



## How does Quality Management affect Customer Satisfaction in Educational Institutions?

Arina Santi<sup>1\*</sup>; Ranto Setiyono<sup>2</sup>; Azainil<sup>3</sup>

Senior High School of 2 Berau<sup>1\*</sup>, Senior High School of 15 Berau<sup>2</sup>, Universitas Mulawarman<sup>3</sup>

\*Corresponding Author. [arinasantisman5berau@gmail.com](mailto:arinasantisman5berau@gmail.com)<sup>1</sup>

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### Abstrak

Penelitian ini bertujuan untuk mengevaluasi pengaruh manajemen di Indonesia dan implikasi pada kepuasan pelanggan di institusi pendidikan dengan fokus khusus pada Daerah Istimewa Yogyakarta. Metode penelitian yang digunakan adalah pendekatan deskriptif kuantitatif dan kualitatif. Data dikumpulkan dari Badan Pusat Statistik (BPS), Kementerian Pendidikan dan Kebudayaan, serta hasil penelitian terdahulu yang relevan. Data kuantitatif mencakup indikator pendidikan seperti tingkat pendidikan guru, fasilitas pendidikan, dan hasil pendidikan. Data kualitatif diperoleh dari studi literatur mengenai manajemen mutu dan kepuasan pelanggan di sektor pendidikan. Temuan utama penelitian menunjukkan bahwa peningkatan kualifikasi guru, yang tercermin dari persentase guru yang memiliki pendidikan minimal S1, secara signifikan berkontribusi pada peningkatan kualitas pengajaran dan kepuasan siswa. Analisis fasilitas pendidikan mengungkapkan adanya disparitas antara daerah perkotaan dan pedesaan dalam hal akses dan kualitas fasilitas. Selain itu, hasil penelitian menunjukkan bahwa aspek-aspek seperti kompetensi guru, keandalan layanan, dan komunikasi yang efektif memiliki pengaruh besar terhadap kepuasan siswa. Implikasi dari penelitian ini adalah pentingnya kebijakan yang berfokus pada peningkatan kualifikasi dan kompetensi guru melalui program pelatihan yang berkelanjutan, serta peningkatan fasilitas pendidikan di daerah-daerah yang kurang terlayani. Selain itu, institusi pendidikan perlu meningkatkan aspek komunikasi dan responsivitas untuk lebih memenuhi kebutuhan dan harapan siswa. Limitasi penelitian ini meliputi keterbatasan data yang tersedia, terutama dalam hal data kualitatif yang dapat memberikan wawasan lebih mendalam mengenai pengalaman siswa. Selain itu, penelitian ini terbatas pada DIY dan mungkin tidak sepenuhnya mewakili kondisi di seluruh Indonesia. Penelitian lanjutan disarankan untuk mencakup wilayah yang lebih luas dan menggunakan metode campuran untuk mendapatkan gambaran yang lebih komprehensif.

**Kata Kunci:** Manajemen Mutu, Kepuasan Pelanggan, Pendidikan, Kualifikasi Guru, Fasilitas Pendidikan

### Abstract

*This study aims to evaluate the influence of management in Indonesia and the implications on customer satisfaction in educational institutions with a special focus on the Special Region of Yogyakarta. The research method used is descriptive quantitative and qualitative approach. Data were collected from the Central Bureau of Statistics (BPS), the Ministry of Education and Culture, and relevant previous research results. Quantitative data included education indicators such as teacher education levels, education facilities and education outcomes. Qualitative data was obtained from a literature review on quality management and customer satisfaction in the education sector. The main findings of the study show that improving teachers' qualifications, reflected in the percentage of teachers who have at least a bachelor's degree, significantly contributes to improving teaching quality and student satisfaction. The analysis of education facilities revealed disparities between urban and rural areas in terms of access and quality of facilities. In addition, the results show that aspects such as teacher competence, service reliability and effective communication have a major influence on student satisfaction. The implications of this study are the importance of policies that focus on improving teachers' qualifications and competencies through continuous training programs, as well as improving educational facilities in underserved areas. In addition, educational institutions need to improve aspects*

