ISLAMIC RELIGIOUS EDUCATION ORIENTED TOWARDS SCIENCE AND TECHNOLOGY AND ENTREPRENEURSHIP IN THE MANAGEMENT AND DEVELOPMENT OF ISLAMIC EDUCATIONAL INSTITUTIONS

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ABSTRACT

This article examines Islamic religious education oriented towards science and technology and entrepreneurship in the development of Islamic Educational Institution management. This research uses a descriptive qualitative method and data collection through observation, documentation, and interviews. The validity of the data uses the triangulation model by communicating the results of this research with the findings of at least three experts in the same field as this research. The results of this research are that (1) Islamic Religious Education survives and advances when oriented towards science and technology because science and technology are a necessity for humans in all fields of modern life, and (2) Islamic Religious Education not only teaches knowledge to students but also Islamic Educational Institutions teach teachers and students to have entrepreneurship skills as a preparation for independent, creative, and innovative living in the socio-economic field. entrepreneurship is also an effort to minimize graduate unemployment (3) Islamic religious education teaches noble morals, such as humility, respecting differences (multiculturalism), mutual cooperation, and so on.

Keywords: *Management of Islamic Religious Education, Science and Technology, Entrepreneurship*

INTRODUCTION

Islamic education oriented towards science, technology (IPTEK), and entrepreneurship requires the application of good educational management within Islamic Educational Institutions. The development of Islamic religious education refers to the effective and efficient (quality) management of organizations, coordination, and administration of Islamic educational institutions that operate in accordance with Islamic principles and values.

Yasin Syafii Azami, Abid Nurhuda, Thariq Aziz, Muhammad Al Fajri that Islamic religious education is capable of making an integral contribution to the holistic education of humans. This includes the process of curriculum development, management of leadership and staff, student management, and financial resources in a manner guided by Islamic teachings and ethics.[1] Sedangkan menurut Desi bahwa Islamic education impacts student development by promoting engagement in teaching methods, intrinsic and altruistic motivation, and active involvement in learning. Students in Islamic religious education teacher programs are expected to actively involve

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[1] Yasin Syafi'i Azami et al., "Islamic Education Environment In The Perspective Of Hadith And Its Implications For Student Development," *Forum Paedagogik* 14, no. 2 (2023), https://doi.org/10.24952/paedagogik.v14i2#.

their students in the learning process. However, there is a risk of perceiving only visible actions as engagement, overlooking passive actions like listening and thinking[2][3]

Educational management is the process of planning, organizing, directing, and controlling human resources and other resources[4] in educational institutions to achieve the established educational goals[5]. Educational management also involves effective and efficient decision-making in managing various aspects of education such as curriculum, educators, facilities, and finances[6].

Islamic religious education can exist in the modern world depending on the strategies of Islamic religious education played by policymakers and school boards as explained by Tolchah, Moch. and Mu'ammar, Muhammad Arfan that Islamic education must adopt the following strategies in the age of globalization: putting the participatory model of education planning first; pushing the government to serve as a catalyst, facilitator, and community empowerment; enhancing the focus of education; using outside resources (outsourcing); fortifying networks of collaboration and partnerships with different parties; and cultivating a positive perception of the community among those who enjoy learning and information technology use.[7].

The importance of integrating science and technology (S&T) into the management of Islamic education is to ensure that the Islamic education system can continue to advance and develop alongside other educational systems. The use of science and technology can make Islamic education more effective in teaching religious principles and preparing the next generation to face the challenges of the modern world. In addition, the integration of science and technology can also help develop innovative and engaging teaching methods for students[8], Islamic religious education is capable of fostering and enhancing students' interests in learning and academic performance, enabling them to understand religion and religious practices well[9] and knowledge as well as Islamic character in all his behavior in society[10] mainly they use noble ethics in carrying out entrepreneurial activities to enhance independence in the socio-economic field.[11]

Entrepreneurship is very important in the management of Islamic education because its primary goal is to create a creative and innovative education system[12], strong and flexible in

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[2] Desi, *11 No. Https://Repository.Uir.Ac.Id/Id/Eprint/24376*, 2023.

[3] Achmad Maulidi, "Peningkatan Kecerdasan Spiritual Siswa Melalui Model Pembelajaran Contextual Teaching and Learning Mata Pelajaran Al-Islam," *Reflektika* 15, no. 1 (2020): 15, https://doi.org/10.28944/reflektika.v15i1.398.

[4] Ahmad Halid, "Student Resource Development Management: A Model Of Planning, Organizing, Leading And Controlling At Bustanul Ulum Bulugading Boarding School Bangsalsari Jember," *Jurnal Imu Manajemen* 9, no. 2 (2024).

[5] Ahmad Halid, "Leadership of Pesantren in the Management of Human Resources Production," *Ma ' Had : Journal of Pesantren and Diniyah Studies* 1, no. 1 (2024): 1–14, https://ejournal.lppdjatim.org/index.php/jpds/article/view/9.

