



## Artificial Intelligence in Higher Education: Perspicacity Relation between Educators and Students

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**Abstract:** Artificial intelligence is a system with the nature of human intelligence that can automatically provide knowledge and information to create intelligent applications to make it easier to solve problems such as problem-solving, speech recognition, and learning. This research was investigated to find out and understand the relationship of intelligence between educators and students in applying artificial intelligence in universities. The method used is a phenomenological type of qualitative method. This research was conducted at Nurul Jadid University (UNUJA), with the subject of research being PAI lecturers and students in semester V. This research phase was carried out by preliminary studies, observation, data collection (interviews), data verification, and drawing conclusions. As for the results of this study, in its application, artificial intelligence in universities has a positive and negative impact on the relationship of intelligence to learning when it is carried out outside conventional learning. The intelligence relationship between educators and students, which includes Intelligence Quotient (IQ), Emotional Quotient (EQ), and Spiritual Quotient (SQ) contained in it, is also a positive thing that coexists and is directed.

**Keywords:** artificial intelligence, e-learning, perspicacity relation

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## INTRODUCTION

Today education is crucial for the advancement of human resources, especially in the digital era like today. Education is the main element fundamental in providing skills to a group to see open conditions in the future (Oktavia et al., 2019; Rozi et al., 2020). Education can be interpreted as an essential pillar in the development of a nation (Bali & Fadli, 2019). Looking at the process, education will continue to experience modernization along with changes in behavior patterns and the socio-cultural setting of the community from time to time (Nabila, 2021). In responding to this, especially among universities, much must be studied or researched to find bright spots in new technologies in education.

Universities also have great competitiveness and potential in their efforts to improve the quality of education, as well as efforts to educate the nation's life (Bali & Ruzifah, 2021). As Morin emphasized, the mission of universities today exceeded the traditional function of preserving heritage, identity, and education; instead, the university today is required to keep pace with technological development by creating new methods of education and teaching (Aldosari, 2020). From this explanation, we are required to keep pace with development technology by creating new methods in education and teaching. The emergence of various educational problems circulating in our society has extensively proven that education in our country is very lacking, and there is a need for the renewal of intelligence, especially in the fields of technology, education, and learning. Given the never-ending pandemic and all government policies to shift conventional learning media to online learning, it makes a big surprise, especially for the productive power of parents who are usually busy with their work outside the home (Saleh, 2020). The rapid growth of information and communication technology in education has inevitably led to a shift from general face-to-face learning to contemporary learning based on e-learning or distance learning that can be accessed easily through intermediary media, such as software, hardware, and networks. internet that can be accessed anytime and anywhere (Bali, 2019). In this case, it is easier for educators and students to access information about the world of education efficiently and sustainably.

E-learning is a teaching and learning process that uses information technology (internet) as an effective means and adds insight to knowledge through the development of knowledge efficiently (Tohet et al., 2021). From the transfer of the learning system, it is beneficial to facilitate the learning process, especially for educators and students in the realm of education, which is not only at the Elementary School (SD), Junior High School

(SLTP), and Senior High School (SLTA) level but also at the university level. Tall. Given the critical and high-level thinking patterns of students, universities need to intervene in technological sophistication and new and modern things that are universal (Bali & Hajriyah, 2020). Freedom here, in a sense, continue to use the excellent path and does not give rise to cyber networks that are not useful.

The picture of future education is that there is high concurrency. There are many demands from educators or students on quality and spending, advances in communication, information, and computer technology that characterize all life transitions (Amirudin & Arikarani, 2020). Of all the educational problems, it raises various essential thoughts. It challenges to develop new technologies in the learning system in the current pandemic, especially in artificial intelligence technology, often interpreted as artificial intelligence, which is developing rapidly and making it easier for everyone to work precisely and efficiently. With advanced technology, educators and students can access extensive knowledge to various foreign countries just by using a PC (computer) or smartphone and internet network easily (Bali et al., 2021). With various facilities and sophisticated facilities on the internet, educators and students must create new things related to the world of education, such as making the latest curriculum with analysis that can create high-quality education in the future.