*of communication and responsiveness to better meet students' needs and expectations. The limitations of this study include the limited data available, especially in terms of qualitative data that could provide deeper insights into students' experiences. In addition, the study was limited to DIY and may not be fully representative of conditions across Indonesia. Further research is recommended to cover a wider area and use mixed methods to get a more comprehensive picture.*

**Keywords:** *Quality Management, Customer Satisfaction, Education, Teacher Qualifications, Education Facilities.*

## Introduction

Improving service quality in educational institutions has become a significant concern in Indonesia in recent years (Dewi et al., 2018; Jazari et al., 2023; Kardoyo et al., 2020; Novita, 2022; Sukmayadi & Yahya, 2020). The necessity for efficacious quality management has become paramount in light of the intensifying competition between educational institutions at the secondary and post-secondary levels (Egido Gálvez et al., 2016). Effective quality management encompasses academic aspects and many other considerations, including facilities, administration, and services to students and parents (Hanif et al., 2022). This is because the overall perception of the educational experience can significantly influence the level of customer satisfaction, in this case, students and parents.

The necessity for quality management in Indonesian educational institutions can be attributed to the numerous challenges confronting the national education system (Sukmayadi & Yahya, 2020). These include variable teaching quality, uneven facilities, and bureaucratic procedures that frequently impede the efficiency of service delivery. Furthermore, as the number of private educational institutions continues to grow and offer a range of advantages, public educational institutions must enhance their quality and competitiveness to maintain their position (Pawenang et al., 2018). This situation necessitates the implementation of continuous quality management improvements to meet customer expectations and enhance satisfaction levels.

A pertinent research area investigates the relationship between quality management practices and customer satisfaction in the Indonesian educational sector (Absah et al., 2019). Customer satisfaction in the education sector significantly impacts the institution's reputation and the ability to attract potential new students and retain existing students (Dužević, 2015). Consequently, understanding the impact of quality management components, such as

teaching quality, supporting facilities, and administrative efficiency, on customer satisfaction can provide invaluable insights for educational institution managers in their pursuit of enhanced overall service quality.

Education constitutes an essential component of nation-building, as evidenced by its role in Indonesia. In the context of globalization and intensifying competition, the quality of education is a pivotal factor that determines a country's competitiveness (Jermolajeva & Aleksejeva, 2013). In Indonesia, there has been a notable increase in attention to the quality of education, driven by the government and educational institutions' efforts to align with international standards and enhance the quality of educational services (Sukmayadi & Yahya, 2020). One crucial element in enhancing the quality of education is the implementation of effective quality management strategies. These encompass a range of procedures and mechanisms designed to guarantee that the educational services offered not only meet but exceed the expectations of key stakeholders, particularly students and parents.

The implementation of quality management in educational institutions entails the consideration of several key elements, including the relevance of the curriculum, the competence of teaching personnel, the adequacy of facilities, and the transparency of the evaluation system (Kartushina, 2020). In Indonesia, the challenges associated with the implementation of quality management in the education sector are manifold and diverse, encompassing quality disparities between regions, budgetary constraints, and bureaucratic issues (Muhartono, 2024). Nevertheless, numerous educational institutions in Indonesia have successfully adopted and implemented effective quality management practices, which not only enhance the quality of education but also have a positive impact on the level of customer satisfaction, in this case, students and parents (Jasin et al., 2019).

Although a substantial body of research has been conducted on quality management and customer satisfaction in the education sector, there are still some gaps in the existing literature that require further attention (Hanif et al., 2022). The majority of extant studies concentrate on the context of education in developed countries, with minimal attention directed towards the distinctive circumstances in developing countries, such as Indonesia (Octarra & Hendriati, 2018). The disparate socio-economic, cultural, and educational policy environments between developed and developing countries necessitate a more nuanced and contextualized research approach. For instance, quality management mechanisms that have been successfully implemented in developed countries may require significant adaptations to be effectively implemented in Indonesia (Sunardi et al., 2020).

