



## Nurturing Ethical Character in Islamic Colleges through Interactive Technology: Lecturers Perspective

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### Abstract

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**Keywords:**  
Character  
Education;  
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Colleges;  
Interactive  
Technology.

This article examines the impact of integrating interactive technology in character education programs on ethical character development in Islamic colleges from the lecturers' perspective. The study addresses two research questions: (1) How does the integration of interactive technology influence ethical character development, according to lecturers in Islamic colleges? (2) What challenges do lecturers face in effectively utilizing interactive technology for nurturing ethical character education?. Data was collected through a survey of 50 lecturers from Islamic colleges in Madura, using a combination of closed-ended and open-ended questions. The findings reveal that integrating interactive technology positively affects ethical character development by enhancing student engagement, critical thinking, and moral reasoning. This research contributes to addressing a research gap by providing empirical evidence on the effectiveness of interactive technology in nurturing ethical character development in the context of Islamic colleges. Additionally, the study identifies challenges lecturers face in embracing the digital age, including limited technical skills, inadequate resources, and resistance to change. Addressing these challenges is crucial for maximizing the potential of interactive technology in character education programs. Overall, this research offers practical insights for educational institutions and policymakers, informing the design of strategies for incorporating interactive technology into character education programs while mitigating associated challenges. By focusing specifically on Islamic colleges, this study provides unique perspectives on integrating interactive technology in nurturing ethical character development, adding novelty to the existing literature.

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**Abstrak:**

**Kata Kunci:**

Pendidikan Karakter;  
Pengembangan Karakter;  
Perguruan Tinggi Islam;  
Teknologi Interaktif.

*Artikel ini mengkaji dampak integrasi teknologi interaktif dalam program pendidikan karakter terhadap perkembangan karakter dari sudut pandang para dosen di perguruan tinggi Islam. Penelitian ini menjawab dua pertanyaan penelitian: (1) Bagaimana integrasi teknologi interaktif memengaruhi perkembangan karakter, menurut pandangan para dosen di perguruan tinggi Islam? (2) Apa tantangan yang dihadapi oleh para dosen dalam memanfaatkan teknologi interaktif secara efektif untuk pembinaan pendidikan karakter? Data dikumpulkan melalui survei terhadap 50 dosen dari perguruan tinggi Islam di Madura, dengan menggunakan kombinasi pertanyaan tertutup dan pertanyaan terbuka. Temuan penelitian ini mengungkapkan bahwa integrasi teknologi interaktif berdampak positif pada perkembangan karakter dengan meningkatkan keterlibatan siswa, pemikiran kritis, dan penalaran moral. Penelitian ini memberikan kontribusi dalam mengatasi kesenjangan penelitian dengan memberikan bukti empiris tentang efektivitas teknologi interaktif dalam pembinaan karakter etis dalam konteks perguruan tinggi Islam. Selain itu, penelitian ini mengidentifikasi tantangan yang dihadapi oleh para dosen dalam menghadapi era digital, termasuk keterbatasan keterampilan teknis, sumber daya yang kurang memadai, dan resistensi terhadap perubahan. Mengatasi tantangan-tantangan ini sangat penting untuk memaksimalkan potensi teknologi interaktif dalam program pendidikan karakter. Secara keseluruhan, penelitian ini memberikan wawasan praktis bagi lembaga pendidikan dan pembuat kebijakan, yang dapat digunakan sebagai dasar perancangan strategi untuk mengintegrasikan teknologi interaktif dalam program pendidikan karakter sambil mengatasi tantangan yang terkait. Dengan fokus khusus pada perguruan tinggi Islam, penelitian ini memberikan perspektif unik tentang integrasi teknologi interaktif dalam pembinaan karakter etis, yang memberikan nilai tambah pada literatur yang ada.*

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## 1. Introduction

In today's rapidly evolving technological landscape, integrating interactive technology in educational settings has become increasingly important <sup>1</sup>. This holds even in Islamic colleges, where the objective of nurturing ethical character remains paramount. By incorporating interactive technology, Islamic colleges can blend modern advancements with ethical character education, providing students with a well-rounded learning experience <sup>2</sup>.

With the advent of the digital age, the educational landscape is transforming, and educators are seeking innovative approaches to enhance character education to prepare students for the complex ethical challenges they

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<sup>1</sup> Mihireteab Abraham et al., "Effects of Information Communication Technology-Assisted Teaching Training on English Language Teachers' Pedagogical Knowledge and English Language Proficiency," ed. Sirui Wang, *Cogent Education* 9, no. 1 (December 31, 2022): 2028336, doi:10.1080/2331186X.2022.2028336.

<sup>2</sup> Avid Leonardo Sari and Eko Lianto Rihardi Irwandi, "Comprehensive Application of E-Learning Based on Islamic Principles and Ethics," *Journal of Positive School Psychology* 6, no. 3 (2022): 3343–50.

may face in their personal, professional, and social lives<sup>3</sup>. According to Farikhah, Education has been considered the center of excellence in preparing human's excellent characters. This belief drives every one to be ready to face the global challenges<sup>4</sup>.

Character education can be defined broadly as giving positive values to students in the context of strengthening self-identity. It is an educational discourse that answers the needs of the education system. It serves as an attempt to instill intelligence in thinking, appreciation in the form of attitudes, and habitual practice in the form of actions that are adjusted to moral values in society<sup>5</sup>. It represents the accumulation of knowledge and wisdom necessary to create welfare and harmony, thereby ensuring the smooth functioning of society.

