styles (64.4%), followed by good (33.9%), while only a small proportion were categorized as fair (1.7%). Spearman's correlation analysis showed a correlation coefficient of $r = 0.170$ with a significance value of $p = 0.065$, indicating a positive but weak relationship between lecturers' teaching styles and students' study duration. **Conclusions:** Lecturers' teaching styles show a weak positive relationship with study duration, while motivation, curriculum workload, and facilities exert greater influence.

Keywords: Lecturers' teaching styles, study duration, learning process

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Introduction

Education is a conscious and systematic effort to create a learning environment and process that enables learners to actively develop their potential, including spiritual and religious strength, self-control, personality, intelligence, noble character, and skills necessary for both individual and societal development (Rohana, 2018; Isroani & Huda, 2022; Susanti & Nukman, 2024). Despite its strategic role, the quality of education in Indonesia remains a significant concern. A survey conducted by the Political and Economic Risk Consultant (PERC) ranked Indonesia's education quality 12th out of 12 Asian countries, placing it below Vietnam (Schleicher, 2015; Pramana et al., 2021). Similarly, data from the World Economic Forum (2000) indicate that Indonesia's global competitiveness is relatively low, ranking 37th out of 57 countries worldwide.

Education plays a pivotal role in strengthening human resources to support national development. However, the persistently low quality of education limits the production of human resources equipped with the expertise and skills required to meet development demands across various sectors. Several factors contribute to this issue, including weaknesses in teaching effectiveness, efficiency, and standardization (Adam & Negara, 2015; Sulisworo, 2016; Elmi & Librianty, 2023). These challenges highlight the urgent need to improve teaching quality as a key determinant of educational outcomes.

Learning success is widely recognized as the primary objective of the educational process (Apple et al., 2016). This success is influenced by both internal factors—such as physiological and psychological conditions—and external factors, including environmental and instructional components. Among external factors, lecturers' teaching methods play a crucial role in shaping both the learning process and students' academic outcomes (Djudin, 2018; Hafeez, 2021). Interactive teaching approaches that actively engage students have been shown to be more effective in fostering essential competencies, including critical thinking, communication, problem-solving, and teamwork (Carlgren, 2013). In higher education, various teaching methods are employed, such as lectures, group discussions, problem-based learning (PBL), and project-based learning (PJBL), each offering distinct strengths and limitations in supporting student competency development (Lasauskiene & Rauduvaite, 2015).

These issues are particularly relevant in the context of medical education, which is characterized by high academic demands and professional responsibility. According to the World Medical Association, medical education consists of three continuous stages: basic medical education, postgraduate medical education, and continuous professional development. This process is dynamic and lifelong, aiming to prepare future physicians to apply scientific knowledge, improve health outcomes, and uphold professional standards in medical practice (Silva et al., 2021; Hafeez, 2021).

Medical students must complete two major phases—preclinical and clinical—before becoming competent physicians (Malau-Aduli et al., 2020). The preclinical phase focuses on

foundational medical sciences, including anatomy, physiology, pathology, and pharmacology, which are essential for understanding human biological mechanisms (Patton et al., 2022). Subsequently, students enter the clinical phase, where theoretical knowledge is applied in real healthcare settings through patient interaction, diagnosis, and supervised medical care. This stage is critical for developing clinical skills, communication abilities, and sound decision-making in complex medical situations (Sahu et al., 2019).

Despite extensive research highlighting the importance of teaching quality and instructional methods in higher education, empirical evidence examining the relationship between lecturers' teaching styles and students' study duration—particularly in medical education contexts in Indonesia—remains limited and inconclusive. This gap underscores the need for further investigation into how lecturers' teaching styles may influence students' academic progression and completion time, especially within faculties of medicine.

Methods

Research Design

This study employed a quantitative analytic design with a correlational approach. A correlational design was chosen to examine the direction and strength of the association between lecturers' teaching styles and students' study duration without aiming to predict outcomes or establish causal relationships. Regression analysis was not applied because the objective of the study was not to predict study duration based on teaching style, but rather to identify whether a statistically significant relationship exists between the two variables. In addition, the measurement scale and data distribution were more appropriate for non-parametric correlation analysis.