Artificial intelligence is defined as a set of computer programs and technologies that mimic the human's brain functioning and intelligence (Jaiswal & Arun, 2021). Artificial intelligence systems automatically have human intelligence properties that can know and provide information and knowledge to create computers or intelligent applications that can make it easier to complete many tasks. This field has proliferated in the last 20 years, along with the growing need for intelligent devices (Susdarwono, 2021). Artificial Intelligence as artificial intelligence that can imitate human behavior intelligently or intelligently in all conditions (Siahaan et al., 2020). So that with this technology it can complete tasks efficiently and practically. Meanwhile, Mulianingsih stated that besides being a source of modern knowledge and information, artificial intelligence is a branch of computer science that relies heavily on the development of machine intelligence and patterns of thinking and working like humans. For example, speech recognition and problem-solving in learning (Mulianingsih et al., 2020). It can be concluded that apart from being current information, artificial intelligence also develops and propagates in the realm of education, such as solving learning problems.

Nurul Jadid University (UNUJA) is an Islamic-based campus under the auspices of the Nurul Jadid Islamic Boarding School in the Probolinggo Regency. UNUJA uses artificial intelligence to fulfill its teaching and learning system. As a new campus, Nurul Jadid University is a campus that is ready to face the challenges of learning during a pandemic, to reduce lag and improve the quality of education on campus; one of the steps taken by Nurul Jadid University in overcoming learning problems is to use intelligent e-learning applications as an educational medium to meet students' teaching and learning (Abdullah et al., 2017; Brijmohan et al., 2018; Buchner & Andujar, 2019; Sawalhah & Al Zoubi, 2020) needs during a pandemic and endemic transition period. In theory, the results of this study are expected to have a good impact on the quality of education at Nurul Jadid University, especially in learning with an artificial intelligence system (e-Learning) to improve the quality of learning between educators and students in the Islamic Religious Education Study Program at Nurul Jadid University Probolinggo.

Seeing from the phenomena that occur in the learning system as has occurred during the pandemic and endemic transitions, the researchers are interested in researching the application of artificial intelligence in universities that relate to educators and students to meet the learning needs of students and lecturers for the readiness of resources human resources in the application of artificial intelligence in education. The purpose of this study is to describe the accentuation of students' understanding of artificial intelligence when applied through E-learning applications and their impact on the relationship between educators and students in the learning system. The limitation of this research is that it only focuses on three types of intelligence and the relationship between intelligence, emotional, and spiritual intelligence between educators and students in applying artificial intelligence.

## **METHODS**

This research uses a qualitative approach with a phenomenological type that puts forward human features and social conditions that cannot be analyzed by statistical methods but emphasizes observational research and interviews in the field (Mulyadi, 2013). In this study, researchers attempted to analyze, study and describe the relationship between intelligence between lecturers and students in the use of Artificial Intelligence (e-Learning) in the Islamic Religious Education Study Program at Nurul Jadid University, Paiton, Probolinggo. To obtain accurate data, data collection was carried out in a natural setting, and to be more accurate and significant, the researchers conducted observations and interviews (interviews) with the head of the Islamic Education Study Program, lecturers of the Islamic Religious Education Study Program, and students of the study program. Islamic Religious Education at Nurul Jadid University. The instruments in this study were observation sheets and interview guidelines for the learning activities of students and lecturers. The data obtained are the

results of observations recorded by researchers in observation sheets and the results of interviews with students and lecturers before and after lecture activities are carried out related to the application of artificial intelligence and its impact on intelligence, emotional, and spiritual intelligence.

During the observation, various activities related to artificial intelligence (e-Learning) were carried out in the Islamic Religious Education study program at Nurul Jadid University, Paiton, Probolinggo. The data analysis used by the researchers in this study went through the stages of data reduction, data modeling, and concluding. This research is said to be important because, through this research policy, managers such as leaders, teachers, and lecturers can see the original picture of the program being carried out so that it can reflect the program or research activity being carried out is appropriate in solving problems that already exist or not (Yuliani, 2019). This research is intended to describe or describe the understanding of Artificial intelligence when applied to e-Learning applications for educators and students in the learning systems of the Islamic Education Study Program at Nurul Jadid University, Paiton Probolinggo. The research subjects were Islamic Religious Education Students and PAI Lecturers at Nurul Jadid University.