Today, there are numerous working definitions of character education. One widely used definition is from the Character Education Partnership (CEP). It is the intentional, proactive effort by schools, districts, and states to instill in their students essential core ethical values such as caring, honesty, fairness, responsibility, and respect for self and others<sup>6</sup>.

This study explores the potential of interactive technology in nurturing ethical character in Islamic colleges, specifically within the context of Madura, East Java. Madura is known for its strong religiosity and the prevalent implementation of traditional character teaching methods. However, the usage of interactive technology in Madura still needs to be improved due to several factors. Firstly, the region needs more internet facilities, which hinders the seamless integration of digital tools in educational practices. Secondly, there need to be more human resources with proficient skills in using digital technology, further impeding the effective adoption and utilization of such tools in teaching and character development. By examining the impact of interactive technology on character development and addressing the challenges arising from the limited implementation of digital technology in Madura, this research seeks to contribute to the effective integration of technology in pursuing ethical character development and character education in Islamic colleges in the region.

According to Setiawan, Islamic colleges are crucial in providing education deeply rooted in Islamic values, ethics, and teachings<sup>7</sup>. Additionally, these institutions primarily aim to nurture students' holistic development, encompassing their intellectual, spiritual, and ethical growth<sup>8</sup>. Furthermore, Ismail<sup>9</sup> emphasizes the importance of ethical character education within Islamic colleges, as it equips

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<sup>3</sup> Rachel Anne Buchanan et al., "Philosophy of Education in a New Key: Exploring New Ways of Teaching and Doing Ethics in Education in the 21st Century," *Educational Philosophy and Theory* 54, no. 8 (2022): 1178–97.

<sup>4</sup> Farikah Farikah, "Developing the Students' Character through Literacy Activities in A Child-Friendly School Model," *Dinamika Ilmu* 19, no. 2 (2019): 187–96.

<sup>5</sup> Ach Fikri Fausi, "Implementing Multicultural Values of Students Through Religious Culture in Elementary School Islamic Global School Malang City," *International Journal of Islamic Education, Research and Multiculturalism (IJIERM)* 2, no. 1 (2020): 62–79.

<sup>6</sup> Balraj Singh, "Character Education in the 21st Century," *Journal of Social Studies (JSS)* 15, no. 1 (2019): 1–12.

<sup>7</sup> Adib Rifqi Setiawan, "Islamic Education in Southeast Asia," *EdArXiv*. DOI: <https://doi.org/10.35542/Osf.io/Dnjqv>, 2020.

<sup>8</sup> Tengku Sarina Aini Tengku Kasim and Yusmini Md Yusoff, "Active Teaching Methods: Personal Experience of Integrating Spiritual and Moral Values," *Religious Education* 109, no. 5 (October 20, 2014): 554–70, doi:10.1080/00344087.2014.956560.

<sup>9</sup> Ismail Ismail, "Character Education Based on Religious Values: An Islamic Perspective," *Ta'dib: Jurnal Pendidikan Islam* 21, no. 1 (September 25, 2016): 41–58, doi:10.19109/td.v21i1.744.

students with the moral compass necessary to navigate the complexities of the modern world while staying true to their Islamic identity.

The emergence of interactive technology, including applications like Kahoot or Prezi<sup>10</sup>, offers exciting possibilities to enhance the educational experience and transform traditional teaching methodologies in Islamic<sup>11</sup>. For example, multimedia presentations using these applications can incorporate vibrant visuals, interactive quizzes, and dynamic content to capture students' attention and foster their understanding of ethical concepts<sup>12</sup>.

In addition to multimedia presentations, educational applications such as <https://quranacademy.io/> or Hadith Collection apps (<https://gtaf.org/apps/hadith/>) provide interactive quizzes, games, and exercises that promote active learning and reinforce ethical concepts. Through gamification elements and interactive features, these applications create an immersive and enjoyable learning environment for students, helping them to deepen their understanding of Islamic teachings while honing their moral reasoning skills<sup>13</sup>.

Virtual simulations through platforms like Moral Machine (<https://www.moralmachine.net/>) or ClassDojo (<https://www.classdojo.com/>) allow students to navigate real-life ethical dilemmas and make informed decisions based on Islamic teachings<sup>14</sup>. These simulations offer a safe and controlled environment where students can explore various scenarios, assess consequences, and develop their ethical decision-making abilities. By engaging in these virtual experiences, students can apply Islamic values and principles to complex situations, developing their critical thinking skills and ethical reasoning.

Furthermore, online collaborative platforms like Google Classroom or Microsoft Teams facilitate engaging discussions, shared perspectives, and collaborative exploration of ethical issues among students<sup>15</sup>. Through features such as chat, video conferencing, and document sharing, these platforms enable students to connect, collaborate, and engage in meaningful dialogue about ethical dilemmas and Islamic ethics<sup>16</sup>. Additionally, communication tools such as Zoom, Google Meet, WhatsApp, and Telegram allow educators to connect with students

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<sup>10</sup> Abdul Fattah Abd Gani, Aeimi Ruzanna Abu Hassim, and Eliyas S Mohandas, "Students' Perceptions of New Web 2.0 Tools' Usage in Classroom Instruction" (Envisioning the Future of Online Learning: Selected Papers from the International Conference on e-Learning 2015, Springer, 2016), 247–57.

<sup>11</sup> Wildana Wargadinata et al., "Student's Responses on Learning in the Early COVID-19 Pandemic," *Tadris: Journal of Education and Teacher Training* 5, no. 1 (2020): 141–53.

<sup>12</sup> Didin Sariudin, Kokom Komalasari, and Diana Noor Anggraini, "Value-Based Digital Storytelling Learning Media to Foster Student Character.," *International Journal of Instruction* 14, no. 2 (2021): 369–84.

