

Artificial Intelligence (AI) and The Principle of Moral Responsibility: How Does it Impact Islamic Education in Indonesia?

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Abstract: Islamic education will continue to develop and civilize along with the times. The presence of reforms to the latest strategies is consistently needed to anticipate the negative space for technological modernization. Artificial Intelligence (AI) is an actual issue in the world of education. AI has succeeded in grabbing the attention of a number of parties who use it for the benefit of institutions and individuals. Human values must still be presented in the use of AI, especially reflecting on the case of the digital generation that misuses more for something that is not good, for example, plagiarism, copyright theft of other people's work, and social abuse. The purpose of the study is to find out the challenges and opportunities of AI, especially in the realm of moral responsibility principles in Islamic education. This research is a qualitative method with a literature study approach, namely collecting some data obtained from research in Sinta, Google Scholar, and Scopus. The results of this study found that in the realm of Islamic education, the presence of facilities such as AI must be interpreted comprehensively with open-minded, technology-based, and human-centered principles in an effort to preserve and renew. Moral responsibility in Islamic education is a necessity, it is imperative to be practiced by every individual engaged in Islamic education. Islam has expressly and fundamentally stated that morals are a branch of goodness in the nature of the Prophets, that is, the true nature and character that every human being should possess. The existence of AI technology leaves one moral side that deserves serious attention, namely the moral responsibility of information and academics. This information and academic morality is the most important part, so every Islamic educational activity is also principled to uphold honesty, justice, integrity, and protection of everyone's rights.

Keywords: AI, Islamic Education, Moral, Responsibility.

Introduction

Islamic education is understood to be something that is open to life transformation (Khoiri, 2023). Islamic education is a strategy, effort, step to shape humans to have goodness in their lives, where all these activities are based on the Qur'an and Hadith (Lestari, 2023). Islam itself, in fact, has set the orientation of every human life in order to have a noble and happy degree, both in this world and the Hereafter (Sundari et al., 2023). Therefore, to achieve all that, Islamic education is entrusted with resilience by constantly revitalizing and updating the content of existing concepts. One of the dimensions in Islamic education is about morals or

morals. Imam Al-Ghazali said, "morality is a trait that is embedded in the soul and can spontaneously cause actions without prior consideration and thought" (Busrizal & Jalwis, 2023). Morality is something in a person that is attached to actions or deeds, so that when the resulting action is good, then it includes akhlaq mahmudah and if the action is bad then akhlaq mazmumah (Syam & Arif, 2022). If it is associated with 'ethics', then simply moral is more practical than theoretical ethics. Ethics provides guidelines about what is good and bad, while morals (morals) is the application of these guidelines in everyday life (Wahyuningsih, 2022).

In an era that is increasingly rapidly developing, the meaning of 'moral' or 'moral' has become a term that develops with all derivations and consequences. The only thing underlying this expansion of meaning is the problem of digital moral degradation. Cases of plagiarism, theft of other people's copyrights, and so on, have become hot conversations with data that shows a very high number of cases among students or students. A survey conducted by Kompas using the Turnitin program showed that many student assignments contained elements of plagiarism. The survey was conducted on 75 student assignments for one year (Barakina et al., 2021)

The results of 27 documents or 36 percent have a Turnitin value of 30 percent to 83 percent (Fatkhuri & Nurdin, 2022). In response to this, it is believed that this kind of case is the aftermath of misuse of gadgets or technology, resulting in negative behaviors that are contrary to societal norms and academic norms (Kusumawati, 2021). On the other hand, many academic circles are still not aware of the importance of morality in the digital world (Pangesti et al., 2023). Seeing the phenomenon of technological intervention in every aspect of human life, it has now become a natural thing, especially after claims about the challenges of digital society (Rachman & Susan, 2021). In addition, the era that continues to transform from 4.0 to 5.0 entrusts the rapid development of technology (Tahar et al., 2022).

Various types of technological innovations were then born, one of which was *Artificial Intelligence*. Often discussed by many parties, AI as a cradle intelligence often reaps controversy, because it contributes to major changes in human life and allegedly can have both positive and negative impacts (Pakpahan, 2021). Basically, in the context of Islamic Education learning, technology has a role in three things, 1) technology for doing, as a substitute for written media in learning; 2) technology for practicing skills, as a skill development tool; and 3) technology for developing conceptual understanding, as a means of developing conceptual understanding (Priyanto, 2020). However, along with benefits and conveniences, there are challenges in the progress of student character. In their daily lives in the cyber

world, students are challenged not to use AI technology for personal interests that are contrary to academic ethics, such as hoaxes, plagiarism, and copyright infringement. Facing this challenge, the world of Islamic education needs to be carefully regulated, especially in the use of technology. Educators and learners should remain the main fulcrum in Islamic education, and technology should be used as appropriate without neglecting academic ethical and moral values (Astuti et al., 2023).