[6] Hastirullah and Ahmad, *New Model Of Student Development Strategy To Strengthening Educational Quality: An Causal Perspective From Indonesia Islamic Educational Institution Approach*, 2022, https://search.ebscohost.com/login.aspx?direct=true&profile=ehost&scope=site&authtype=crawler&jrnl=271775 64&AN=157761255&h=OPH34X3EfC8SODiBfGR0XsfYNySKH%2FniR8Pt%2BgSn6DOR3IZjFbd92avRok9ljg 84Cle6C7IISNzOT02JVJMXcQ%3D%3D&crl=c.

[7] Moch Tolchah, Mu'ammar, and Muhammad Arfan, "Islamic Education in the Globalization Era.7 (4). Pp. 1031-1037. ISSN 2395-6518," *Humanities & Social Sciences Reviews,* 7, no. 2 (2019).

[8] Halid Ahmad, "Online Learning Model and Assistance of Parents and Private Teachers in Increasing Student Learning Achievement at MIMA KH. Shiddiq Jember," *Ambarsa: Jurnal Pendidikan Islam* 4, no. 1 (2024), https://doi.org/https://doi.org/10.59106/abs.v4i1.169.

[9] Ahmad Halid, *KONSEP PENDIDIKAN ISLAM DALAM SURAT LUQMAN* (Jember, 2020).

[10] Ahmad Halid, *TRANSFORMASI NILAI-NILAI PENDIDIKAN ISLAM DI MASYARAKAT* (Jember: UIJ Kyai Mojo, 2012), https://drive.google.com/file/d/1dxFbRc1jnyOwex1quxnerDAVb8U15qTi/view?usp=drive_link.

[11] Ahmad Halid, "Pelatihan Untuk Membangun Kemandirian Jama'ah Dan Jam'iyah Di MWC NU Patrang Jember," *Jurnal Abdi Masyarakat Indonesia* 3, no. 1 (2023): 377–86, https://doi.org/10.54082/jamsi.652.

[12] Ahmad Halid, *Membangun Sekolah: Prinsip Pembelajaran Sukses, Siswa Kreatif*, 1st ed. (Jember: UIJ Kyai Mojo, 2020).

accordance with the advancements of the current era second, to develop programs that are relevant to the needs of society and industry. Third, entrepreneurship can also help educational institutions find more diverse and varied research sources. Therefore, Islamic educational institutions need to effectively utilize entrepreneurship by developing information technology skills training programs for students to be ready to compete in the digital era and the developers Islamic Educational Institutions need to collaborate with local, national, and even international industries to create internship opportunities for students in order to enhance their skills in line with job market demands and global requirements.

Therefore, this research is very interesting to discuss and can provide a positive contribution to how Islamic Religious Education learning oriented towards science and technology and entrepreneurship in the management and development of Islamic Educational Institutions. This research is characterized by Islamic religious education oriented towards science and technology and entrepreneurship to facilitate the learning of Islamic religious education materials and to equip students with economic independence at school. Thus, students are taught knowledge along with economic performance for the benefit of a prosperous life.

THEORETICAL STUDY
Principles of Management in the World of Islamic Religious Education

Ramayulis is of the opinion that the principles of Islamic educational management are sincerity, honesty, trustworthiness, justice and responsibility[13], dynamic, practical, and flexible, deliberation, division of tasks, adaptability[14], The adoption of a work culture is emphasized in Islamic educational management. Meanwhile, according to Langgulung, there are seven principles of Islamic educational management: faith, morals, justice, equality, deliberation, division of tasks and work, adherence to management functions, social interaction, and sincerity[15]. According to Ahmad Halid, educational institutions should equip each teacher and student with four things: (1) amanu or faith, (2) amilus shalihat (practice of good deeds)[16] (3) watawa saubil haq (holding fast to each other's goodness and haq) (4) watawa saubil sabri (holding fast to each other's patience)[17]. According to Ahmad Halid, these four elements serve as sufficient and complete capital to be firmly held by the leaders of Islamic Religious Education Institutions and the teaching staff, as well as by every student in competing to excel in society.

The Role of Science and Technology in Improving the Quality of Islamic Religious Education

Modern scholars do not doubt the role of science and technology in improving the quality of Islamic education because Islam is a religion that commands humans to engage in science and

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[13] Ramayulis, *Ilmu Pendidikan Islam* (Jakarta: Kalam Mulia, 2000).

[14] Ramayulis, *Ilmu Pendidikan Islam, (Jakarta: Kalam Mulia, 2011), Cet Ke.9, Hlm. 277*, 2011.

[15] Hasan Langgulung, *Langgulung , Hasan.2000. Asas-Asas Pendidikan Islam* (Jakarta: Al-Husna Zikra, 2000).