<sup>13</sup> Muhammad Dahlan Rabbanie, Katni Katni, and Khaidir Fadil, "Experience and Expectation during E-Learning of Islamic Religion Education: The Students' Response," *Utamax: Journal of Ultimate Research and Trends in Education* 4, no. 2 (2022): 122–34.

<sup>14</sup> Rick Houser et al., "Learning Ethics through Virtual Fieldtrips: Teaching Ethical Theories through Virtual Experiences.," *International Journal of Teaching and Learning in Higher Education* 23, no. 2 (2011): 260–68.

<sup>15</sup> Muammar Revnu Ohara, "The Role of Social Media in Educational Communication Management," *Journal of Contemporary Administration and Management (ADMAN)* 1, no. 2 (2023): 70–76.

<sup>16</sup> Zetty Nurzuliana Rashed and Nurul Rahimah Binti Mohd Hanipah, "Challenges and Best Practices of Teaching and Learning among Islamic Education Teachers during the COVID-19 Pandemic in Malaysia," *International Journal of Pedagogy and Teacher Education* 5, no. 2 (2022): 105–12.

remotely and facilitate virtual interactions that promote learning and ethical discussions<sup>17</sup>.

By integrating interactive technologies into educational practices, Islamic colleges can create dynamic and immersive learning experiences that promote critical thinking, moral reasoning, and applying ethical principles to real-world situations, both in-person and remotely<sup>18</sup>. These technologies offer a unique opportunity to blend modern advancements with ethical character development, empowering students to navigate the complexities of the modern world while staying true to their Islamic identity. However, successfully integrating interactive technology in character education in Islamic colleges is challenging. Lecturers may need more technological infrastructure, inadequate training, and concerns about technology usage's potential distractions and ethical implications. It is essential to identify and address these challenges to ensure that the integration of interactive technology aligns with the goals and values of Islamic education and effectively supports the development of ethical character among students.

This research will focus on gathering perspectives solely from lecturers in Islamic colleges. By conducting surveys with lecturers, the study aims to explore their experiences, attitudes, and perceptions regarding integrating interactive technology in ethical character education. The research will investigate lecturers' insights on the impact of interactive technology on ethical character development, successful strategies employed, challenges faced, and the ethical considerations associated with technology usage.

The findings of this research have the potential to contribute to the growing body of knowledge on effective approaches to character education in Islamic colleges from the lecturers' perspective. By identifying the opportunities and challenges associated with embracing the digital age, this study aims to inform lecturers, policymakers, and other stakeholders about the potential benefits and ethical considerations in utilizing interactive technology for nurturing ethical character. Ultimately, the goal is to empower lecturers in Islamic colleges to leverage interactive technology effectively in their teaching practices and inspire the development of ethical character among their students. This research seeks to address 1). how the integration of interactive technology in character education impact ethical character development in Islamic colleges from the lecturers' perspectives; 2). The challenges were faced by lecturers in embracing the digital age and effectively utilizing interactive technology to nurture ethical character education in Islamic colleges; and 3). The best strategies and practices for integrating digital technology in nurturing ethical character development in academic education?

## **2. Methods**

By employing quantitative and qualitative data analysis methods, this study aims to comprehensively describe lecturers' perspectives on nurturing ethical character education in Islamic colleges through interactive technology. The findings obtained from the analysis will contribute to the broader discourse on

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<sup>17</sup> Junaid Qadir and Muhammad Suleman, "Teaching Ethics,(Islamic) Values and Technology: Musings on Course Design and Experience" (2018 7th International Conference on Computer and Communication Engineering (ICCCCE), IEEE, 2018), 486–91.

<sup>18</sup> Saadet Korucu-Kış, "Preparing Student Teachers for Real Classrooms through Virtual Vicarious Experiences of Critical Incidents during Remote Practicum: A Meaningful-Experiential Learning Perspective," *Education and Information Technologies* 26, no. 6 (2021): 6949–71.

integrating technology in ethical character education, specifically within the context of Islamic colleges.

The study involved an online survey inviting potential lecturers from various Islamic colleges in Madura. Conducted anonymously in May 2023 via Google Forms, the questionnaire reached over 100 lecturers through platforms like WhatsApp. A total of 50 lecturers participated, recruited through a snowball sampling technique. Researchers ensured informed consent, emphasizing the voluntary nature of participation and data confidentiality. Data collection occurred on a secure online platform, with identifying information removed, and the data used solely for study purposes without third-party sharing. The participants' demographic is presented in Table 1.

Table 1. Participants Demographic Information

Participants' characteristics	Frequency	Percentage	
Age range	Less than 30 years old	2	20%
	30-39 years old	17	42%
	40-49 years old	21	34%
	More than 50 years old	10	4%
Institutions	IAIN Madura	25	50%
	Universitas Islam Madura	3	6%
	IAI Al- Khairat	2	4%
	Institut ilmu keislaman Annuqoyah	1	2%
	IDIA	3	6%
	Sekolah Tinggi Ilmu Al-Qur'an Nurul Islam	2	4%
	STAI Muafi	12	24%
	Nadzatul Tullab	2	4%
	Teaching experience	Less than 5 years	10
5-10 years		7	44%
11-15 years		11	22%
More than 16 years		22	14%
Sex	Female	19	38%
	Male	31	62%

It can be seen in Table 1 that the demographic profile of participants underscores the potential for fostering ethical character education in Islamic colleges through interactive technology from the lecturers' perspective. Predominantly aged 30-49, with the highest percentage in the 40-49 range, it indicates that lecturers in their prime years actively explore innovative approaches to character education using technology. The diverse representation across Islamic colleges in Madura, notably from IAIN Madura, signifies widespread interest and readiness to embrace technological advancements for ethical character development. The varying levels of teaching experience, with a

higher percentage at 5-10 years, suggest receptiveness among both early-career and experienced lecturers to leverage interactive technology for enhancing character development in classrooms.