Moreover, the majority of previous studies have employed a quantitative methodology utilizing surveys to assess customer satisfaction levels (Yakubu et al., 2021). This approach, however, is often inadequate for capturing the subtleties and intricacies of the student learning experience (Erjavec & Slovenia, 2015). In the Indonesian context, where cultural diversity and socio-economic conditions exert a pronounced influence on perceptions and expectations of education, a more comprehensive research strategy is essential (Alfita et al., 2019). Qualitative research, for instance, can offer a more nuanced understanding of how students and parents perceive and evaluate the quality of education, as well as the factors that most influence their satisfaction (Steyn et al., 2019).

Furthermore, the extant literature has paid insufficient attention to the role of technology in the management of educational quality in Indonesia (Rahman et al., 2019). In light of the rapid development of information technology, an increasing number of educational institutions have begun integrating technology into the learning process and quality management (Arif & Suzianti, 2019). However, the impact of this technology use on customer satisfaction remains largely unexplored. This research aims to address this gap by examining how technology can enhance quality management and student and parent satisfaction in Indonesia. By elucidating this gap in the literature, this research is expected to make a significant contribution to the

development of quality management theory and practice in the Indonesian education sector.

The urgency of this research lies in the importance of improving the quality of education in Indonesia to support sustainable national development. With a large and diverse population, Indonesia needs an education system that is able to meet the needs of all levels of society. The challenges faced by the education sector in Indonesia, such as the quality gap between urban and rural areas, limited resources and lack of access to technology, make quality management even more important. This research seeks to provide greater insight into how quality management can be effectively implemented in these diverse contexts to improve student satisfaction and learning outcomes.

Furthermore, with increasing global and regional competition, high-quality education is key for Indonesia to remain competitive. Educational institutions that are able to implement quality management well will not only increase student and parent satisfaction but will also attract more potential students and strengthen the reputation of the institution. This research is important to identify effective strategies in quality management that can be adopted by various educational institutions in Indonesia, so that they can make a real contribution in improving national education standards.

The main objective of this research is to examine how quality management affects customer satisfaction in educational institutions in Indonesia. The research will explore various elements of quality management, such as curriculum, teaching staff competencies, educational facilities, and evaluation systems, and how these elements contribute to student and parent satisfaction. Thus, this research is expected to provide a comprehensive picture of the relationship between quality management and customer satisfaction in the Indonesian education context.

In addition, this study aims to identify challenges and opportunities in the implementation of quality management in educational institutions in Indonesia. By analyzing the factors that support and hinder the implementation of quality management, this research will provide practical recommendations for educational institutions and policy makers. It is hoped that the findings from this research can

be used to design more effective strategies to improve education quality and customer satisfaction, as well as support efforts to improve education standards in Indonesia as a whole.

## Method

This study uses data from the Central Bureau of Statistics (BPS), other government data, and the results of previous research to answer the three sub-discussions. Data from BPS provides an accurate and reliable picture of various education indicators in Indonesia, including teacher education levels, education facilities, and education outcomes. In addition, data from the Ministry of Education and Culture and other government reports are also used to complement and strengthen the analysis. Previous research results from academic journals and field studies provide additional context and perspective to understand the effect of quality management on customer satisfaction in the education sector.

Data were collected through documentation by accessing the official BPS database, annual reports from the Ministry of Education and Culture, and other official publications. Additional data was obtained from a literature study that included relevant previous research results. This study collected quantitative data such as the percentage of qualified teachers, student-to-classroom ratio, graduation rate, and student satisfaction index. In addition, qualitative data from previous studies discussing aspects of quality management and customer satisfaction were also analyzed to provide greater insight.

