

## Digital Citizenship and Moral Development: Integrating Technology into Family-Based Character Education

Musyarrafah Sulaiman Kurdi

Universitas Islam Negeri Antasari Banjarmasin

Email: [musyarrafah@uin-antasari.ac.id](mailto:musyarrafah@uin-antasari.ac.id)

**Abstract.** *This research explores the intricate relationship between digital citizenship, moral development, and family-based character education, focusing on integrating technology. Employing a library research approach and descriptive analysis method, the study delves into existing literature to investigate the impact of technology-based interventions on parental influences in shaping children's ethical decision-making in the digital age. The research addresses three primary questions: (1) How does incorporating technology in family-oriented character education programs impact children's formation and reinforcement of moral values and digital citizenship skills compared to traditional methods? (2) What are the key challenges and opportunities families face when leveraging technology for character education, and how do these factors influence the effectiveness of moral development within the familial environment? (3) In what ways do parental involvement and modelling of digital behaviours shape children's ethical decision-making and online conduct, and how can technology-based interventions enhance or alter these parental influences on their children's moral development and digital citizenship? Through a comprehensive review of theoretical frameworks, empirical studies, and technology integration models, this research aims to provide valuable insights into the evolving dynamics of character education within the digital landscape.*

**Keywords:** *Digital Citizenship; Moral Development; Technology Integration; Family-Based Character Education; Ethical Decision-Making*

### INTRODUCTION

In today's interconnected digital world, the amalgamation of technology and family-based character education raises critical debates and paradoxes concerning shaping digital citizenship and moral development in children. As digital interfaces permeate various aspects of daily life, their impact on ethical values and the cultivation of responsible digital behaviours within the familial context has sparked considerable discourse among scholars and practitioners. This research explores the multifaceted interactions between technology integration and familial character education and its implications for fostering digital citizenship and moral development in children.

The fusion of technology with family-oriented character education has sparked contrasting viewpoints regarding its effects on children's moral values and digital skills. Some argue that technological integration enhances accessibility to diverse learning resources, encouraging critical thinking and global awareness (Bingimlas, 2009; Ghavifekr & Rosdy, 2015; lai, 2011; Thaiposri & Wannapiroon, 2015). However, others raise concerns about potential detrimental effects, such as erasing interpersonal skills and ethical values due to excessive screen time and exposure to inappropriate content (See also Reid, 2016; Hale & Guan, 2015; Livingstone & Blum-Ross, 2020). This debate underscores the need for a

comprehensive examination of the impact of technology on moral development within family-based character education programs.

Amid this discourse, a paradox emerges concerning the utilization of technology as a tool for promoting and hindering children's moral development. While digital platforms offer avenues for interactive learning and engagement, they concurrently present challenges such as cyberbullying, misinformation, and the blurring of ethical boundaries in online interactions. This paradox accentuates the complex landscape in which technology operates within family dynamics, necessitating a deeper exploration of the balance between its positive and negative influences on children's moral growth.

This research addresses these debates and paradoxes by examining three primary research questions. Firstly, it aims to investigate how integrating technology in family-based character education programs influences children's formation and reinforcement of moral values and digital citizenship skills compared to conventional pedagogical methods. Research by Friedman and Hendry (2019), Verbeek (2011), Hirsch et al. (2003) highlights the need to understand the nuanced effects of technology in shaping moral character within familial settings. Secondly, the research explores families' key challenges and opportunities when leveraging technology to nurture digital citizenship and moral development. The digital landscape presents many challenges, including privacy, online safety, and equitable access to educational resources (Livingstone, 2006; Grant, 2009; Steinberg, 2016). Simultaneously, it offers opportunities for global connectivity and the cultivation of critical digital literacy—a juxtaposition that demands thorough investigation. Lastly, the study explores the intricate relationship between parental involvement, digital behaviours, and their influence on children's ethical decision-making and online conduct. Prior research by Clark (2011), Livingstone et al. (2015; 2017), and Buckingham (2013) underscores the pivotal role of parental guidance in shaping children's digital behaviours and moral compass, emphasizing the need to understand how technology-based interventions could augment or modify parental influences within the digital realm.

This research's significance lies in its potential to inform educators, policymakers, and families about effective strategies and interventions to navigate the complexities of digital citizenship and moral development within family-based character education. By addressing these research questions, this study aims to contribute nuanced insights into leveraging technology to foster ethical values and responsible digital conduct in children, navigating the challenges, and optimizing the opportunities presented within the digital landscape.