The balanced gender representation in this study emphasizes inclusivity, showcasing that both male and female lecturers play crucial roles in shaping ethical character education through interactive technology. This gender parity enhances the credibility and applicability of the study's findings across diverse educational contexts. In conclusion, the varied demographic characteristics of the participants underscore the importance of fostering ethical character in Islamic colleges through interactive technology, offering insights into its potential impact and applicability within these institutions.

To explore ethical character education in Madurese Islamic colleges via interactive technology, a comprehensive online survey is conducted among lecturers. The survey, based on Balraj Singh's<sup>19</sup> character education theory, delves into lecturers' views on integrating technology in ethical character education. It includes personal information and specific items to thoroughly examine their perspectives and experiences. The finalized survey, after rigorous content review, comprises 2 open-ended items and 16 Likert scale statements, capturing lecturers' insights in the unique context of Madurese Islamic colleges.

The collected data are analyzed using a mixed-methods approach. Descriptive statistics, such as frequencies and percentages, are utilized to analyze the quantitative data obtained from the Likert scale statements, providing insights into lecturers' perspectives and practices in integrating interactive technology in ethical character education.

For the qualitative data gathered from the open-ended responses, a systematic qualitative data analysis method is employed. The analysis explores lecturers' experiences, reflections, and practices in integrating interactive technology in ethical character education. Through a rigorous coding process that involves constant comparison analysis, initial codes are generated, followed by detailed descriptions and classifications of each response.

### **3. Result and Discussion**

This section presents the results of a study investigating the impact of integrating interactive technology on ethical character education in Islamic colleges, focusing on lecturers' perspectives. The study explores how interactive technology influences the development of ethical character traits among students and examines lecturers' insights on its effectiveness in enhancing the educational environment. The findings offer valuable insights into the interplay between interactive technology, ethical character education, and the crucial role of lecturers in shaping a holistic Islamic education for students at Islamic colleges.

#### *3.1 The Impact of Interactive Technology on Student Character and Ethics Development*

Table 2 presents survey results on the impact of digital technology on character and ethics development in Islamic colleges. It reveals insights on how interactive technology enhances character development, facilitates student participation, and promotes Islamic principles' application.

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<sup>19</sup> Singh, "Character Education in the 21st Century."

Table 2. The frequency of respondents' responses in the impact of interactive technology on the student's character and ethic development

Survey Statements	Frequency				
	SA	A	N	DA	SDA
Interactive technology can enhance character and ethics development in Islamic colleges.	20%	44%	16%	16%	4%
Digital Technology serves as a means for students to participate in discussions on ethics and character education actively.	26%	54%	10%	4%	6%
Digital technology helps students apply Islamic principles and values in real-life situations related to ethics and character education.	16%	30%	32%	14%	8%
Digital technology supports students' critical thinking skills and moral reasoning in character and ethics education.	24%	32%	28%	12%	4%

The research findings provide compelling arguments supporting the impact of digital technology on character and ethics development in Islamic colleges. It can be seen in Table 2 that the survey results show mixed responses regarding using interactive technology for character and ethics development in Islamic colleges. Approximately 20% strongly agreed, and 44% agreed with this statement, while 16% remained neutral, 16% disagreed, and 4% strongly disagreed. It is also supported by the respondents' perspectives, indicating that interactive technology plays a crucial role in enhancing character and ethics development. The substantial percentages of agreement demonstrate a widespread recognition of the positive influence of technology on fostering moral values. For instance, one respondent emphasized,

*"The use of applications as a learning medium, such as creating educational content on YouTube, teaches students to develop character and ethics (for example, being responsible, having integrity, and collaborating with their peers) (Respondent 25)".*

This statement underscores the consensus among participants regarding the beneficial effects of technology on shaping ethical behavior and nurturing character traits.

Regarding digital technology's role in facilitating active student participation in ethics and character education discussions, 26% strongly agreed and 54% agreed. Only 10% were neutral, but 4% disagreed and 6% strongly disagreed. Furthermore, the survey findings highlight that digital technology facilitates active student participation in ethics and character education discussions. As expressed by another respondent,

*"Engaging social media content rich in values often resonates with students. For example, short films on platforms like TikTok that highlight the duty of filial piety towards mothers or captivating flash messages can be seen on students' WhatsApp Stories, indicating a shift towards embracing those values and incorporating them into their status updates (Respondent 26)".*

This endorsement further strengthens the argument that technology provides a platform for engaging students in meaningful ethical conversations, encouraging their active involvement in character development.

### 3.2 Challenges Faced in Integrating Digital Technology into Character and Ethics Education in Islamic Colleges

In Islamic colleges, lecturers not only face the challenges of the interactive digital era but also grapple with students' ethical and character development. As technology reshapes education, lecturers must find ways to integrate Islamic values and teachings into the digital learning environment. Balancing technological advancements with Islam's moral and ethical principles becomes crucial in fostering students' character development. This part delves into the challenges lecturers face in the digital era. It explores how they can navigate these challenges while nurturing ethical behavior and character development in Islamic college settings. Researchers then performed the challenges of integrating technologies into character and ethics education in Table 3.