[16] Ahmad Halid, "Menghasilkan Keunggulan Berkelanjutan Melalui Manejemen Budaya Kerja 'Aswaja' Di Lembaga Pendidikan," *An-Nahdhoh: Jurnal Kajian Islam Aswaja* 1, no. 1 (2021): 1–15, https://jim.unisma.ac.id/index.php/nahdloh/article/view/10726.

[17] Ahmad Halid, "Menghasilkan Keunggulan Berkelanjutan Melalui Manejemen Budaya Kerja 'Amanu' Di Universitas Islam Jember," *Fenomena* 20, no. 1 (2021): 1–18, https://doi.org/10.35719/fenomena.v20i1.43.

technology in their lives. This can be traced in several verses of the Qur'an that explain about science and technology, among them Here is Surah Al-Baqarah 31.

وَعَلَّمَ اٰدَمَ الْاَسْمَاۤءَ كُلَّهَا ثُمَّ عَرَضَهُمْ عَلَى الْمَلٰۤىِٕكَةِ فَقَالَ اَنْۢبِـُٔوْنِيْ بِاَسْمَاۤءِ هٰٓؤُلَاۤءِ اِنْ كُنْتُمْ صٰدِقِيْنَ

Meaning: He taught Adam all the names (things, science and technology), then He showed them to the angels, saying, "Tell Me the names of these (things, science and technology) if you are right!"[18]

QS al-Baqarah 31 explains that the first human to be taught science and technology was the Prophet Adam (peace be upon him). The development and advancement of technology today have actually already progressed and were taught to Prophet Adam, but they were still basic and had not yet rapidly evolved into a technological movement.

QS al-Anbiyah ayat 69

قُلْنَا يٰنَارُ كُوْنِيْ بَرْدًا وَّسَلٰمًا عَلٰٓى اِبْرٰهِيْمَ

Meaning: We (Allah) said, "O fire! Be cool, and a savior for Abraham!" The content of science and technology is the technology of making hot materials cool, for example refrigerators, air conditioners, and so on[19].

QS al Muluk 19

اَوَلَمْ يَرَوْا اِلَى الطَّيْرِ فَوْقَهُمْ صٰۤفّٰتٍ وَّيَقْبِضْنَ ۘ مَا يُمْسِكُهُنَّ اِلَّا الرَّحْمٰنُ ۗ اِنَّهٗ بِكُلِّ شَيْءٍ بَصِيْرٌ

Meaning: "Do they not see the birds above them spreading and closing their wings? None holds them (in the air) except the Most Gracious. Indeed, He is All-Seeing of all things" (QS Al-Mulk ayat 19) [20]

The scientific content is that birds are scattered flying in the sky with agility and ease. This is a signal from Allah to humans to be able to match birds in terms of flying speed, so this verse was studied and became a technological advancement in the form of airplanes that can function as the fastest air transportation and sophisticated war tools made by humans, capable of matching the advantages and superiority of Allah's creatures on this earth.

QS Al Alaq ayat 1-5:

اِقْرَأْ بِاسْمِ رَبِّكَ الَّذِيْ خَلَقَ ۚ خَلَقَ الْاِنْسَانَ مِنْ عَلَقٍ ۚ اِقْرَأْ وَرَبُّكَ الْاَكْرَمُ ۙ الَّذِيْ عَلَّمَ بِالْقَلَمِ ۙ عَلَّمَ الْاِنْسَانَ مَا لَمْ يَعْلَمْ

Meaning: "Read in the name of your Lord who created. "He created man from a clot of blood. Read, and your Lord is the Most Glorious. Who teaches (man) by the pen. He teaches man that which he did not know[21]

Surah Al-Alaq verses 1-5 command the Prophet Muhammad (peace be upon him) and humanity to read, write, and research everything created by Allah, including science and technology, and to orient it in the name of Allah (the Exalted).

QS Ali Imran ayat 191

وَيَتَفَكَّرُوْنَ فِيْ خَلْقِ السَّمٰوٰتِ وَالْاَرْضِۚ رَبَّنَا مَا خَلَقْتَ هٰذَا بَاطِلًا ۚ

Meaning: thinking about the creation of the heavens and the earth (while saying), "Our Lord, You did not create all this in vain [22]

QS Ali Imran verse 191 discusses the way of thinking about knowledge, science and technology, and contemplation, or reflecting on Allah SWT's creation. All of Allah's creation is useful for humans and the entire world.

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[18] Kemenag, *Al-Qur'an Al Karim* (Jakarta: Kementerian Agama RI, 1990).

[19] Kemenag.

[20] Kemenag.

[21] Kemenag.

[22] Kemenag.

QS Al-Mujadalah ayat 11

$$رْفَعِ اللهُ الَّذِيْنَ اٰمَنُوْا مِنْكُمْ وَالَّذِيْنَ اُوْتُوا الْعِلْمَ دَرَجٰتٍۚ$$

Meaning: Allah will raise those who believe among you and those who are given knowledge to high ranks. Allah is All-Aware of what you do[23]

QS Al-Mujadalah verse 11 is about the glory of the knowledgeable person with many honors (degrees) in this world and in the hereafter, and this verse can also be drawn to the issue of science and technology that must be taught in schools to students so that students can make progress in science and technology with the values of faith in Allah and the Messenger of Allah.