Islam as a fundamental teaching, has emphasized the importance of morality or academic ethics as verses of the Qur'an and the Prophet's hadith, "*And do not harm people in their rights and do not run rampant on the earth causing destruction.*" (QS. Asy-Syu'ara: 183). In another verse, "*Believers, do not eat each other's wealth by unlawful means, except by way of a consensual trade between you ...*". Furthermore, in a hadith narrated by At-Tirmidhi, the Prophet also explained, "*Verily your blood (soul) and treasure are haram (noble, protected).*" Some of the texts above, quite straightforwardly explain the importance of students or academic community to maintain moral values in the academic level, because according to the MUI fatwa, intellectual property rights include huquq maliyyah (property rights) that get legal protection (mashun) so that the form of violation of it is injustice and haram law. (Marasabessy, 2023).

As far as we can see, there has never been a study about AI and the principle of moral responsibility in Islamic education, although there have been many discussions about AI in general along with opportunities, risks, and its relationship with morality and ethics. (1) An article entitled, "*The Relationship between Ethics and Technology in the Perspective of Islamic Philosophy*" by Faiz, et al. This article discusses the thoughts of Al-Ghazali and Plato, arriving at the conclusion that technology can have a negative impact on a person's character, including deviation from Islamic values, moral deviation, difficulty distinguishing between good and evil, social isolation, and erosion of spiritual values. Therefore, it requires responsibility and participation from various lines so that the use of technology can be monitored and run according to

the right purpose. (Faiz et al., 2022). (2) The article entitled, "*Threats and Opportunities of Artificial Intelligence (AI)*" by Siti Masrichah, which found the results that the use of AI has great potential to improve medical diagnostics and health care and optimize the operation of renewable energy systems. In addition, the risks include threats to individual privacy and the role of AI in replacing human jobs. It is imperative to use AI responsibly and based on strong ethical values. (Masrichah, 2023).

Next, the article entitled "*Artificial Intelligence in Higher Education: Perspicacity Relation between Educators and Students*" by (Bali et al., 2022), This study seeks to understand the correlation of AI artificial intelligence between lecturers and students (UNUJA) in implementing AI in higher education. Karim & Sugianto, (2023) in the article entitled "*Measuring the Future Needs of Islamic Education through the Role of Artificial Intelligence*" discussing the existence of AI artificial intelligence as a bridge to the future needs of superior Islamic education. Next, the article entitled "*A Philosophical Approach To Artificial Intelligence And Islamic Values*" ditulis oleh (Ziaee, 2012), This study highlights the compatibility and potential of AI in empowering humans through strengthening performance and learning. The potential of AI can be realized if ethical and technical aspects are taken into account. There is also research entitled "*Islamic Virtue-Based Ethics for Artificial Intelligence*" by (Raquib et al., 2022), this article seeks to analyze the impact of AI and interrogate the various dimensions of ethics and responsibility based on the orientation of Islamic studies (maqasid) as an ethical guide in AI governance. The purpose of this study is to describe the moral reality of information and academics during the utilization of AI and the concrete strategies of Islamic educational institutions to respond to the challenges of AI.

Materials and Methods

This research uses qualitative research methods with a literature study approach. This kind of research method was chosen in order to describe the real situation in the form of a descriptive

analysis of artificial intelligence and the principle of moral responsibility: what impact it will have on Islamic education in Indonesia. Next in this research are several steps in the research procedure, namely; *First*, description or orientation, namely the stage of the researcher's description of what is analyzed and interpreted about a phenomenon through comparison of literary sources. *Second*, reduction, namely the researcher's stage in reducing all the information obtained in the first stage. Researchers filter important data and eliminate unimportant data. *Third*, namely the stage of in-depth analysis by researchers of the information and data obtained, so that it will produce meaningful knowledge, hypotheses or new knowledge. (Harahap, 2020). In this research, data was collected by comparing several literatures on the Scopus, Sinta, Emerald, Google Scholar, Taylor & France websites. As are general data collection techniques found in qualitative research-analysis. This technique is used to provide an understanding of the concept of artificial intelligence and the principle of moral responsibility, and determine its impact on Islamic education in Indonesia?(Mukhtar et al., 2020).

