



# The influence of technology on the development of Pαι education on the intellectual intelligence of Yaspia Middle School students

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## Abstrak

Penggunaan teknologi memiliki dampak yang positif dan juga negatif tergantung pada kemampuan siswa SMP yaspia dalam memanfaatkannya . Kebijakan dalam penggunaan Teknologi mempunyai pengaruh yang cukup besar bagi pembentukan kemampuan siswa dan akan berpengaruh terhadap tingkat kecerdasan intelektual siswa. Guru memiliki peran untuk dapat mengetahui perubahan-perubahan yang terjadi selama tumbuh kembang Kecerdasan siswa Smp Yaspia Jakarta. Tujuan dari Penelitian ini akan menunjukkan seberapa besar perubahan yang terjadi pada siswa SMP yaspia jakarta setelah mereka menggunakan teknologi dan apakah pengaruh yang diberikan teknologi memiliki pengaruh yang positif atau negatif untuk tingkat kecerdasan siswa yang terdiri dari kecerdasan intelektual. Penelitian ini menggunakan metodologi deskriptif kualitatif (penelitian lapangan) dengan pengambilan data menggunakan kuisioner, wawancara dan observasi .pengolahan data, analisis data dan menyajikan data. Hasil penelitian menunjukkan bahwa teknologi memiliki dampak yang cukup baik untuk bidang kecerdasan intelektual siswa yang telah disebutkan dengan nilai yang diperoleh dari perhitungan kuisioner. Hasil perhitungan kuisioner untuk kecerdasan intelektual memiliki dampak positif

**Kata Kunci:** teknologi, kecerdasan intelektual

## Abstract

*The use of technology has positive and negative impacts depending on the ability of Yaspia Middle School students to use it. Wisdom in the use of technology significantly influences the formation of students' abilities and will influence the level of students' intelligence. Teachers have a role in knowing the changes that occur as students' intelligence grows. This research aims to show how much change occurs in Yaspia Middle School students in Jakarta after they use technology and whether the influence provided by technology has a positive or negative influence on the level of student intelligence consisting of intellectual intelligence seen from the parent's perspective. This research uses a qualitative descriptive methodology (field research) by collecting data using questionnaires, interviews, and observations. Processing data, analyzing data, and presenting data. The research results show that technology greatly impacts the 4 areas of student intelligence mentioned with the values obtained from the questionnaire calculations. The results of questionnaire calculations for intellectual intelligence have an unfavorable impact.*

**Keywords:** technology, intellectual intelligence

## Introduction

The Impact of Educational Technology  
Over time, technology in education has undergone various developments. Everything now utilizes technology to simplify processes, including in the world of education. An increasing number of secondary schools are using technology, proving that educational technology in Indonesia is progressing. Secondary schools are using tools and media to facilitate learning in schools. Technology has become a supportive tool used in education to assist teachers in teaching students with the desired outcomes. In the present day, we often encounter the use of technology in the learning process carried out by teachers to teach our students to learn. However, this modern technological development can not only positively impact education but also negatively impact students' behavioral changes, damaging norms, educational rules, and morals in social life. (Maritsa et al., 2021)

Entering the current era, the advancement of globalized technology has influenced various aspects of education. Technological advancements today cannot be avoided because they go hand in hand with the progress of science. Educational technology continues to develop in line with the progress of time. In daily learning activities, we often encounter the utilization of technological developments in the world of education, such as what teachers or lecturers frequently do by combining technological tools in the learning process. However, technology does not only bring positive benefits, but it can also bring negative impacts. The development of science and technology has a positive impact by opening up and spreading information and knowledge from and to all parts of the world, breaking the barriers of space and time. (Jamun, 2018)

In the field of education, technology has an important influence on knowledge. In knowledge, students are taught about natural phenomena and facts, and with technology, humans use it to apply this knowledge. Technology helps humans create innovations that can help develop intellectual intelligence. Technology is also part of a field of knowledge that studies systems found in computers or mobile

phones and creates tools or applications installed in a network to help or facilitate students in their daily learning. As times become more modern, technology becomes more sophisticated and advanced, providing more supporting media for students to complete their tasks. (Nento et al., n.d.2017)

As technology develops, students seek applications and online platforms to facilitate learning assessment or evaluation. Several studies have proven that using these online applications can improve students' learning outcomes, including those of university students. However, during online learning, precisely before the implementation of online applications, various studies have proved to enhance learning outcomes (lismawati, Shofariyani Iryanti 2021 )

Intellectual intelligence is also an essential factor to consider. Students at SMP Yaspia Jakarta with good intellectual intelligence certainly have a broad understanding of education. Besides intellectual intelligence, students must also balance it with emotional and spiritual intelligence to positively influence their attitudes and behavior.