QS Al-Ankabut ayat 43

$$وَتِلْكَ ٱلْأَمْثَٰلُ نَضْرِبُهَا لِلنَّاسِ ۖ وَمَا يَعْقِلُهَآ إِلَّا ٱلْعَٰلِمُون$$

Meaning: And these parables We set forth for mankind; and none understand them except those endowed with knowledge [24].

QS Al-Ankabut verse 43 explains the signs of Allah's power, whatever technology has been successfully developed by humans, only a few have been taught by Allah. However, technology and information obtained by humans need to bring faith in Allah. Such people are people with science and technology who can understand the science and technology that Allah created.

Specifically, the role of Science and Technology in the world of Islamic religious education includes (1) the ability to use interactive and highly engaging learning technology media in the classroom, such as educational videos, e-learning, animations, projectors, the internet, Zoom, Facebook, WhatsApp, and others. (2) Digital-based Islamic Religious Education: all presentation of learning materials is provided digitally and can be accessed by every student, allowing them to discuss and learn collaboratively. (3) The role of science and technology can facilitate students in accessing learning references such as teacher's textbooks, yellow book materials, the Quran, Hadith, fiqh, Aqidah akhlaq, Arabic language, Islamic cultural history, mathematics books, and so on. (4) online or network-based learning (daring)[25]: the advancement of cutting-edge technology can help facilitate and accelerate learning through online or distance learning models, so students do not need to go to school; they can simply study and work from their respective homes.

The impact of entrepreneurship on the sustainability of Islamic Religious Education institutions

Entrepreneurship in Islamic religious educational institutions has recently received a lot of special attention as a means to strengthen the institution's economy, finance the institution's needs and improve the welfare of the teachers and students, as well as promote innovation, creativity and independence in Islamic religious educational institutions[26] among the teachers and students of Islamic religious educational institutions, they now realize the importance of equipping their students with entrepreneurial skills and a creative economic mindset [27] what is needed to succeed in studies to prepare a creative economy that becomes a provision for businesses at the local, national and even global levels that are rapidly developing and changing. By incorporating

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[23] Kemenag.

[24] Kemenag.

[25] Ahmad, "Online Learning Model and Assistance of Parents and Private Teachers in Increasing Student Learning Achievement at MIMA KH. Shiddiq Jember."

[26] Halid, "Pelatihan Untuk Membangun Kemandirian Jama'ah Dan Jam'iyah Di MWC NU Patrang Jember," 2023.

[27] Ahmad Halid, "Pelatihan Untuk Membangun Kemandirian Jama'ah Dan Jam'iyah Di MWC NU Patrang Jember," *Jurnal Abdi Masyarakat Indonesia (JAMSI)* 3, no. 1 (2023), https://jamsi.jurnal-id.com/index.php/jamsi/article/view/652.

entrepreneurship into the curriculum at Islamic Religious Education Institutions, it can certainly provide a positive contribution to the board of teachers and students to have an insight into entrepreneurship as a tool to not only create their own business opportunities, but also contribute positively to the community and society as a whole.

In Islamic educational institutions, the concept of entrepreneurship is often contradictory. Some argue that students are only obligated to pursue knowledge, leading them to argue that this trend focuses solely on traditional religious studies and neglects to include entrepreneurial education. These institutions may produce graduates who lack the practical skills and mindset needed to thrive in a competitive economy, limiting their potential for success and influence in society. However, modern Islamic educational institutions have considered entrepreneurial skills mandatory for every student and teacher, with the goal of achieving social independence and at least providing teachers with additional financial resources beyond their salaries.

The Importance of Entrepreneurship in Islamic Religious Educational Institutions

The importance of entrepreneurship in Islamic religious educational institutions is that entrepreneurship can play a strategic role in advancing Islamic religious educational institutions because it can encourage quickly and strongly to carry out institutional innovation, build and equip learning facilities, foster creativity in the academic community, and economic independence among students and teachers. By encouraging an entrepreneurial mindset. Jacline I. Sumual, Joubert B. Maramis argues that Entrepreneur Education is very important to be implemented in Higher Education. Due to the limited job opportunities available, it is highly expected that college graduates will not have a "Job Seeker" mindset but a "Job Creator" mindset[28].

Islamic religious educational institutions aim to program entrepreneurship as an effort to educate students to have business skills, trade, and independence in life. So that when students graduate, they will live independently and not depend on parents, society, or the government, but rather actively engage in business and trade, of course, the type of business and trade they are oriented towards the values or principles of Islam Ahlussunnah wal Jama'ah, namely blessings. Arif and Darul Ilmi stated that the integration of entrepreneurship allows students to connect religious values with the real world, develop their potential, and become agents of positive change[29].