Results and Discussion

Artificial Intelligence (AI) and Academic Ethics in the World of Education

As the Internet became known and utilized by many people in the world, a new term called cyberspace or cyberworld emerged (Indrajit, 2014). Both terms refer to the digital space, which is an electronic system that allows computer users to communicate with each other or access information (Budiman et al., 2021). The space in question is then understood to be a new reality in human life, where its use is not only practiced in private/government institutions, but household or private needs (Maskun et al., 2020). The phenomenon of the unification of the real and virtual worlds indicates that there has been a massive migration of actual human activities to become all-digital. This kind of living trend in recent decades has taken root in many countries in the world, including Indonesia(Gunawan et al.,

2021). Based on the data obtained, the number of internet users in Indonesia is currently around 200 million people, or about 65% of the total population (Shiddiqi et al., 2021). In response to this, it is necessary to strive for wise and wise management of the digital ecosystem (Hidayah et al., 2022).

The rapid development of digital technology provides various benefits, although these advances also pose risks, such as misuse of technology for unethical and irresponsible interests (Surbakti et al., 2021). The word 'ethics' is basically a branch of philosophy about good and bad deeds (Tarigan, 2020). So, if an action is said to be unethical, then the act clearly violates the applicable law or norms. In the context of education in higher education, there is a term known as 'academic ethics', which is a value that is upheld by the entire academic community in the form of equality, openness, and honesty (Zuriah & Sunaryo, 2020). Viewed from an Islamic perspective, academic ethics is something that must be upheld by every student (Nuristiqamah Awaliyahputri B. et al., 2023) in order to form the nature of prudence and wisdom, so that the use of technology can provide great benefits for oneself and others and become a means of worship to God (Afifi et al., 2021). The words of the Prophet in HR. Ahmad, "*The best of you is that which benefits other human beings.*" So is the word of Allah in QS. An-Nur verse 51: "*Indeed, the words of the Believers when they were called upon Allah and His Messenger to punish them were the expressions, 'We listen and we obey.' They are the lucky ones.*"

Polemic on the Principles of Responsibility and Educational Ethics of the Academic Community in the Digital Space

Islam views academic ethics comprehensively, not only related to academic integrity and moral values, but rather obligations and responsibilities as a Muslim (Suryani et al., 2023). This is also explained by Shaykh Az-Zarnuji in the Book "*Ta'lim Muta'allim*", that in achieving Islamic scientific standards, ethical factors and morality must be the main concern. Learners are not only directed to be smart, but also moral so that they not only graduate, but also in a commendable way (Arsyad, 2023). It becomes an irony, when

academic ethics begin to disappear and fade due to technological sophistication which is more potential to be used to cheat or violate, for example in writing scientific papers and academic writing (Maulana et al., 2023). The variety of technology that is quite existing is used is AI, which according to Rodway and Schepman is expected to continue to increase in use on a large scale (Rodway & Schepman, 2023). Advances in artificial intelligence (AI) in education are fueling concerns about morality. AI can quickly analyze data sets and generate new learning models, but it also leaves education vulnerable to data misuse or poor logic, as well as AI trial and error (Memarian & Doleck, 2023). Ahmad, et al revealed that AI technology has a negative impact that is broadly identified in three things: making humans lazy, eliminating the role of humans in decision making, and security and privacy that are threatened (Ahmad et al., 2023).

In essence, activities outside academic ethics are usually called academic cheating. Furthermore, Davis, Drinan, and Gallant define academic cheating as fraudulent behavior committed by students to deceive, obscure, or outwit teachers (Fina Rahmawati, 2022). One example of fraudulent behavior academically is plagiarism, which is the act of stealing ideas or intellectual property belonging to others that are recognized as their own (Syahputra et al., 2023). This behavior is based on several factors, such as mismotivation in work, where students write scientific papers just to get a degree, even though they don't care about the quality of the work (Hokianto, 2023), concerns about unsatisfactory grades, gaps in the internet and AI space, rationalization of actions, peer influence, and the absence of firm regulation of plagiarism (Annisa, 2023). Finally, the act of plagiarism is understood as a form of violation of academic ethics.