Table 3. Challenges Faced in Integrating Digital Technology into Character and Ethics Education in Islamic Colleges

Survey Statements	Frequency				
	SA	A	N	DA	SDA
Limited technological infrastructure hinders the effective use of digital technology in character and ethics education	26%	46%	14%	12%	2%
Inadequate training and support in utilizing digital technology pose challenges in the development of character and ethics education for students in Islamic colleges	28%	52%	12%	6%	2%
Concerns about digital technology misuse and ethical implications impact character and ethics education in Islamic colleges.	32%	56%	8%	2%	2%
Ethical considerations, such as privacy and content appropriateness, need to be considered when using digital technology.	64%	32%	2%	0%	2%

Quantitative findings reveal several challenges in integrating digital technology in character and ethics education. It can be seen in Table 3 that limited technological infrastructure emerges as a major hurdle, with 26% strongly agreeing and 46% agreeing that it hinders the effective use of digital technology. This indicates that many institutions lack the resources and infrastructure to leverage digital tools for character and ethics education fully.

*“Technological equipment that does not adapt to the current conditions due to limited budget allocation (respondent 5)”.*

Another significant challenge highlighted by the quantitative data is the inadequate training and support in utilizing digital technology, with 28% strongly agreeing and 52% agreeing.

*“As a lecturer, I face challenges with my own digital literacy and inadequate supervision. My students lack social awareness and oversimplify digital technology. To address this, my institution should establish a digital*

*technology ecosystem, provide training, and enforce penalties. I, as a lecturer, can contribute by being a role model and promoting ethical digital technology use. (Respondent 31)".*

This points to the need for comprehensive professional development initiatives to equip faculty and staff with the necessary skills and knowledge to incorporate digital technology into their teaching practices effectively.

*"Top-down regulations and synergy among all academic community members are necessary to guide us towards effective technology usage (respondent 44)".*

Furthermore, concerns about digital technology misuse and ethical implications are evident in the quantitative data, with 32% strongly agreeing and 56% agreeing. This emphasizes the importance of addressing ethical considerations and promoting responsible technology usage to ensure positive character and ethics education outcomes.

*"The challenges in character education in the digital era include balance, safety, cyberbullying, copyright, and plagiarism. Using the Turnitin application helps address plagiarism, and being mindful of technology usage prevents harm; the rapid advancement of technology greatly aids humans in carrying out tasks more easily. However, this also poses a challenge when these conveniences are misused, for example, cheating during exams. To overcome this, creativity is needed to enhance monitoring through technology. In other words, technology can be effectively used to prevent the misuse of technology itself on others (respondent 25)".*

Qualitative findings provide additional insights into the challenges faced in integrating digital technology. Respondent 5 highlights the challenges posed by insufficient campus internet network and limited budget, which hinder the seamless integration of digital technology. This suggests the need for improved infrastructure and budget allocation to enhance digital technology usage in education.

Respondents 25 shed light on the challenges in character education in the digital era, such as maintaining a balance between technology usage and safety, and addressing cyberbullying, copyright infringement, and plagiarism. Tools like Turnitin are suggested to tackle plagiarism, while responsible and mindful technology usage is advocated to prevent harm to others.

Respondent 31 sheds light on challenges encompassing insufficient digital technology literacy among lecturers and students, coupled with a lack of social awareness and oversimplification of technology usage. Addressing these issues requires systematic measures from both institutions and lecturers, involving training, awareness campaigns, and the establishment of a digital technology ecosystem. Moreover, respondent 31 also underscores the digital divide, emphasizing unequal access to technology and the Internet among students. This highlights the imperative to ensure fair and equitable access for all students, as disparities can hinder their learning experiences and character development. Respondents 44 further emphasize the importance of top-down regulations and synergy within the academic community.

On the other hands, Respondent 48's assertion that employing ethics learning applications from Western countries may introduce cultural elements

conflicting with Islamic norms raises a compelling argument. It underscores the imperative of scrutinizing the cultural context embedded in educational technology, especially when it comes to ethics education. The potential clash necessitates a critical examination of specific examples where incongruities may emerge, urging a careful selection process. Furthermore, this argument opens the door to advocating for the development of localized ethics learning applications tailored to align seamlessly with Islamic values. In doing so, it not only addresses the concerns highlighted by respondent 48 but also contributes to a more culturally sensitive and ethically grounded educational environment. This discourse underscores the importance of balancing technological advancements with the preservation of cultural and religious values in the realm of education.

*“Using ethics learning applications developed by Western countries may introduce foreign cultural elements that contradict Islamic norms (respondent 48)”.*

### 3.3 Best Strategies and Practices for Digital Technology Integration in Character and Ethical Development.

in today's digital world, the use of technology has become pervasive in education. It offers numerous opportunities to enhance students' learning experiences and foster their character and ethics. However, it is essential to critically examine digital technology's positive and negative effects on character and ethics development. This article presents a discussion based on qualitative data from interviews with educators and students, supplemented by survey results on integrating digital technology in character education.

Table 4. Finding of the Best Strategies and Practices for Digital Technology Integration in Character and ethical development.

Survey Statements	Frequency				
	SA	A	N	DA	SDA
Providing adequate training and professional development opportunities supports the effective integration of digital technology in character education.	50%	42%	6%	0%	2%
Collaborative tasks and online discussions using digital technology foster character and ethics development among students.	28%	40%	24%	4%	4%
Ongoing evaluation and assessment of the impact of digital technology on character education help refine teaching practices.	4%	46%	8%	0%	2%
Integrating Islamic values and ethics with the use of digital technology can enhance the effectiveness of character education.	54%	32%	10%	2%	2%

It can be seen in Table 4 that the survey reveals that 28% of respondents strongly agree and 40% agree that collaborative tasks and online discussions using digital technology foster student character and ethics development. Similarly, respondent 20 emphasizes the positive impact of digital technology, stating that video projects foster creativity among students, positively influencing their character development.