Data analysis was conducted using quantitative and qualitative descriptive approaches (Medina & Avi, 2021). Quantitative data was analyzed using descriptive statistics to describe the conditions and trends of education in Indonesia. For example, the percentage of teachers with bachelor's degrees was analyzed to see the trend of improving teacher qualifications from year to year. Qualitative data from previous studies were analyzed to understand the factors that influence quality management and how this impact student satisfaction. Triangulation techniques were used to ensure the validity and reliability of the data by comparing different sources of data (Santos et al., 2020). Using this approach, this study provides a comprehensive picture of the influence of quality management on customer satisfaction in the education sector

in Indonesia, particularly in the Special Region of Yogyakarta.

## Result and Discussion

### *The Competency Level of Teachers and Their Impact on Satisfaction in Indonesian Schools*

One of the key factors in quality management in educational institutions is the quality of the teaching force (Qingyan et al., 2023). This quality is often measured by the level of education possessed by the teachers (Qingyan et al., 2023). In Indonesia, efforts to improve the competence of teaching staff have been a major focus of various education policies. Data on teacher education levels have shown significant progress in recent years, reflecting the commitment of the government and education institutions to improve education quality standards.

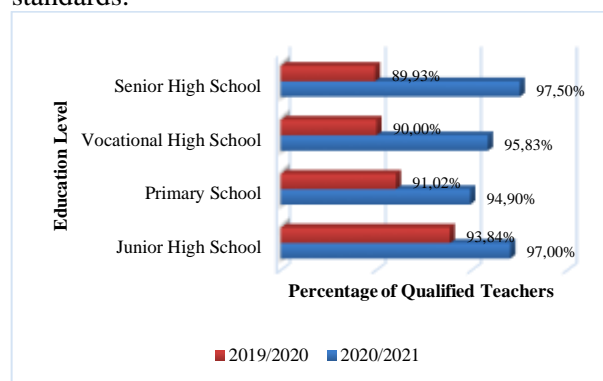


Figure 1. Percentage of Qualified Teachers in Indonesia

Source: [Statistik Pendidikan 2021 - Badan Pusat Statistik Indonesia \(bps.go.id\)](#)

The Figure 1 provides data on the percentage of qualified teachers in Indonesia who possess at least a bachelor's degree (D4/S1) across different educational levels for 2019/2020 and 2020/2021. The data is categorized into four educational levels: Primary School, Junior High School, Senior High School, and Vocational High School.

The data reflects a positive trend in the qualification levels of teachers across all educational levels in Indonesia. The consistent increase in the percentage of teachers with a bachelor's degree or higher over the two academic years indicates the effectiveness of policies and programs to improve teacher qualifications. This improvement is critical for enhancing the overall quality of education, as better-qualified teachers are generally more

capable of delivering high-quality instruction and fostering better student outcomes.

The increase in the competency levels of teachers, as indicated by their qualifications, directly impacts the quality of education provided to students. Teachers with higher educational qualifications are better equipped with subject knowledge, pedagogical skills, and the ability to implement effective teaching strategies. This can improve student performance, engagement, and preparedness for higher education and the workforce. The substantial increase in qualified teachers at the Senior High School level, for example, suggests a potential improvement in the quality of education at a critical stage of students' academic careers.

While the data shows overall improvement, it is essential to consider regional disparities in teacher qualifications. Urban areas typically have higher percentages of qualified teachers compared to rural areas, which can exacerbate educational inequalities. The government and educational authorities need to focus on providing targeted support and resources to rural and underprivileged regions to ensure that all students have access to qualified teachers. This includes offering incentives for teachers to work in remote areas, providing professional development opportunities, and improving infrastructure in rural schools.

The increasing trend in qualified teachers should be complemented by continuous professional development programs. Even with a high percentage of teachers holding bachelor's degrees, ongoing training is essential to keep teachers updated with the latest educational practices, technological advancements, and curriculum changes. Professional development

programs help teachers enhance their skills, adapt to new teaching methods, and better meet the diverse needs of their students. The Indonesian government has been implementing various training programs to support teacher development, which is crucial for sustaining and further improving the competency levels of teachers.