## RESULT AND DISCUSSION

Artificial Intelligence the ability of machines to use algorithms to learn from data and use what has been learned to make decision like human would, Artificial Intelligence is system that think like human, system that act like humans, system that think rationally, system that act rationally (Supriyadi & Asih, 2020). In line with this, Artificial Intelligence (AI) is a computer system that has human knowledge and behavior capabilities, such as understanding human language, storage, memory, judgment, and solving problems (Halim & Prasetyo, 2018). In its placement, Artificial Intelligence is a technology that plays an essential role in the development and progress of information systems in the global world.

Artificial Intelligence can invite humans to think critically without relying on the ability to manipulate facts and ideas in one's head. In colleges and universities, the use of Artificial Intelligence is divided into two categories, namely on the one hand using applications, the most important of which is related to the management of institutions which include marketing, recruitment, acceptance, determination, financial assistance, and answering general questions related to needs in higher education and universities. Furthermore, it can analyze learning system data and student academic data storage to improve teaching and learning facilities and retention.

In the process, the technique of utilizing and using media contributes to attracting the interest and attention of students in PBM. Because the media has two primary functions, namely as a tool and the media as an essential source of knowledge for students (Wahid et al., 2021). E-learning is an activity whose learning system is web-based (internet access). In addition, e-learning is a term for all types of technology-enhanced learning (TEL), where technology is used to support the learning process (Encarnacion et al., 2021). This is also in line with Rosenberg, who emphasized that e-learning refers to the use of internet technology that can improve the knowledge and skills of students to deliver a series of learning solutions. Internet is an extensive collection of computers in networks that are tied together that many users can share their vast resources (Elyas, 2018). The use of e-learning as an electronic medium cannot be separated from the role of the internet.

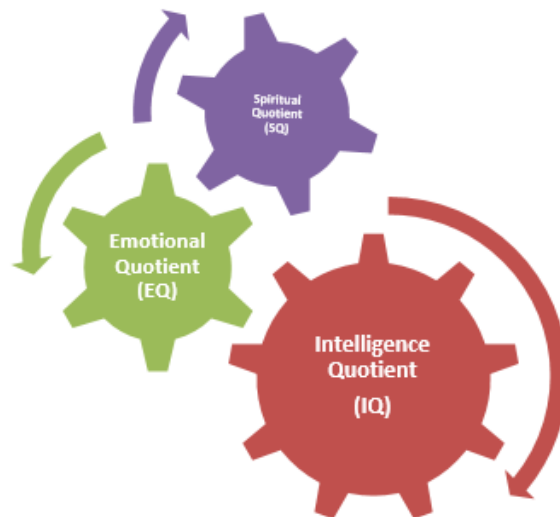
Intelligence is a matter of perfection in developing the human mind, such as intelligence and sharpness of mind. Intelligence is a skill related to the ability to solve problems or create new problems to be solved (Maitrianti, 2021). His intelligence largely determines a person's ability. In humans, there are several bits of intelligence, including spiritual intelligence, emotional intelligence, intellectual intelligence, and creative intelligence (Rahmasari, 2012). Humans have three kinds of intelligence, namely: (1) abstract intelligence, namely intelligence related to the skill of understanding mathematical symbols and language (2) Concrete intelligence, namely the skill of a person able to understand natural objects (3) Social intelligence, namely the skill of someone who can understand and control social relations. This social intelligence gives rise to emotional intelligence (Ekasari & Witarsa, 2018). The three bits of intelligence that already exist are very continuous and directed.

Human intelligence is divided into eight: (1) Intelligence Quotient (IQ) or Intellectual intelligence. A person's ability to learn something using thinking tools or, in short, intelligence is related to awareness of space to do something systematically, for example, formal education (Handriani & Subhan, 2020). (2) Emotional Quotient (EQ) or emotional intelligence has five aspects of intelligence: self-awareness, emotional management, motivation, empathy, and managing a social relationship. (3) Spiritual Quotient (SQ) or Spiritual intelligence, in this intelligence contains all intelligence from other bits of intelligence or can be called the highest intelligence (Multiple Intelligence). Spiritual intelligence is the necessary foundation for the practical function of both IQ and EQ (Kholil et al., 2021). In their view, spiritual intelligence is the highest intelligence in humans, covering all the bits of intelligence that exist in humans. This means that spiritual intelligence is the most superior and highest among all bits of intelligence of all the bits of intelligence that exist.