*“In my digital environment as a lecturer and student, values and behavior are shaped by habits and imitation. Digital interactions, such as frequent instances of plagiarism and translation in assignments and theses, play a significant role in molding character and ethics (respondent 20)”.*

Living in a digital world, our values and behavior are significantly influenced by our habits and imitation of others. Qualitative data from respondent 23 supports this, as they state, "Many assignments and even theses (as I have researched) often contain plagiarism, and this appears to be true because students so frequently do it." This indicates the impact of digital technology on ethics. However, respondent 29 provides a contrasting viewpoint, emphasizing the positive side. They mention that digital technology provides easy access to educational resources, including religious texts, studies, research, and other materials. This enables students to expand their knowledge and understanding of Islam, contributing to developing their character and ethics.

*“The concrete use of digital technology can significantly impact the development of students' character and ethics in Islamic higher education institutions. For example, digital technology provides easy and fast access to educational resources, including religious texts, studies, research, and other educational materials. This enables students to expand their knowledge and understanding of Islam, which can contribute to developing their character and ethics (respondent 29)”.*

Another Qualitative data from respondent 24 and 32 highlights the role of learning platforms such as YouTube in promoting character and ethics. They mention that creating content on YouTube teaches students essential values such as responsibility, integrity, and collaboration with peers.

*“The use of applications as learning platforms, such as creating content on YouTube, teaches students to develop character and ethics (e.g., responsibility, integrity, and collaboration with peers) (respondent 24)”.*

*“The effective way is by searching for social media accounts that can meet the desired criteria (with relevant content) and have attractive packaging (respondent 32)”.*

Additionally, respondent 26 mentions using applications like Padlet to convey relevant stories and highlight moral values during discussions. These platforms offer engaging ways to foster character development and ethics.

*“Usually, I convey it through relevant stories about the things that are currently happening, and I highlight the moral values that we can take from them, using applications like Padlet as a means of discussion (respondent 26)”.*

The survey results indicate that 54% of respondents strongly agree and 32% agree that integrating Islamic values and ethics with interactive digital technology can enhance the effectiveness of character education. Qualitative data from respondent 27 further supports this notion, as they state,

*“Digital technology provides easy and fast access to educational resources, including religious texts, studies, research, and other educational materials.*

*This enables students to expand their knowledge and understanding of Islam, which can contribute to developing their character and ethics (respondent 27)."*

The survey results also show that 50% of respondents strongly agree and 42% agree that providing adequate training and professional development opportunities supports effective integration of digital technology in character education. Additionally, 46% of respondents agree that ongoing evaluation and assessment of the impact of digital technology on character education help refine teaching practices. These findings highlight the importance of continuous improvement and professional development in utilizing digital technology ethically and effectively for character education.

### *3.4 The Lecturers' Perspective in Integrating Interactive Technology in Character Education Impacts the Ethical Character Development in Islamic Colleges*

The research findings provide compelling evidence for the positive effects of interactive technology on student character and ethics development in Islamic colleges, supported by the quantitative and the qualitative data. According to the survey results (Table 2). This quantitative data aligns with the respondents' perspectives, indicating a widespread recognition of the positive influence of technology in fostering moral values. For example, one respondent highlighted educational content on platforms like YouTube, stating that it teaches students to develop character and ethics. This perspective is consistent with existing literature, as previous research has shown that technology-enhanced character education programs positively impact students' ethics and character development<sup>20</sup>.

The qualitative data further reinforces the argument for the positive impact of interactive technology. Respondents emphasized that digital technology facilitates faster access to necessary information (Respondent 2), supporting previous studies that have found technology to be an effective tool for knowledge acquisition and dissemination of ethics and character education<sup>21</sup>. Another respondent mentioned that technology allows students to access diverse information sources (Respondent 49), aligning with research indicating that technology provides students with a broader perspective, facilitating critical thinking and enhancing their understanding of ethical issues<sup>22</sup>.

The survey findings affirm that digital technology plays a crucial role in promoting active student engagement in discussions on ethics and character education. Supported by both quantitative and qualitative data, technology facilitates quick information access and creates an inclusive learning environment aligned with Islamic teachings. It also provides access to valuable online Islamic resources for ethical guidance. From the lecturer's perspective, this research underscores their vital role in establishing a morally upright environment,

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<sup>20</sup> LD Antonoglou, ND Charistos, and MP Sigalas, "Design, Development and Implementation of a Technology Enhanced Hybrid Course on Molecular Symmetry: Students' Outcomes and Attitudes," *Chemistry Education Research and Practice* 12, no. 4 (2011): 454–68.

<sup>21</sup> Sophie Stammers, "Improving Knowledge Acquisition and Dissemination through Technological Interventions on Cognitive Biases," *Educational Theory* 68, no. 6 (2018): 675–92.

<sup>22</sup> Alexandre Castonguay et al., "Revolutionizing Nursing Education through Ai Integration: A Reflection on the Disruptive Impact of ChatGPT," *Nurse Education Today* 129 (2023): 105916.

fostering student engagement in discussions rooted in Islamic principles of ethics and character development. In essence, these elements reveal a compelling synergy between interactive technology, Islamic teachings, and educators in nurturing ethical character.

The survey paints a nuanced picture of interactive technology's impact on applying Islamic principles in real-life ethics and character education situations. It underscores the technology's real-world relevance in promoting ethical behavior by enabling community service, social justice advocacy, and research on ethical issues. However, the mixed survey responses indicate the challenges of integrating technology into ethical education. While it offers opportunities for creativity and innovation, it also introduces risks, such as fostering pragmatic attitudes and copy-pasting behaviors among students. These observations highlight the delicate balance educators navigate when incorporating technology into ethics and character education.