RESEARCH METHODS

This study uses qualitative research by analyzing research data qualitatively. Qualitative research is a type of research conducted by researchers who strengthen the analysis of research data qualitatively, not using numbers or applying statistics, but rather rational analysis. The research data collection method uses observation, documentation, and interviews with research informants. Strengthening the data analysis uses a data triangulation model, namely communicating the results of this study with the findings of previous experts from at least three previous relevant research works, so that the findings of this study can truly be accounted for.

DISCUSSION OF RESEARCH RESULTS
Integrasi Teknologi Dalam Proses Pengajaran Dan Pembelajaran Agama Islam

Pendidikan agama Islam yang beripteks telah membawa perubahan yang signifikan dalam dunia Pendidikan islam[30]. sebab integrasi teknologi itu, guru dapat melaksanakan pembelajaran yang lebih interaktif dan menarik, menyenangkan bagi siswa. Selain itu, Pendidikan agama islam yang berorientasi teknologi juga dapat mengakses referensi dan informasi yang lebih luas dan cepat

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[28] Jacline I. Sumual and Joubert B. Maramis, "Urgensi Entrepreneurship Education Bagi Mahasiswa Perguruan Tinggi," *Jurnal Pembangunan Ekonomi Dan Keuangan Daerah* 23, no. 1 (2022).

[29] Arif and Darul Ilmi, "Pengelolaan Pendidikan Dan Kewirausahaan Dalam Pendidikan Agama Islam," *Perspektif: Jurnal Pendidikan Dan Ilmu Bahasa* 1, no. 4 (2023).

[30] Ahmad Halid, "PROSPEK PEMBELAJARAN DAN PENDIDIKAN AGAMA ISLAM DALAM KONTEKS ERA GLOBAL DAN MANAJEMEN PEMBIAYAANNYA," *L-Ashr: Jurnal Pendidikan Dan Pembelajaran Dasar* 9, no. 1 (2024): 34–48, https://doi.org/https://doi.org/10.56013/alashr.v9i1.2742.

bagi siswa, membantu mereka untuk belajar dengan lebih efektif dan efisien[31] serta mudah sehingga dapat meningkatkan kualitas pendidikan agama Islam di era digital ini.

Jakaria Umro menjelaskan Integrasi iptek dalam pembelajaran Pendidikan Agama Islam sangat urgen karena iptek tidak hanya menjadi alat bantu, tetapi juga medium yang mengubah cara pembelajaran menjadi lebih interaktif, kontekstual, dan relevan dengan kebutuhan siswa sehingga penggunaan iptek dalam Pendidikan agama islam berdampak positif yaitu menarik dan sangat efektif dalam dalam pembelajaran[32] sesuai dengan pendapat Rifa bahwa Integrasi teknologi dalam pengajaran Pendidikan Agama Islam (PAI) memiliki dampak signifikan terhadap keterlibatan siswa dalam proses pembelajaran[33] maka Pendidikan agama Islam akan menjadi lebih baik dan unggul.
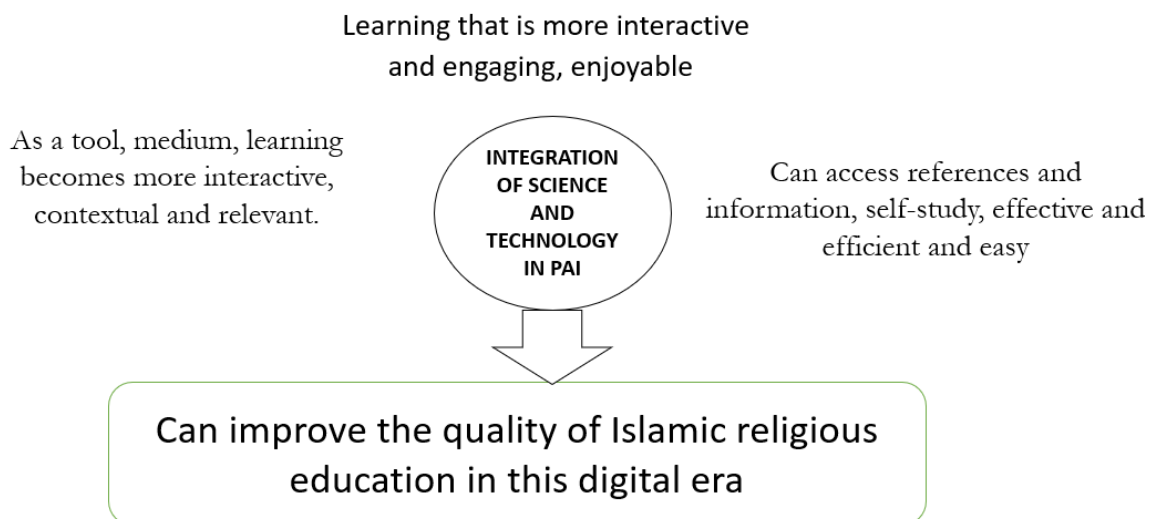