Speaking of reality, what is happening on the ground is quite concerning. In a study conducted by Mayling Oey Gardiner in 2018, it was found that almost half of universities in Indonesia do not have an ethics committee. Of the 160 universities surveyed, 47.5% do not have an ethics committee. In addition, 45.6% do not have an official body to deal with ethical violations, and maintain

committee accountability (Palandeng et al., 2023). The worst deterioration in academic ethics was recorded in 2014, where Mochammad Zuliansyah, a doctoral alumnus of STEI ITB, was proven to have committed level 1 plagiarism in his dissertation entitled, "3D topological relations for 3D spatial Analysis". The dissertation is a copy of a paper entitled "On 3D Topological Relationships" by Siyka Zlatanova. As a result of this case, Zuliansyah's dissertation and doctoral degree were revoked (Syukriah, 2022).

Figure 1. Impact of AI on Academic Ethics Violations in Higher Education

Kecerdasan Buatan yang Semakin Marak di Kehidupan (6) : Ancaman Hak Cipta oleh Kemudahan Produksi AI

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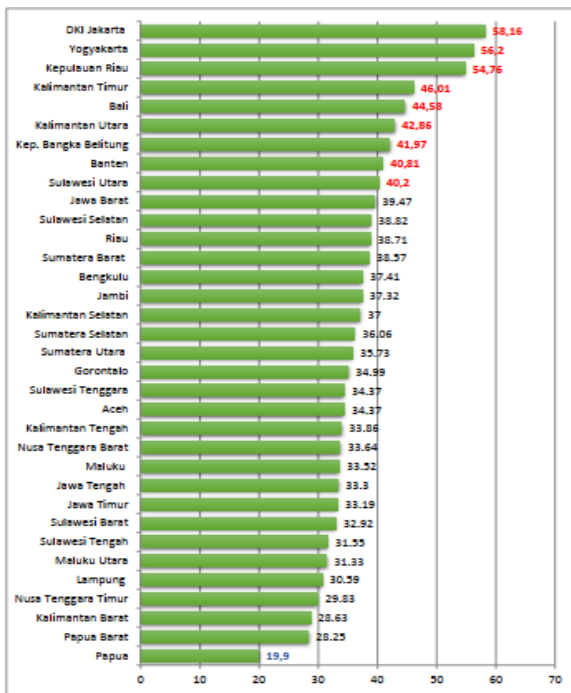


plagiarism in his dissertation. Next, a case involving a lecturer at STIKes Muhammadiyah Lhokseumawe who committed plagiarism on his students' scientific work (Sinurat et al., 2021). Reflecting on the data and facts above, if it is necessary to have Islamic educational values pursued in every academic activity, as well as in the use of AI technology. Quoting the opinion of Hasan Asy'ari, that Ibn Jama'ah describes how a Muslim scientist should have personal ethics, which include being close to Allah and always maintaining knowledge, zuhud and avoiding excessive material wealth, not using knowledge for worldly purposes, avoiding reprehensible actions, carrying out religious teachings and supporting the Shari'a, maintain the practice of the Sunnah, treat society with noble morals, cleanse themselves of reprehensible morals and cultivate praiseworthy morals, deepen knowledge consistently, do not hesitate to study with anyone, and diligently write in the field pursued (Salim et al., 2020). The use of digital technology in Islamic Education must be in accordance with the teachings of Sharia. That is, students need to maintain self-integrity, avoid content that contradicts Islamic values, and communicate with courtesy. In addition, students also need to develop communication ethics and behave well, as well as maintain data privacy and security (Amala et al., 2023). Not only that, the presence of AI tends to make students increasingly fade critical thinking skills and lose their enthusiasm for reading. In fact, the academic community must have full responsibility for academic morality.

Based on the results of these measurements, it was found that the reading literacy activity index of the Indonesian people was in the low category. The details are; out of 34 provinces in Indonesia, 9 provinces fall into the 'medium' reading literacy activity index category (26%); 24 provinces fall into the 'low' reading literacy activity index category (71%); while 1 province falls into the 'very low' category (3%) (Tim Penyusun, 2019). For more details consider the following table:

A part from the above cases, several other violations of academic ethics are the case of UNJ Rector, Professor Djaali who was fired because several public officials alumni of UNJ postgraduate programs were proven to have committed