Population and Sample

The population of this study comprised all students of the Faculty of Medicine, Pattimura University. The accessible population included students who had completed more than eight semesters or less than eight semesters. Based on academic records from the Medical Education Program, this population consisted of 361 students. The sample size was determined using Slovin' s formula, resulting in a minimum required sample of 78 participants. A total of 118 students participated in the study, exceeding the minimum sample requirement and strengthening the statistical reliability of the findings. A simple random sampling technique was applied, in which each member of the population had an equal opportunity to be selected. This technique was used to minimize selection bias and ensure sample representativeness. The inclusion criteria were: students with a study duration of more than eight semesters or less than eight semesters and students who agreed to participate and provided informed consent. The exclusion criterion was: students who submitted incomplete questionnaires were excluded from the analysis.

Instruments and Procedures

Data were collected using a structured questionnaire adapted from Herdianta (2013). The instrument consisted of 36 valid items after validity testing. The questionnaire measured two variables: lecturers' teaching styles (24 items) and students' study duration–related factors (12 items). Validity testing was conducted among students from the 2019 cohort of the Faculty of Medicine, Pattimura University. Of the initial 40 items, four items were found to be invalid and subsequently removed. The remaining 36 items demonstrated adequate validity, with correlation coefficients (r_{hitung}) ranging from 0.363 to 0.811, exceeding the critical r value ($r_{tabel} = 0.361$). Reliability testing using Cronbach's alpha yielded a coefficient of 0.92, indicating excellent internal consistency.

Data Collection

Data collection was conducted at the Faculty of Medicine, Pattimura University, after obtaining institutional permission and ethical clearance. Eligible respondents were provided with informed consent forms prior to participation. The questionnaires were then distributed, and instructions for completion were explained to the respondents. The researcher was assisted by colleagues to ensure accurate and complete responses.

Statistical Analysis

Data analysis was performed using Spearman Rank correlation (Spearman's rho), a non-parametric test suitable for ordinal data and non-normally distributed variables. First, correlation analysis was conducted to determine the direction and strength of the relationship between lecturers' teaching styles and students' study duration. The correlation coefficient (r) ranges from -1 to $+1$, where positive values indicate a direct relationship and negative values indicate an inverse relationship. The strength of the correlation was interpreted based on established criteria (Newcastle University, 2018). Second, the statistical significance of the correlation coefficient was assessed using a two-tailed significance test (p -value), with a significance level set at 0.05.

Results

Lecturers' Teaching Style

The frequency distribution related to lecturers' teaching styles is presented in Table 2.

Table 2. Distribution of Teaching Style Categories (118)

Category	n	%
Fair	2	1.7
Good	40	33.9
Very Good	76	64.4
Total	118	100

Based on the results shown in Table 2, it can be observed that the majority of lecturers (more than 64.4%) have a perfect teaching style, indicating high-quality teaching in this environment. However, a small proportion of lecturers are categorized as "fair," with a very low percentage (1.7%) compared to those classified as "good" or "very good."

Relationship Between Lecturers' Teaching Styles and Students' Study Duration

The correlation coefficient calculation resulted in a value of $r_{hitung} = 0.170$. This coefficient indicates a positive correlation or direct relationship. The results of the data processing are shown in Table 3.

Table 3. Correlation Between Teaching Style and Study Duration (n=118)

			Lecturers' Teaching Style	Students' Study Duration
Spearman's rho	Lecturers' Teaching Style	Correlation	1.000	.170
		Coefficient		
		Sig. (2-tailed)	.	.065
	N		118	118
	Students' Study Duration	Correlation	0.170	1.000
		Coefficient		
Sig. (2-tailed)		.065	.	
N		118	118	

The correlation strength can be observed from the values $0.4 > r > 0$ range, indicating a weak linear correlation. Therefore, the obtained correlation coefficient suggests that the relationship between lecturers' teaching style and students' study duration is weak. Based on the overall statements above, the results suggest a positive relationship, but the strength of the correlation between the lecturers' teaching style and the duration of study of the Faculty of Medicine students at Pattimura University is weak.