Figure 1: Integration of science and technology in Islamic Education learning

Pemanfaatan Iptek Dalam Pengembangan Kurikulum Pendidikan Agama Islam

Integrasi teknologi dalam dunia pendidikan tidak hanya dapat memberikan manfaat bagi siswa saja, tetapi juga bermanfaat bagi para guru dan lembaga pendidikan secara keseluruhan. Dengan teknologi, guru dapat menjalankan pembelajaran yang lebih menarik dan interaktif-komunikatif, sehingga siswa dapat lebih mudah memahami materi yang diajarkannya. Bagi siswa, teknologi juga memungkinkan adanya kolaborasi antara siswa dan guru, serta memfasilitasi akses informasi yang lebih luas dan cepat. Bagi Lembaga Pendidikan agama Islam, tekhnologi bermanfaat untuk mengembangkan layanan administrasi online dan mengakses fasilitas pembelajaran secara online[34].

Oleh karena itu, penting bagi semua pihak terkait untuk memahami dan menerapkan integrasi teknologi dalam proses pembelajaran guna meningkatkan kualitas pendidikan[35] di era digital ini. Era digital adalah periodesasi yang ditandai oleh perkembangan teknologi dan informasi,

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[31] Ahmad Halid and Hasan bin Jali, "Curriculum Design For Non-Formal Diniyah Madrasah at Islamic Boarding School," *TARLIM: JURNAL PENDIDIKAN AGAMA ISLAM* 8, no. 1 (2025): 109–24, http://ejurnal.unmuhjember.ac.id/index.php/TARLIM/article/view/2970.

[32] Jakaria Umro, "Integrasi Teknologi Dalam Pembelajaran Pendidikan Agama Islam: Inovasi Menuju Pembelajaran Religius Yang Relevan Di Era Digital," *Al Makrifat* 10, no. 1 (2025), https://ejournal.kopertais4.or.id/tapalkuda/index.php/makrifat/article/view/6656#:

[33] Rifa 'Afuwah, "Integrasi Teknologi Dalam Pengajaran Pendidikan Agama Islam (PAI): Tantangan, Peluang, Dan Dampaknya Pada Partisipasi Siswa Dalam Pembelajaran," *Perspektive* 17, no. 1 (2024).

[34] Ahmad Halid et al., "Transforming the Quality of Santri Based on Pesantren Culture," *Edukasia Islamika* 2, no. 2 (2024): 172–90, https://doi.org/10.28918/jei.v9i1.7237.

[35] Ahmad Halid, *TEORI PEMBELAJARAN Perspektif Pendidikan* (Jember: UIJ Kyai Mojo, 2024).

komunikasi secara internet dan perangkat digital, diera ini komunikasi manusia dan bekerja berbasis digital[36], Peningkatan pembelajaran berbasis teknologi dan media digital. Sehingga pengetahuan atau informasi terkini dapat diakses secara jitu, mudah lagi cepat.

Secara khusus pemanfaatan iptek dalam pembelajaran Pendidikan agama Islam dapat bermanfaat untuk (1) meningkatkan keterlibatan siswa dalam pembelajaran inovatif dan kreatif, menyenangkan (2) terjadi pembelajaran yang lebih interaktif dan komunikatif, kolaboratif (3) mudah untuk mendapatkan referensi (informasi, materi, sumber materi) pembelajaran diakses secara online.
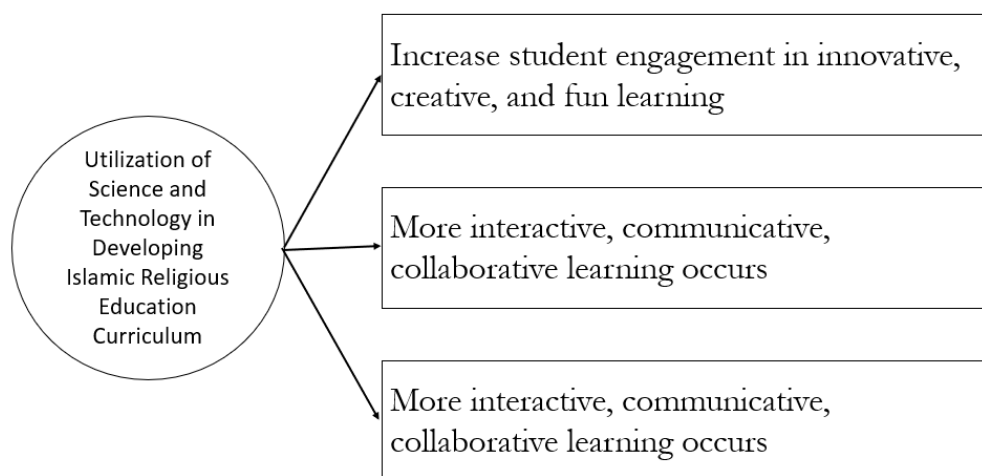

Figure 2: Utilization of Science and Technology in Developing Islamic Religious Education Curriculum

Application of Science and Technology in the Management Process (Administration) of Islamic Educational Institutions

The application of science and technology in the management or administration process of Islamic educational institutions can be useful for (1) expanding the online education network (2) providing fast, easy, practical and cheap services, (3) making decision makers in Islamic educational institutions more open, transparent, democratic and proactive (4) the application of educational technology can provide inspiration and high motivation to continue to progress in facing challenges in the computer or digital era.