The positive trends observed in the data underscore the importance of sustained investment in teacher education and training. Future policies should aim to maintain and accelerate this growth by ensuring that teacher education programs are of high quality and accessible to all prospective teachers. Additionally, there should be a focus on providing ongoing support and professional development to existing teachers to enhance their skills continuously. Ensuring that all regions, including remote and rural areas, have access to highly qualified teachers will be critical for achieving equitable educational outcomes across Indonesia.

### *Educational Outcomes and Their Impact on Satisfaction in Indonesian Schools*

The provided table presents a comprehensive overview of various educational outcomes in Indonesia. These include school completion rates, academic levels, and school indicators, with specific breakdowns by gender, where applicable, and projections for the 2030 goals. Key metrics include early childhood enrollment rates, primary and secondary school completion rates, high school and college graduation rates, academic levels, free school percentages, student-to-teacher ratios, and data on out-of-school children.

Table 1. Education Outcomes Indonesia

School Completion Rates	%	Female	Male	2030 Goal
Early Childhood Enrollment Rate	71%	NA	NA	100%
Primary School Completion Rate	100%	99.07%	100%	100%
Secondary School Completion Rate	91.19%	95.64%	86.97%	100%
High School Graduation Rate	83%	NA	NA	80%
College Graduation Rate	26%	NA	NA	20%
Academic Levels	Total	Reading	Math	Science
Primary Levels	265	NA	397	397
Secondary Levels	132	397	NA	NA
School Indicators	%	Pre-Primary	Primary	Secondary
Free Schools	33%	NA	Yes	No
Students to Teacher Ratio	14:1	11:1	17:1	15:1
Out of School Children	NA	78.5%	1%	OD

**Note:**

NA: Data Not Available

OD: Data 5 Years Old or More Not Reliable

2030 Goal: Projections based on Economics, Social Science, and Youth Population

**Sources:** Indonesia - Educate Every Child on the Planet: The World Top 20 Project

Table 1 illustrates that promising trends in primary and secondary education in Indonesia. The primary school completion rate is impressively high at 100%, reflecting effective government policies and initiatives to ensure that children complete primary education. This is a significant achievement and serves as a foundation for further educational development. The secondary school completion rate is also high, though there is a noticeable gender disparity with females (95.64%) outperforming males (86.97%). Addressing this gap is crucial for achieving gender equity in education.

Despite improvements in later stages of education, early childhood enrollment stands at 71%, indicating that nearly 30% of children are not enrolled in early education programs. Early childhood education is vital for cognitive and social development, and increasing this rate is essential for laying a strong educational foundation. The 2030 goal of 100% enrollment in early childhood education is ambitious but necessary for long-term educational success.

The high school graduation rate is 83%, surpassing the 2030 goal of 80%. This indicates a strong performance at this educational level. However, the college graduation rate is relatively low at 26%, although it is above the 2030 target of 20%. This low percentage may reflect barriers to higher education access and affordability. Improving this rate is crucial for developing a highly skilled workforce and enhancing the country's competitive edge in the global economy.

The table also provides data on academic levels, highlighting the total number of levels in primary and secondary education, and specific attention to reading, math, and science. The data suggests a comprehensive educational framework aimed at covering essential academic areas. However, to fully understand academic performance, additional data on student outcomes and proficiency in these subjects would be beneficial.

The percentage of free schools stands at 33%, indicating that one-third of primary schools do not charge fees, which is crucial for ensuring access to education for all socioeconomic groups. Expanding the availability of free schools,

especially at secondary levels, would help reduce educational disparities and increase overall enrollment and completion rates.