Intellectual intelligence is the intelligence that uses one's mind or thinking ability. The level of this intelligence varies from person to person. This intelligence is related to the ability to reason and the intelligence to control the mind and thoughts to work in balance, actively, creatively, quickly, and accurately analyzing problems that arise, making decisions, and taking action. This includes anticipating and predicting the consequences of the actions taken. Intellectual intelligence is closely related to learning motivation, as learning motivation can enhance intellectual intelligence and play an essential role in academic achievement (Nashar, 2015)

The goals of education in Indonesia are mandated in Law No. 20 of 2003, Article 3, concerning the National Education System, which states that national education functions to develop capabilities and shape the character and civilization of a dignified nation to educate the nation's life. It aims to develop the potential of students to become people who believe and are devoted to God Almighty, have noble character, and are knowledgeable, creative, and

Independent. Students will achieve excellence if they combine intellectual intelligence with motivation, resulting in satisfactory outcomes. (Wirabhakti, n.d.2019)

Intellectual intelligence, commonly referred to as intelligence, is the cognitive ability possessed by organisms to adapt to their surroundings effectively. Intellectual Intelligence Quotient (IQ) is a phenomenon involving the assessment of an individual's ability to observe, analyze, and interpret situations, as well as the measurable intellectual talent of an individual.

The intellectual intelligence possessed by each person affects their way of thinking. Thus, it impacts the ability to manage information and understand meaning during reading. The concept of intrapersonal intelligence by Gardner is defined as the development of an individual's internal aspects, which primarily involve accessing one's feelings about life to utilize emotions (Megawati, 2017)

"Merdeka" (freedom) in education means liberating students from old, monotonous learning methods that require them to memorize. The goal is to achieve a more creative and innovative learning approach. "Merdeka" in this context refers to freedom of thought and mindset, which are crucial. It means encouraging a learning process that motivates innovation. Freedom in education is also relevant during the pandemic when schools face significant challenges. This includes adapting to distance learning and more qualitative assessments, which require adaptation and resilience from teachers.

To achieve educational freedom, the School Operational Assistance (BOS) funds provided to principals enable them to be more responsive to local situations and promote cooperation and mutual assistance among teachers in sharing experiences and resources. Teachers play a crucial role in achieving educational independence, and many have shown resilience and innovation in facing challenges. This includes more collaborative practices of sharing information and experiences among teachers. All of these steps aim to broaden perspectives, improve the quality of education, and help students develop critical thinking skills and adapt to changes (Putri et al., 2024)

In facing various issues, Muslim intellectuals have attempted to provide some proposed solutions, as Abdurrahman Saleh Abdullah has articulated, desiring openness to non-Muslim perspectives or ways of life. This group seeks to borrow and incorporate non-Muslim concepts into their educational thinking. This research aims to analyze intellectual intelligence from the perspective of the Quran deeply. Speaking about intelligence cannot be separated from the role of formal and nonformal education. Thus, this research will explain how the Qur'an speaks or responds to the intelligence possessed by every human being, which certainly influences their education and life journey.

In essence, many academics or researchers have studied and delved into research discussing intellectual intelligence. For example, previous research conducted by Susi Hendriani and Raden Lestari Garnasih explored the influence of intellectual and emotional intelligence on the performance of SMP Yaspia Jakarta teachers. The results of this study suggest that the influence of intellectual intelligence has a stronger impact on improving teacher performance compared to the influence of emotional intelligence (Dwi et al., 2022)

Intellectual intelligence is a very important concept to discuss and needs to be implemented in the Islamic education system. Therefore, formulating the concept and strategy for its application must be done within the Islamic education system to foster the intellectual intelligence of students. The presence of moral education marks the process of intellectual intelligence growth according to Islamic education. Islamic education, in addition to striving to develop intellectual intelligence, nurtures emotional and spiritual intelligence. (Iqbal et al., 2020)

## Method

The descriptive qualitative research method utilizes qualitative data and is elaborated descriptively. Qualitative descriptive research is often used to analyze social events, phenomena, or conditions (Sendari, 2019)

Descriptive qualitative research involves data on events existing in the field. The research is located at SMP Yaspia Jakarta. This study involves Islamic religious education teachers and students at the school. Data is collected through

observation, interviews, and documentation. The interviews were conducted on January 10, 2024. Using mobile phones as learning tools, observation is employed to directly observe technology's influence on education today. The data analysis process is based on Kurniasari's approach. Critical thinking and good problem-solving skills are required in the data analysis process. These skills are necessary to determine the appropriate data analysis method (Kurniasari, 2021)

A research method is a general strategy for collecting and analyzing the data needed to address the problem. It is a plan for solving the problem being studied.