Dwi Iryanta Prihartana, Unik Hanifah Salsabila, Pathur Rahman, Siti Nafiah, Aliftiya Oktinawati explained that the application of science and technology (IPTEK) in Islamic education management can increase the efficiency and effectiveness of the education process, as well as enrich students' learning experiences[37].

Entrepreneurship in Islamic Religious Education
Promotion of entrepreneurial skills among students and educators

Entrepreneurial skills in schools can be developed through various educational activities, such as training programs and nurturing students' interests and talents in the field of entrepreneurship. Training and mentoring in entrepreneurial skills for students and educators can build sensitivity and business ideas in students from their school days, with the hope that they will truly enjoy the business world. Training and business guidance for students, then teachers provide

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[36] Ahmad Halid, "Strategy To Build Religious Values in Students At Mts Miftahul Ulum Renes Wirowongso Ajung Jember," *AL-ASHR Jurnal Pendidikan Dan Pembelajaran DasarJurnal: Pendidikan Dan Pembelajaran Dasar* 7, no. 2 (2022): 107–19, https://doi.org/https://doi.org/10.56013/alashr.v7i2.1606.

[37] Dwi Iryanta Prihartana et al., "Peran Teknologi Dalam Pendidikan Islam," *Jurnal Pendidikan Islam* 6, no. 1 (2022).

training on effective marketing strategies and good promotion of entrepreneurial skills so that graduates can be more innovative and independent in the business world.

Students are not only taught subjects like Aqidah, fiqh, and akhlaq, but they also greatly need education in business fields such as trade, agriculture, plantations, livestock, development, and so on. The world of entrepreneurship is certainly strengthened by the knowledge and character gained during Islamic religious education, which is very ideal for students. The Institute of Technology team explains that entrepreneurship education plays an important role in creating innovative, creative, and resilient young entrepreneurs. By providing the necessary knowledge, skills, practical experience, and support, entrepreneurship education can help the younger generation to start and manage their own businesses.[38]

Establishing a Business Venture Within an Islamic Educational Institution

Islamic religious education institutions should have several entrepreneurial units, as an institution that is advanced and strong is independent in financing its educational needs, not relying on donations and contributions from parents. Instead, the Islamic education institution should engage in trade and own agricultural land, with the proceeds allocated to meet school needs such as purchasing school land, building school buildings, fulfilling learning facilities and infrastructure, increasing teacher salaries, and providing educational services to students. All of that requires funding, and the funding must come from the school's own business enterprises. Asy-Syams Islamic School explains that establishing a business within Islamic educational institutions, such as madrasahs or pesantrens, can be a way to enhance the economic independence of the institution and provide students with opportunities to learn entrepreneurship[39]

Islamic educational institutions that do not have independent revenue streams through entrepreneurial activities face difficulties in funding, making it hard to obtain quality human resources. As a result, the guidance provided to students also weakens because the human resources available are very weak. Therefore, the main task of the Foundation is to consider the entrepreneurship of its educational institutions so that they have strong economic resources.

The entrepreneurial units that need to be developed by the Foundation include school cooperatives, school canteens, and other business units such as agriculture, trade, plantations, livestock, tourism, transportation, and other ventures that are expected to generate income for the Islamic educational institution it manages.

Collaboration With Industry Partners For Funding And Support

Policy makers of Islamic Religious Education Institutions need to collaborate with various stakeholders[40] and industrial partners such as the cooperatives department, trade department, agriculture department, market department, fisheries department, tourism department and so on to obtain permits and skills training in carrying out the entrepreneurship they are involved in.

According to Lina Anatan, this collaboration is crucial for creating productive partnerships between universities and industry. Its importance is influenced by external forces that will determine the capabilities of both parties in increasing competitiveness in both the manufacturing and service sectors[41]

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[38] Tim Institut Teknologi, Mengapa Pendidikan Kewirausahaan Penting? (2023).

[39] Team Asy-Syams Islamic School, "Tips Mendirikan Usaha Di Bidang Pendidikan," 2024, https://asysyams.id/tips-mendirikan-usaha-di-bidang-pendidikan.

[40] Ahmad Halid, Manajemen Pendidikan: Teori Kebijakan Dan Praktik Di Sekolah / Madrasah, Pesantren, Dan Perguruan Tinggi (Indonesia, issued 2025), https://drive.google.com/file/d/1ioXrzVWzHwqlb37xL6zahgiV0BLzUen-/view?usp=drive_link.