The student-to-teacher ratio is an important indicator of educational quality. With an overall ratio of 14:1, and specific ratios of 11:1 at pre-primary, 17:1 at primary, and 15:1 at secondary levels, these figures suggest manageable class sizes that can potentially lead to more individualized attention and better educational outcomes. However, regional disparities in these ratios could affect the quality of education, especially in rural areas.

A significant concern highlighted by the data is the high percentage (78.5%) of out-of-school children. While the primary level sees only 1% out-of-school children, older data (OD) indicates challenges in accurately assessing the current situation. Ensuring accurate and updated data is essential for addressing this issue effectively. Strategies to reintegrate these children into the education system are critical for achieving educational equity.

The data underscores the importance of continuous improvement and targeted interventions to address existing gaps and disparities. Policies focusing on increasing early childhood enrollment, supporting higher education access, expanding free education, and improving data accuracy are vital. Achieving the 2030 goals will require sustained efforts, resources, and innovative approaches to ensure that all children in Indonesia have access to quality education, thereby enhancing customer satisfaction and overall educational outcomes.

While Indonesia has made significant strides in improving educational outcomes, challenges remain in early childhood education, higher education access, gender disparities, and ensuring all children are in school. Addressing these issues through comprehensive policies and targeted interventions will be crucial for achieving long-term educational success and customer satisfaction in the education sector.

***The Effect of Quality Management on Customer Satisfaction in Special Region of Yogyakarta***

Quality management plays a pivotal role in enhancing customer satisfaction within

educational institutions (Jasin et al., 2019), particularly in the Special Region of Yogyakarta. By focusing on various aspects such as the competence of teachers, reliability of services, communication, and responsiveness, educational institutions can significantly improve the overall student experience. Effective quality

management practices ensure that educational services meet or exceed student expectations, leading to higher levels of satisfaction and better educational outcomes. This is reflected in the comprehensive assessment of student satisfaction across different regencies and cities within the Special Region of Yogyakarta.

Table 2. Student Satisfaction Index by Regency/City and Special Region of Yogyakarta

Aspects	Yogyakarta	Sleman	Bantul	Kulon Progo	Gunung Kidul	Special Region of Yogyakarta
Tangibles	65,0%	57,3%	68,7%	65,3%	60,8%	63,4%
Reliability	83,4%	78,6%	82,7%	83,1%	83,7%	82,3%
Competence	87,2%	87,1%	90,8%	85,6%	89,1%	88,0%
Understanding the Customer	83,7%	82,6%	83,9%	82,5%	81,6%	82,9%
Communication	80,3%	85,2%	76,4%	71,4%	78,8%	78,4%
Responsiveness	55,4%	53,6%	44,5%	45,0%	45,8%	48,9%
Courtesy	83,5%	84,3%	83,2%	81,9%	80,3%	82,6%
Security	78,8%	72,4%	75,6%	71,9%	69,5%	73,6%
Access	76,7%	69,5%	67,3%	67,2%	58,8%	67,9%

Source: (Ishartiwi, 2017)

Table 2 presents a comprehensive analysis of the student satisfaction index across multiple dimensions and geographical regions within the Special Region of Yogyakarta sector, including Yogyakarta, Sleman, Bantul, Kulon Progo, and Gunung Kidul. The following aspects were assessed: tangibles, reliability, competence, understanding the customer, communication, responsiveness, courtesy, security, and access. Each aspect is rated on a scale, with higher values indicating greater satisfaction. For instance, competence scores are notably high across all regions, reflecting the effective implementation of teacher training programs. In contrast, responsiveness scores are lower, indicating a need for improvement in addressing student inquiries and providing timely support. Overall, the table highlights both strengths and areas for improvement in the quality management practices of educational institutions in Special Region of Yogyakarta, underscoring the importance of continuous efforts to enhance student satisfaction.

The data from the table highlights the significant impact of quality management practices on educational outcomes and customer satisfaction. High satisfaction scores in aspects such as competence, reliability and courtesy indicate that Special Region of Yogyakarta schools have successfully implemented quality management practices, leading to positive perceptions among students. However, the lower responsiveness and tangibility scores indicate

areas that require further attention and improvement.