Moreover, research, such as that by Pan and Hamilton <sup>23</sup>, supports the notion that technology, when used effectively, provides a platform for students to explore and apply ethical principles in practical contexts. Students can develop critical thinking skills by analyzing real-world ethical dilemmas, engage in discussions on social justice issues, and even use technology to advocate for positive change in their communities. It's in these instances that the values instilled through Islamic teaching find tangible expression in students' lives.

It is essential to acknowledge the challenges associated with technology use, as revealed in the qualitative data. Concerns were raised about plagiarism and a decline in honesty <sup>24</sup> (Respondents 6 and 21). These insights highlight the need for responsible and ethical use of technology in character and ethics education <sup>25</sup> for that reasons researchers have emphasized the importance of promoting digital citizenship and providing guidance to mitigate these challenges.

Interactive technology is a catalyst for reinforcing core ethical values in character education. It enhances students' knowledge and understanding by providing access to vast information, deepening their grasp of principles, including key Islamic values like honesty, compassion, justice, and integrity. Digital resources enable exploration of Islamic teachings, bridging the gap between theory and practical application. This plays a pivotal role in nurturing a foundation of ethical conduct aligned with Islamic teachings. Moreover, interactive technology stimulates critical thinking through problem-solving activities and ethical decision-making scenarios, fostering essential skills for ethical reasoning. Additionally, it promotes empathy and perspective-taking by exposing students to diverse viewpoints, cultures, and ethical dilemmas.

Virtual simulations, online discussions, and multimedia content enable students to gain a broader understanding of different viewpoints, promoting empathy and aligning with the ethical value of benevolence. Moreover, technology facilitates self-reflection and self-development through platforms allowing students to assess their ethical behavior and make improvements. For example, online journals or self-assessment quizzes enable students to reflect on

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<sup>23</sup> Xueni Pan and Antonia F de C Hamilton, "Why and How to Use Virtual Reality to Study Human Social Interaction: The Challenges of Exploring a New Research Landscape," *British Journal of Psychology* 109, no. 3 (2018): 395–417.

<sup>24</sup> Sumaya Daoud, Hussam Alrabaiah, and Eman Zaitoun, "Technology for Promoting Academic Integrity: The Impact of Using Turnitin on Reducing Plagiarism" (2019 International Arab Conference on Information Technology (ACIT), IEEE, 2019), 178–81.

<sup>25</sup> Keng Siau and Weiyu Wang, "Artificial Intelligence (AI) Ethics: Ethics of AI and Ethical AI," *Journal of Database Management (JDM)* 31, no. 2 (2020): 74–87.

their character and ethics, promoting self-attitude of contentment, sincerity, humility, and personal growth.

In summary, interactive technology plays a significant role in character education by aligning with and reinforcing core ethical values. It promotes knowledge acquisition, critical thinking, empathy, self-reflection, effective communication, teamwork, respect, and accessibility. By leveraging technology in character education, students are empowered to apply these values in real-world contexts, cultivating ethical attitudes and behaviors consistent with the teachings of Islamic values and promoting their overall character and ethics development.

### *3.5 The Challenges Face by the Islamic Colleges Lecturers in Embracing the Digital Age and Effectively Utilizing Interactive Technology for Nurturing Ethical Character Education*

The research reveals significant challenges in introducing digital technology into character and ethics education in Islamic colleges. These challenges are compounded by the deep-rooted values of Madurese society, notably honesty and integrity. However, it's important to note that in contrast with these values, the use of technology can sometimes inadvertently lead to increased instances of cheating and plagiarism. Adding to the complexity, Madurese society is traditionally oriented and less familiar with technology. This convergence of technology and traditional values demands a thoughtful and tailored approach to address the integration challenges effectively, making it a crucial consideration in ethics education.

Quantitative data from the survey reveals significant challenges that lecturers encounter in incorporating digital technology into character and ethics education. The table shows that limited technological infrastructure hinders the effective use of digital technology. The finding suggests that the availability of resources and infrastructure needed to support interactive technology integration<sup>26</sup> is a major obstacle in Islamic colleges, including those in Madurese culture. Addressing this challenge requires investments in improving technological infrastructure within these educational institutions.

Inadequate training and support in utilizing digital technology also pose challenges. This highlights the importance of comprehensive professional development programs for lecturers<sup>27</sup>, specifically tailored to Madurese Islamic colleges' unique cultural and religious context. Such programs would equip educators with the necessary skills and knowledge to effectively integrate interactive technology into character and ethics education.

The concern about digital technology misuse and its ethical implications is another challenge highlighted in the quantitative data. A significant percentage of respondents recognize the impact of these concerns on character and ethics education. In the context of Madurese culture, which strongly emphasizes religious values and ethics, addressing ethical considerations becomes even more crucial. Educators in Madurese Islamic colleges should prioritize

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<sup>26</sup> Javier Gil-Flores, Javier Rodríguez-Santero, and Juan-Jesús Torres-Gordillo, "Factors That Explain the Use of ICT in Secondary-Education Classrooms: The Role of Teacher Characteristics and School Infrastructure," *Computers in Human Behavior* 68 (2017): 441–49.

<sup>27</sup> Sarah A Dysart and Carl Weckerle, "Professional Development in Higher Education: A Model for Meaningful Technology Integration," *Journal of Information Technology Education. Innovations in Practice* 14 (2015): 255.

responsible technology usage and guide students on navigating potential ethical dilemmas when using digital tools <sup>28</sup>.