Graph 1. Reading Literacy Activities in 34 Indonesian Provinces



In addition to being faced with academic ethics that are increasingly eroded, another phenomenon that occurs is the decline in ethics in information. Behaviors such as cyberbullying and hoaxes are still rife in the digital space. The Ministry of Communication and Information Technology (Kominfo) found 425 hoax issues circulating on the internet during the first quarter of 2023. This number is higher than the first quarter of 2022 which reached 393 hoax issues. In detail, the AIS Team of the Directorate General of Information Applications of Communication and Information found 147 hoax issues in January 2023, 117 hoax issues in February 2023, and 161 hoax issues in March 2023 (50/HM/KOMINFO/04/2023, 2023). The research also shows that 77% of Indonesians are internet users, and 60.4% are social media users. The average digital literacy rate of Indonesians is at 3.49, which means medium. Digital literacy consists of four components, namely internet proficiency, internet safety, culture when internet (Dewi, 2023).

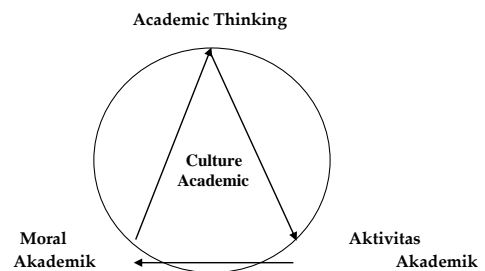
Islamic Education's Response to AI Challenges

The ease of access to technology (AI) in the digital era is expected to facilitate the affairs of students,

lecturers, and other staff in finding references and exploring their potential to add insight. The presence of technology in the world of education certainly brings a lot of innovation and new changes that function in supporting the success of the learning process, especially in the development of academic culture in Indonesian Higher Education. However, many academicians are not responsible for the use of AI in education. As a result, it opens up opportunities for the decline of academic culture in Indonesian Higher Education. In fact, in today's digital era it is very necessary to instill a good academic culture in the educational environment (Orr & Davis, 2020).

Academic culture is a universal thing, anyone can participate in academic activity groups, of course, building academic culture is not an easy thing but there needs to be socialization in academic activities so that it will become a habit in obeying academic rules and norms. This is conveyed in a dissertation by (Mahariah, 2020). The concept of academic culture in Islamic universities has provided illustrations related to academic activities, both in associating, acting, and being able to solve problems in the university environment in improving the quality of education. The lecturers no longer consider that their scientific coaching and teaching is no longer a burden but an academic tradition that must be preserved (Dina et al., 2023). There are three structures of academic culture, as follows:

Figure 2. Form and Structure of Academic Culture



When viewed from the picture above that academic culture includes three elements, namely: 1) academic thinking based on scientific studies, critical thinking, reading habits, rational thinking and critical-analytical, 2) academic morals based on honesty, hard work, discipline, independence, tolerance, 3) academic activities based on scientific

publications, article writing, scientific discussions. These elements of academic culture have a very close relationship in academic culture that is interrelated with each other in order to realize academic achievements at State Islamic Religious Universities (PTKIN).

On the other hand, the Qur'an and hadith have explained many values that must be upheld by Islamic academics, namely honesty, justice, accuracy of information, not spreading fake news (Sari, 2020). Some nashes that explain this, QS. An-Nur verse 15, QS. Al-Hujurat verse 11, and HR. Abu Dawud. Based on several related propositions, the integration of Islamic educational values into the use of technology can be carried out properly, in accordance with the frame of Sharia and applicable academic ethics.

Responding to the phenomenon of ethical degradation in the digital space, both at the academic level and in the information stage, Islamic Education requires a design that can fill the void. In the book *"Impact of AI Technologies on Teaching, Learning, and Research in Higher Education"* stated that the gap between AI and education must be addressed with a comprehensive strategy, including technology deployment, reform and reevaluation, and offering the best knowledge.

The idea of renewal in Islamic Education is always needed, in order to expand the scope of education itself actually and virtually. Offers that can be made for educational developers, namely: the development of curriculum based on Islamic values, the development of active-innovative learning methods, and the development of a conducive learning environment.

- a. Development of curriculum based on Islamic values. In this case, universal good values such as honesty, responsibility, and justice become the foundation in every learning material, both general and religious subjects (Novita et al., 2022).
- b. Development of active and innovative learning methods. Educators always encourage students to practice critically, creatively, and responsibly every time they use information sources (Arka, 2020).
- c. Development of a conducive learning environment. The agenda for developing

ethics and morality of students must be supported by the provision of a good educational climate, so that mutual respect, courtesy, and courtesy can be accustomed (Yuliana & Kristinawati, 2022).