Not everyone who has a high IQ can consciously solve all the problems of life. Even in the realm of education, not all children who have an IQ above the average can master the learning material and cannot maintain their achievements continuously. Within the scope of the campus world, not a few students who have a high IQ only depend on their scores, and when they have entered the community, their existence and success are not much different from students who only have an average IQ (Ashshidieqy, 2018). Thus, people with a high IQ do not prove that IQ determines a person's success.

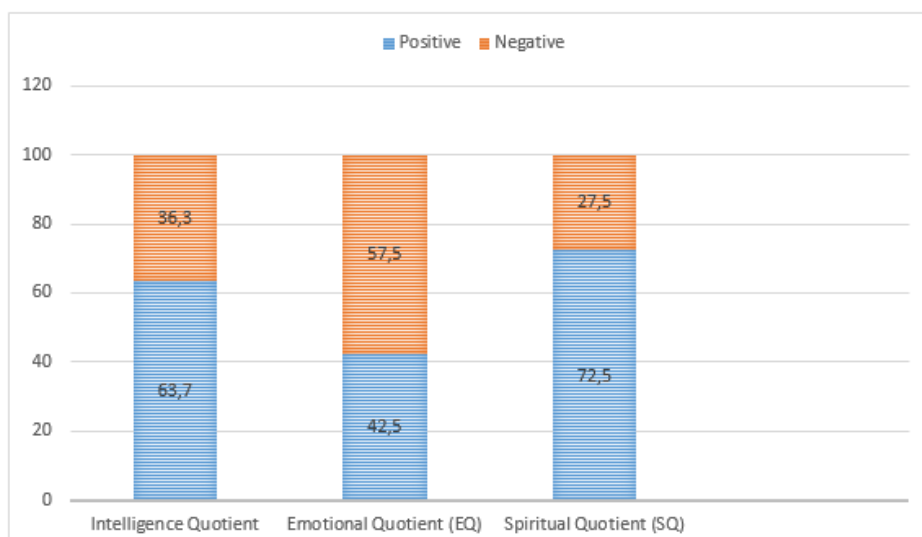
Based on the research results in the field, the influence of Artificial Intelligence (e-Learning) is very influential for the sustainability of the learning and learning system for students and lecturers of Nurul Jadid University. Especially during the pandemic, which is still limited in terms of socializing. This can be seen from the observations at the Nurul Jadid University Paiton, Probolinggo. Based on the results of observations of 5 PAI students who use e-learning as a learning medium, it can be seen that e-learning greatly facilitates students to send assignments and interact with the lecturer well. In this study, two images give rise to the results in the study. That is in terms of the benefits and drawbacks of e-learning for students and lecturers and the relationship of intelligence for students and lecturers during the learning process using e-learning.

From the observations made to 5 students and lecturers, there are several variants of answers from respondents who complain a little when learning using e-learning. Because the majority of students come from within or are students of the Nurul Jadid Islamic Boarding School, they experience a few complaints about the internet network for continued learning and learning so that they can interact with lecturers and vice versa with lecturers who have obstacles in the teaching and learning process which is less effective because it is carried out unconventionally. So that the material presented is not distributed as a whole.



**Figure 1.** Positive and Negative Relationships IQ, EQ, and SQ

The results of empirical research regarding the relationship between the bits of intelligence of the three bits of intelligence, namely Intelligence Quotient (IQ), Emotional Quotient (EQ), and Spiritual Quotient (SQ) in their application to the sustainability of e-learning for students and lecturers show that:



**Figure 2.** Positive and Negative Impacts of IQ, EQ, and SQ Relationships in Learning Systems

Intelligence Quotient (IQ) based on the data above, namely; *first*, there is a positive and negative relationship to intellectual intelligence in the learning process using the e-learning system between lecturers and students. *Second*, the positive relationship contained in the learning system using e-learning between educators and students is that students are more pro-active in learning so that they are able to carry out or do things easily and are not dependent on other friends. The negative thing is that students are not able to absorb the learning material presented by the lecturer well. Students tend not to open all of the teaching materials that have been uploaded in Google Classroom, even though all explanations and teaching materials have been delivered (Basar, 2021). In this case, the positive side is that the lecturers themselves make it easier to deliver material to students. *Third*, The intelligence relationship between educators and students regarding IQ is significant. During a pandemic, it plays an essential role in the continuity of the learning process. Apart from the pandemic, students and lecturers will not be able to escape from technology and the internet.