Respondents mentioned challenges related to limited campus internet networks and limited budget allocations, hindering the seamless integration of interactive technology. These challenges are prevalent in many educational settings, including those within the Madurese cultural context. Overcoming these challenges requires institutional support, increased budget allocations, and infrastructure improvements to effectively use digital technology <sup>29</sup>.

Furthermore, the qualitative data highlights the need for engaging content related to character development. Respondent 11 points out the need for captivating content, indicating the challenge of creating digital resources that effectively engage students in Madurese Islamic colleges. Developing culturally relevant and Islamic-themed content can help align character and ethics education <sup>30</sup> with the values and teachings of Madurese society.

The qualitative data also raises concerns about ethical issues such as cyberbullying, copyright infringement, and plagiarism. In the context of Islamic teachings, these problems can be addressed by emphasizing respect, justice, and integrity <sup>31</sup>. Cyberbullying contradicts Islamic principles of kindness and avoiding harm, while copyright infringement goes against the principles of justice and respecting others' rights. Plagiarism, similarly, breaches Islamic principles of honesty and truthfulness. In essence, Islam provides a moral framework for addressing these issues, promoting empathy, fairness, and integrity in digital interactions.

These concerns resonate with Madurese society's cultural values, which strongly emphasize honesty, respect, and moral conduct <sup>32</sup>. Addressing these issues requires implementing ethical guidelines and responsible technology use practices, ensuring that digital tools are utilized consistently with Islamic principles. To overcome the challenges identified, references to specific strategies and practices can be incorporated. For example, researchers such as McGillivray, et.al have emphasized the importance of promoting digital citizenship and responsible technology use to mitigate challenges associated with technology integration <sup>33</sup>. Additionally, incorporating the principles of Islamic pedagogy and educational philosophies within the digital learning environment can help bridge the gap between technology and character education in Madurese Islamic colleges <sup>34</sup>.

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<sup>28</sup> Victoria A Goodyear, "Social Media, Apps and Wearable Technologies: Navigating Ethical Dilemmas and Procedures," *Qualitative Research in Sport, Exercise and Health* 9, no. 3 (2017): 285–302.

<sup>29</sup> Elena R Vershitskaya et al., "Present-Day Management of Universities in Russia: Prospects and Challenges of e-Learning," *Education and Information Technologies* 25 (2020): 611–21.

<sup>30</sup> Evi Eliyanah, "Gendered Moralities and Cinematic Representations of Indonesian Muslims and Their Arab Others," *Asian Studies Review*, 2022, 1–17.

<sup>31</sup> Mansoureh Ebrahimi, "Islamic Identity, Ethical Principles and Human Values," *European Journal of Multidisciplinary Studies* 2, no. 6 (2017): 325–36.

<sup>32</sup> Moh Wardi and Ismail Ismail, "Following The Prophet Muhammad Character through Ngabuleh Tradition in Pondok Pesantren Darul Ulum Banyuwanyar Pamekasan," *El Harakah* 20, no. 1 (2018): 49.

<sup>33</sup> David McGillivray et al., "Young People, Digital Media Making and Critical Digital Citizenship," *Leisure Studies* 35, no. 6 (2016): 724–38.

<sup>34</sup> Mussa S Abubakari et al., "Analysing Technology Acceptance for Digital Learning in Islamic Education: The Role of Religious Perspective on ICT," *Journal of Computing*

In conclusion, integrating digital technology into character and ethics education in Madurese Islamic colleges faces various challenges, including limited technological infrastructure, inadequate training and support, ethical concerns, and the need for engaging culturally relevant content. Addressing these challenges requires investments in infrastructure, comprehensive professional development programs, ethical guidelines, and the development of culturally appropriate and Islamic-themed digital resources. By effectively navigating these challenges, Madurese Islamic colleges can leverage digital technology to enhance character and ethics education while staying true to their religious and cultural values.

#### **4. Conclusion**

Interactive technology supports essential ethical ideals and character education, according to study. It encourages learning, critical thinking, empathy, self-reflection, communication, teamwork, respect, and accessibility. Interactive Technology in character education empowers students to apply these ideals in real-world circumstances, encouraging ethical attitudes and behaviors consistent with Islamic values and character and ethics development.

Quantitative results show that interactive technology helps users learn faster, find various sources, and participate in ethics and character education conversations. Some respondents think digital technology helps pupils apply Islamic ideals in ethics and character education scenarios

Technology-related issues like plagiarism and dishonesty emphasize the necessity for ethical technology use in character and ethics education. Researchers stress the necessity of digital citizenship and counseling to address these issues.

Interactive technology enhances character education by reinforcing essential ethical ideals, fostering knowledge acquisition, critical thinking, empathy, self-reflection, effective communication, teamwork, respect, and accessibility. This application of technology empowers students to translate these ideals into real-world contexts, promoting ethical attitudes aligned with Islamic values. However, integrating interactive technology into character education at Islamic colleges, particularly in Madurese society, faces challenges due to ethical concerns, limited technology, and insufficient teaching support. Addressing these issues requires a focus on infrastructure, professional development, adherence to ethical principles, and the creation of culturally acceptable Islamic-themed digital resources.

the data underscore challenges like cyberbullying, copyright infringement, and plagiarism, necessitating robust ethical guidelines for technology use. In Madurese society, where virtues like honesty and respect are paramount, the implementation of such guidelines is imperative. Despite obstacles such as limited infrastructure and training, it is argued that Madurese Islamic universities can elevate character and ethics education through strategic deployment of digital technology, aligning with their religious and cultural values.

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