Competence and reliability are important components of quality management that directly affect educational outcomes. High competence scores reflect the effectiveness of teacher training programs and the recruitment of qualified personnel, leading to better student performance and satisfaction. Reliability ensures that education services are consistent and reliable, building trust and confidence among students and parents.

Lower scores in responsiveness highlight the need for schools to improve their ability to meet students' needs quickly and efficiently. Improving responsiveness can be achieved through better communication channels, more staff training, and implementing feedback mechanisms to quickly identify and address student concerns. Similarly, improving tangible things like physical facilities and equipment can create a more conducive learning environment, which can further increase student satisfaction.

Effective communication and a deep understanding of student needs are essential to fostering a supportive educational environment. High scores indicate that the school actively engages with students, understands their expectations, and provides clear and timely information. This engagement is critical to building strong relationships and ensuring students feel valued and supported.

Safety and access are fundamental to providing a positive educational experience.

Ensuring a safe learning environment is essential for student well-being and academic success. Schools must continue to invest in safety measures and create accessible learning environments where all students can thrive. Improving access to educational resources and services can help address disparities and ensure that all students have the opportunity to succeed.

The findings from the table above underscore the importance of continuous improvement in quality management practices. Schools should regularly assess and improve their services to meet the evolving needs of students. Policymakers should focus on providing resources and support to address identified gaps, especially in responsiveness and form. Implementing a comprehensive quality management framework can help achieve higher levels of student satisfaction and better educational outcomes.

Thus, the data highlights the significant impact of quality management on educational outcomes and customer satisfaction. By focusing on key areas such as competence, reliability and communication, and addressing gaps in responsiveness and tangibility, Special Region of Yogyakarta schools can continue to improve education quality and increase student satisfaction. Continuous improvement and targeted policy interventions are essential to achieve long-term success and ensure all students receive the highest quality education.

### Conclusion

The findings of this study demonstrate that enhancing the qualifications of teachers in Indonesia has a considerable impact on enhancing the quality of teaching and student satisfaction. The rising proportion of teachers with at least a bachelor's degree is indicative of the efficacy of the teacher competency enhancement program. Furthermore, disparities in access to and quality of educational facilities between urban and rural areas were identified. Specifically in the Special Region of Yogyakarta, the findings indicated that aspects of teacher competence, service reliability, and effective

communication had a significant impact on student satisfaction levels.

From a theoretical standpoint, the findings of this study align with the proposition that effective educational management, encompassing the enhancement of teacher qualifications and competencies and the provision of sufficient resources, yields positive outcomes in terms of educational quality and customer satisfaction. This research lends further support to the view that investment in human resources and educational infrastructure is a crucial determinant of high-quality education. The theories pertaining to customer satisfaction are also validated, indicating that factors such as reliability, competence, and communication exert a significant influence on shaping student perceptions and satisfaction.

From the standpoint of practicality, the outcomes of this study point to a clear necessity for implementing policies that prioritize enhancements to the qualifications and competencies of teachers through the establishment of continuous training programs. It is also incumbent upon educational institutions to ensure the provision of adequate and equitable facilities, particularly in underserved areas. Furthermore, enhancing communication and responsiveness in educational services can assist in meeting students' needs and expectations, subsequently elevating their satisfaction level.

It should be noted that this study is not without limitations. Firstly, the data utilized primarily originated from quantitative sources, while qualitative data capable of providing more profound insights into students' experiences is scarce. Secondly, the study is limited to the Special Region of Yogyakarta and may not fully represent conditions across Indonesia. Thirdly, the limited data from some rural areas also affects the analysis of disparities in education facilities. Further research is recommended to cover a wider area and use mixed methods, including in-depth interviews and surveys, to gain a more comprehensive understanding of the impact of quality management on customer satisfaction in the education sector.

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