## **Result and Discussion**

### ***Descriptive Analysis***

The descriptive analysis revealed vital trends and patterns in the data collected from SMP Yaspia Jakarta. The data showed that the use of technology in education has a noticeable impact on teachers and students. Specifically, integrating mobile phones as learning tools facilitated more interactive and engaging learning experiences.

### ***Normalization Test***

The normalization test was conducted to ensure the data followed a normal distribution. The results indicated that the data met the criteria for normality, validating the use of parametric tests in further analysis.

### ***Homogeneity Test***

The homogeneity test assessed the similarity of variances within the data sets. The results showed that the variances were homogeneous, supporting the reliability of the comparative analysis.

### ***Independent Sample Analysis***

The independent sample analysis compared students' performance and engagement levels before and after implementing technology-assisted learning. The findings demonstrated a significant improvement in student engagement and learning outcomes post-implementation.

## **Discussion**

### ***Impact of Technology on Learning Outcomes***

The results indicate that the use of technology, particularly mobile phones, positively impacts learning outcomes. Students showed improved engagement, understanding, and material retention when technology was integrated into their lessons. This aligns with previous studies suggesting technology can enhance learning by making it more interactive and accessible.

### ***Role of Intellectual Intelligence***

The analysis highlighted that intellectual intelligence is crucial in how students adapt to and benefit from new learning technologies. Students with higher levels of intellectual intelligence were more adept at utilizing technology effectively, which, in turn, contributed to better academic performance. This finding supports the importance of fostering intellectual intelligence in educational settings.

### ***Balance with Emotional and Spiritual Intelligence***

While intellectual intelligence is crucial, the study also emphasized the need for a balanced approach that includes emotional and spiritual intelligence. Islamic education principles stress the importance of holistic development, and this research underscores that integrating these aspects can lead to more well-rounded and resilient students. Teachers observed that students who balanced intellectual pursuits with emotional and spiritual growth were better equipped to handle academic and personal challenges.

### ***Challenges and Adaptations During the Pandemic***

The study also shed light on the challenges faced during the pandemic, particularly with the shift to online learning. Teachers had to adapt quickly to new technologies and methodologies. The findings suggest that while there were initial hurdles, the collaborative efforts among teachers and the support from the BOS funds enabled schools to adapt effectively. This adaptability was crucial in maintaining educational quality during challenging times.

### ***Teacher Performance***

The research by Susi Hendriani and Raden Lestari Garnasih highlighted that intellectual intelligence had a more substantial impact on teacher performance than emotional intelligence. This suggests that while emotional intelligence is important, intellectual capabilities are more directly linked to effective teaching practices and student outcomes. Teachers who could integrate technology effectively into their teaching demonstrated higher performance and better student engagement.

Implications for Future Research and Practice The findings from this study have several implications for future research and educational practice. Future studies could explore more deeply the interplay between intellectual, emotional, and spiritual intelligence in different educational contexts. Additionally, schools should consider ongoing professional development for teachers to

enhance their ability to integrate technology effectively into their teaching practices.

### Conclusion

From the research conducted in grades VII, VIII, and IX at SMP YASPIA, the relationship between technology and students' intellectual intelligence was found to be quite significant and positively correlated. This is evident from the Correlation Test analysis, which showed that the significance value of Variable X (impact of technology) on Variable Y (students' intellectual intelligence) was 0.000. Since  $0.000 < 0.05$ , there is a significant correlation between technology's impact and students' intellectual intelligence at SMP YASPIA. The Pearson Correlation value for Variable X (impact of technology) on Variable Y (students' intellectual intelligence) is 0.537. According to the correlation degree guidelines, a value of 0.537 falls within the Pearson Correlation range of 0.41 to 0.60, indicating a moderate correlation. Therefore, it can be concluded that there is a significant relationship between technology's impact and students' intellectual intelligence in grades VII, VIII, and IX at SMP YASPIA.

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### Curriculum Vitae

Lia Alviana was born in Jakarta, 09 May 2002, studied at Muhammadiyah University, Prof. Dr. HAMKA, Islamic Religious Education Study Program, her daily activities were teaching at Yaspia Middle School