Emotional Quotient (EQ) based on the data of research findings, namely; *first*, there is a positive and negative relationship between students and lecturers on emotional intelligence in the learning system using e-learning. *Second*, the relationship of emotional intelligence contained in the critical souls of students when their learning material is not conveyed correctly, they are more likely to complain and vent their anger on other friends or vent to something around them; they tend to be lazier and act less polite to lecturers who are accustomed to conventional learning they always behave well and have a polite attitude when using e-learning they act casually, for example when using the zoom application in their delivery sometimes students learn by sleeping, while eating, in a shop, or whatever that's as long as it is lawful for them and that is what they usually do because their parents or lecturers do not supervise it. The positive value of using e-learning in the relationship of emotional intelligence is that students tend to be more cheerful and have feelings of happiness and pleasure because in terms of processing and collecting assignments, it is easier, practical, and efficient without having to meet face-to-face with lecturers, students also prefer e-learning because save more time and material in terms of their assignments. Forming the character and character of Lecturers and Students to help them feel confident in the learning process. *Third*, the relationship between emotional intelligence in e-learning for students and lecturers is unidirectional or balanced.

Spiritual Quotient (SQ) based on research findings data, it is known that; *first*, there is a positive and negative relationship between students and lecturers on spiritual intelligence in the learning system using e-learning. *Second*, the relationship of spiritual intelligence between students and lecturers is that students are trained to be more honest in learning and conveying their arguments. In addition to being trained to be more honest, students are required to be able to control their spirituality in broad scopes, such as being able to act and behave more politely towards others and to God. *Third*, The relationship of Spiritual intelligence between students and lecturers on e-learning in their learning is unidirectional or balanced.

Apart from that all in the application of learning using e-learning has the benefits of using the internet (Ishikawa et al., 2015) in a flexible and more open world of education, among others: *First*, lecturers and students can use teaching materials and instructions for teaching materials that are conceptualized and planned through the internet so that they can find out up to date how far the lesson has been learned. *Second*, students can access the internet easily if they need additional information. *Third*, students do not have to bother looking for teaching materials that will be studied tomorrow because the teaching materials are already on the computer. *Fourth*, students tend to be more active in learning. *Fifth*, lecturers and students can carry out discussions quickly even though many participants participate during the discussion. *Sixth*, lecturers and students can communicate and interact easily without being limited by distance and time. *Seventh*, it is more efficient and practical for those who take the open lecture.

Even so, the use of the internet does not necessarily have a positive side, but there are also drawbacks to its usefulness (Rahman et al., 2019). The responses from several respondents indicated that: *First*, they tend to be more inclined to the point of view in the commercial or trade world than the academic aspect. *Second*, the weakening of values in the development of learning and teaching is caused by the lack of interaction between lecturers and students or even between students themselves. *Third*, learning techniques using ICT change the role of a lecturer who usually uses conventional learning. *Fourth* is the lack of personnel who understand and have internet skills. *Fifth*, the internet does not reach all places or regions. *Sixth*, some students who fail do not have the enthusiasm and motivation to learn. *Seventh*, it is more directed to training or direction than to the realm of education. *Eighth*, the lack of mastery of language in computers.

## CONCLUSION

Based on the results and discussions that have been carried out, the following conclusions can be drawn: Although the learning process using virtual classes (e-learning) is not something new anymore, it can still be a breakthrough in solving problems in the learning process between educators and students. The learning process using e-learning as it is currently being implemented cannot be categorized as a conducive and ideal learning

condition because there are still many obstacles that can become an obstacle in the optimal teaching and learning process. The intelligence relationship between educators and students is also a positive thing that is side by side and directed. In addition to being a breakthrough for the learning system, e-learning devices are very much needed in the future considering the increasingly sophisticated development of the era supported by adequate information technology, all of which lead to the digital era, both in terms of the technological tools used and the widespread content, into the realm of education. Things like this are not only for emergency conditions such as the pandemic period but also for the future to keep up with the increasingly sophisticated era of technology that is following interests and needs in learning. The relationship of intelligence between educators and students, which includes Intelligence Quotient (IQ), Emotional Quotient (EQ), and Spiritual Quotient (SQ) contained therein, is also a positive thing that is side by side and directed.

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