[41] Lina Anatan, "Kolaborasi Universitas-Industri: Tinjauan Konseptual Mekanisme Transfer Pengetahuan Dari Universitas Ke Industri," *Jurnal Manajemen* 8, no. 1 (2008): 2.

Challenges and Opportunities in Technology Integration in the Islamic Religious Education Learning Process

In an Islamic educational institution, there are bound to be pros and cons among the management regarding the policy of educational development, especially in the field of entrepreneurship, because traditional perspectives view that students' age should be focused on learning, not on working to earn money. This is caused by six factors, namely (1) traditional mindset and orientation solely towards the hereafter. (2) the lack of outstanding human resources in implementing science and technology initiatives and entrepreneurship in Islamic Educational Institutions (3) innovation in the field of management and development of Islamic educational institutions is very weak (4) limited access to technology in the environment of Islamic Educational Institutions is very restricted (5) there are various difficulties in teacher competency workshops in integrating technology into the learning process of Islamic Education (6) there is a very prominent potential for a digital or educational technology gap among students, teachers, and even the leaders of Islamic educational institutions. Irna explained that the main challenges include limited infrastructure, access gaps, lack of teacher skills, and the potential for technology misuse.[42]

Strategies for Success in Technology Integration in the Islamic Religious Education Learning Process

A precise strategy to improve the quality of Islamic religious education with a focus on science, technology, and entrepreneurship includes three aspects: (1) Conducting training and mentoring for teachers in the use of educational technology and entrepreneurship relevant to Islamic religious education, (2) Islamic educational institutions providing access to technology and entrepreneurship for the necessary educational technology devices, and (3) Developing a curriculum that supports the integration of technology and entrepreneurship in Islamic religious education. According to what was explained by Adinda Zahrah, Amalia Setya Hanifah, Adiyas Adiyas, and Abdul Azis, the successful strategy for integrating technology in PAI learning includes teacher training, utilization of digital platforms, development of engaging content, and cross-sector collaboration.It is also important to ensure that the content aligns with Islamic values, maintain data security, and involve parents[43].

Diva Dhiyaul Auliyaha, Eko Nursalim stated that the integration of digital technology has the potential to enhance the quality of PAI learning through increased accessibility, interactivity, and student engagement. However, the success of the implementation requires a comprehensive strategy, such as digital competency training for teachers, the utilization of technology-based learning platforms, and collaboration between the government, schools, and the technology community. With this strategy, technology-based PAI learning can be optimized to create an innovative and relevant learning process, in line with the needs of students in the digital era[44]. So such a strategy can enhance technology-based and digital media learning.

CONCLUSION

Islamic religious education oriented towards science and technology and entrepreneurship in the management and development of Islamic educational institutions is an effort to improve the quality of Islamic educational institutions. As an effort to improve the management and quality of Islamic educational institutions, the following can be implemented: (1) Integration of Technology in the Teaching and Learning Process of Islam (2) Utilization of Science and Technology in the Development of Islamic Education Curriculum (3) Application of Science and Technology in the Management Process (Administration) of Islamic Educational Institutions (4) Promotion of Entrepreneurial Skills among Students and Educators (5) Establishment of Business

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[42] Irna Prayetno, "Tantangan Dan Solusi Dalam Pembelajaran PAI Di Era Digital," *Jurnal Kajian Islam Dan Sosial Keagamaan* 2, no. 3 (2025).

[43] Adinda Zahrah et al., "Inovasi Pembelajaran PAI Berbasis Teknologi Informasi: Transformasi Digital Dalam Pendidikan Islam," *Akhlak: Jurnal Pendidikan Agama Islam Dan Filsafat* 2, no. 3 (2025), https://ejournal.aripafi.or.id/index.php/Akhlak .

[44] Diva Dhiyaul Auliyaha and Eko Nursalim, "Optimalisasi Pembelajaran Pendidikan Agama Islam Berbasis Teknologi Digital," *Jurnal Kajian Islam Dan Sosial Keagamaan* 2, no. 3 (2025).

Ventures within Islamic Educational Institutions (6) Collaboration with Industry Partners for Funding and Support. (7) Challenges and Opportunities in Integrating Technology in the Islamic Education Learning Process (8) Strategies for Success in Integrating Technology in the Islamic Education Learning Process.

Specifically, the results of this research indicate that (1) Islamic Religious Education survives and advances when oriented towards science and technology because science and technology are essential for humans in all fields of modern life (2) Islamic Religious Education not only teaches knowledge to students but also Islamic Educational Institutions teach teachers and students to have entrepreneurship skills as a preparation for independent, creative, and innovative living in the socio-economic field. entrepreneurship is also an effort to minimize graduate unemployment (3) Islamic religious education teaches noble morals, such as humility, mutual respect for differences (multiculturalism), cooperation, and so on

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