Discussion

Lecturers' Teaching Style

The results indicate that most lecturers (64.4%) were categorized as having very good teaching styles, reflecting a generally high level of instructional quality within the Faculty of Medicine. This finding is consistent with empirical studies demonstrating that high-quality teaching positively influences students' learning outcomes and engagement (Trigwell & Prosser, 1991). Effective teaching is commonly associated with clear instructional design, student-centered learning strategies, and reflective teaching practices that promote deeper understanding (Kivunja, 2014).

Nevertheless, 33.9% of lecturers were classified as having good teaching styles, suggesting that while these lecturers demonstrate adequate pedagogical competence, there remains room for improvement. Alenezi (2020) reported that lecturers with well-developed teaching skills tend to deliver clearer instructional materials and foster more meaningful interactions with students, thereby enhancing comprehension and learning effectiveness. Consequently, lecturers within the "good" category may benefit from continuous pedagogical training to further strengthen interactive and innovative teaching practices (Awla, 2014; Amirian et al., 2023).

Only a small proportion of lecturers (1.7%) were categorized as having fair teaching styles. Although this percentage is low, previous studies have shown that inadequate teaching practices may negatively affect students' motivation, satisfaction, and academic engagement (Ögeyik, 2016). Even limited occurrences of suboptimal teaching can influence students' learning experiences, indicating the importance of early identification and targeted professional development interventions.

The predominance of very good teaching styles may also be attributed to institutional support, including structured training programs, curriculum alignment, and quality assurance mechanisms. Studies have demonstrated that institutional commitment to lecturer development significantly improves pedagogical competence and teaching effectiveness (Prasetyo et al., 2022; Isnainy & Zainaro, 2024; Díez et al., 2020). Overall, these findings suggest that the teaching environment has been relatively well maintained, although sustained efforts are required to ensure continuous quality improvement.

Relationship Between Lecturers' Teaching Styles and Students' Study Duration

The correlation analysis revealed a weak positive relationship between lecturers' teaching styles and students' study duration. Although the direction of the relationship indicates that better teaching styles are associated with more efficient study progression, the low correlation coefficient suggests that teaching style alone is not a dominant determinant of study duration (Sugiyono, 2021).

This finding aligns with previous research indicating that students' study duration is

influenced by multiple interrelated factors beyond instructional quality. Ujir et al. (2020) found that academic ability, learning motivation, curriculum load, and institutional support systems significantly affect time-to-degree completion. Similarly, Ogut et al. (2017) emphasized that personal, institutional, and curricular factors often exert a stronger influence on study duration than teaching practices alone.

Nonetheless, the positive correlation suggests that effective teaching may contribute indirectly to shorter study duration by improving learning efficiency and reducing academic difficulties. Zhang et al. (2020) reported that while high-quality teaching is positively associated with academic achievement, its impact on graduation time is often mediated by factors such as assessment systems and program structure. In medical education, the complexity of curricula and clinical training requirements may further dilute the direct effect of teaching style on study duration.

Despite the weak relationship, the findings remain meaningful. Eze and Misava (2017) demonstrated that improved teaching quality enhances students' learning efficiency and academic persistence, even when effects on study duration are gradual. Fisher et al. (2016) similarly concluded that high-quality instruction supports long-term academic success rather than immediate reductions in completion time. Therefore, improving teaching quality should be viewed as part of a broader strategy to support timely study completion.

Conclusion

The statistical analysis results show that the correlation coefficient between lecturers' teaching styles and students' study duration at the Faculty of Medicine, Pattimura University, indicates a weak relationship. In other words, while six teaching styles are related to students' study duration, the effect is not strong. The analysis results indicate a weak relationship between the teaching style of lecturers and the duration of students' studies, suggesting that other factors may have a more significant influence, such as students' personal motivation, curriculum load, or other external factors

Conflicts of Interest

The authors declare that there are no conflicts of interest or financial relationships that could have influenced the outcomes or interpretation of this research.

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