There are at least some actual Islamic education designs as a step to advance academic and information morality and ethics:

- a. Project-based learning. This kind of learning model entrusts the role of students in completing projects through teamwork. In the learning process, active, creative, and critical values are instilled to solve problems. The emphasis of learning is more on peer activities to produce products based on real experience. These products can be designs, schemes, written works, works of art, works of technology/crafts, and values (Pantiawati et al., 2020)
- b. Problem-based learning. As the purpose of project-based learning, this model is oriented towards the growth of students' creative and critical reasoning. Project-based learning (PBL) is a real problem-oriented teaching model. PBL can develop students' critical ability to solve problems and absorb important concepts. Implementation of PBL with ICT can produce better content for teaching materials and skills (Domu et al., 2023).
- c. Community-based learning. Learners are given the opportunity to engage in social-community activities. In terms of objectives, students are expected to apply Islamic ethics and moral values in real life. Community-based learning and teaching is a model that encourages students to interact and collaborate with people from diverse backgrounds in a supportive environment. This environment can help students learn about new cultures and perspectives, develop social and emotional skills, and form self-identity. (Shah et al., 2023)

Some of the steps above, do not guarantee that better ethics and morality will be formed students, therefore parents, society, and government haurs actively consolidate in this regard. Parents act as

agents of change who always provide direction and advice to their children to be able to behave ethically and morally from an early age (Solekhin et al., 2022). Next, the community participates in the formation of a conducive climate for the moral development of students (Hermawan et al., 2020), and finally, the government must have the courage to make firm policies regarding regulations that support the improvement of academic and information ethics (Tompul et al., 2022) (Yulieta et al., 2021).

The Islamic Education design above, according to researchers, is very potential for the development of morality and ethics of students, so that responsible behavior can be built. Students are instructed to be able to explore sources of information critically and responsibly. Furthermore, at a more concrete level, Islamic Education institutions can also seek several steps in facing the current challenges of AI (Ziaee, 2012), namely:

- a. Understand the urgency of AI and opportunities in education. Knowledge of AI and its potential is very important so that in the future it can be utilized to improve the quality of education (Pabubung, 2021).
- b. Leveraging AI for learning purposes. Technology is inseparable from progress, therefore even aspects of learning are sought to utilize AI, especially as learning aids, interactive content development media, and the provision of more personalized learning. Islamic educational institutions can adjust some of these strategies according to their capabilities and needs (Serdianus & Saputra, 2023).
- c. Train educators' skills in using AI. As implementers of education, educators must be able to use AI as a form of response to AI challenges. This skill is very necessary, considering that the use of AI seems not yet under the control of educators, so plagiarism cases are rife among students. In addition, educators who are skilled with AI can monitor and support the quality of learning. Training can be pursued by Islamic Education institutions with

seminars on the use of AI in the realm of learning (Karyadi, 2023).

- d. Educating students' ethics, especially in utilizing AI (Putri et al., 2022). One of the most important things in developing education through AI is ethics, where the principle of responsibility must be instilled in order to avoid academic violations. Extracurricular activities can be a means of providing outreach regarding the ethics of using AI.

Conclusions

The rapid development of digital technology provides various benefits, although these advances also pose risks, such as misuse of technology for unethical and irresponsible interests. Advances in artificial intelligence (AI) in education are fueling concerns about morality. AI can quickly analyze data sets and generate new learning models, but it also leaves education vulnerable to data misuse or poor logic. AI technology has negative impacts that are broadly identified in three ways: making humans lazy, eliminating the role of humans in decision making, and threatened security and privacy. Responding to the phenomenon of ethical degradation in the digital space, both at the academic level and in the information stage, Islamic education requires a design that can fill the gap. In the book "*impact of ai technologies on teaching, learning, and research in higher education*" it is stated that the gap between ai and education must be addressed with a comprehensive strategy, including technology deployment, reform and reevaluation, and offering the best knowledge.

Artificial intelligence and the principle of moral responsibility in Islamic education in Indonesia can be used as an alternative solution by every Indonesian university in exploring the existence of AI and the principle of responsibility in Islamic education. It is hoped that the entire academic community will not only narrow their horizons by relying on solutions offered by researchers, but also need to examine subsequent research studies in order to expand scientific knowledge.

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