## LITERATURE REVIEW

### 1. Digital Citizenship: Conceptual Frameworks and Dimensions

Digital Citizenship within family-based character education encompasses a multifaceted concept that integrates ethical values, responsible digital behaviour, and active participation in the digital realm. Various scholars have attempted to define and establish the parameters of Digital Citizenship in this context. Ribble (2015) defines Digital Citizenship as the "norms of appropriate, responsible behaviour about technology use." Also, digital citizenship is defined by Ribble, Bailey, and Ross as "the rules of behaviour with reference to technology use." In this context, it involves the development of skills encompassing critical thinking, ethical decision-making, digital literacy, and online safety within familial environments. Expanding upon this definition, Ribble emphasizes the importance of integrating these principles into character education within families, highlighting the need to instil responsible digital practices alongside moral values.

The key components and models of Digital Citizenship development elucidate the comprehensive nature of this construct. Scholars like Ribble (2015) have proposed a framework consisting of nine elements: digital access, digital commerce, digital communication, digital literacy, digital etiquette, digital law, digital rights and responsibilities, digital health and wellness, and digital security. This framework outlines the diverse facets necessary for a holistic understanding of Digital Citizenship, emphasizing technical proficiency and ethical, social, and legal dimensions essential within family-based character education.

Theoretical perspectives on Digital Citizenship and its significance in moral development highlight the interplay between technological proficiency and ethical growth. Researchers such as Mossberger (2007), Choi et al. (2017); Kim and Choi (2018), Suson (2019), Cortesi (2020) suggest that Digital Citizenship manifests traditional citizenship in the digital age. The principles and values of good citizenship in traditional society should also apply in the digital realm. In traditional citizenship, individuals are expected to contribute positively to their community, uphold certain ethical standards, and respect the rights and well-being of others. Similarly, in the digital age, digital citizenship involves behaving ethically, respecting the rights and privacy of others online, and contributing positively to the digital community. This includes using technology responsibly, being mindful of digital etiquette, protecting personal information, and engaging in online spaces with integrity. They posit that technology usage necessitates the acquisition of ethical

values and critical thinking skills. Furthermore, from the standpoint of moral development, Kohlberg's theory of moral reasoning and Piaget's stages of cognitive development underscore the role of Digital Citizenship in facilitating the advancement of moral judgment in children within digital spaces (Hollandsworth et al., 2011).

## **2. Moral Development Theories and Family Dynamics**

Moral development theories provide a framework for understanding how individuals acquire and internalize ethical principles over time. One of the most prominent theories is Lawrence Kohlberg's stages of moral development. Kohlberg proposed a six-stage model organized into three levels: pre-conventional, conventional, and post-conventional morality. This theory suggests that moral reasoning evolves through these stages, progressing from self-interest to conformity with societal norms and eventually to principles of justice and universal ethics (Kohlberg, 1969; See also Lapsley, 2006; Nucci & Gingo, 2010). Similarly, Carol Gilligan's theory of moral development highlights gender differences, emphasizing the importance of care-based ethics, relational values, and interconnectedness in ethical decision-making, particularly among women (Gilligan et al., 1971; Gilligan, 1982). These theories provide a foundation for comprehending the progression of moral reasoning and ethical growth in individuals.

The family environment serves as a crucial context for developing and reinforcing moral values and behaviours in children. Researchers such as Maccoby (1994), Kurdi (2022), Putra (2020), Khoironi (2017), Kurdi (2022), Dwiyanti (2013) assert that families play a pivotal role in shaping children's moral development through various mechanisms, including parental modelling, communication patterns, discipline strategies, and value transmission. The quality of parent-child interactions, parental warmth, and responsiveness significantly influence children's moral understanding and behaviour (Hoffman, 1975; Siegal & Francis, 1982; Laible et al., 2019). Furthermore, family dynamics, such as cohesion, conflict resolution, and moral discussions, contribute significantly to children's ethical growth and understanding of moral principles within their immediate environment.

The interplay between parental influences and children's moral development underscores the intricate relationship between parental guidance and the cultivation of ethical values in children. Parental influences manifest through direct instruction, moral conversations, disciplinary practices, and the modelling of ethical behaviours. Researchers such as Garcia (2020), Hawkins (2005), Berkowitz and Grych (1998), Frabutt (2001), Ladd and Kochenderfer-Ladd (2019), Sarwar (2016), Tan and Yasin (2020) emphasize the

significance of authoritative parenting styles characterized by warmth, clear expectations, and reasoning in fostering children's moral development. Additionally, parental values and beliefs profoundly shape children's ethical framework, as children often internalize and emulate parental attitudes and behaviours (See also Karmakar, 2015; Piquart & Fischer, 2022). This interplay between parental influences and children's moral development highlights the critical role of family dynamics in instilling ethical principles and behaviours in children.

### **3. Technology Integration in Family-Based Character Education**

Technology integration in family-based character education encompasses various approaches to merging technological tools with moral education programs. Researchers have outlined diverse strategies for incorporating technology into moral education. For instance, interactive digital platforms, such as gamification and immersive simulations, offer engaging methods to impart moral lessons and ethical decision-making skills to children (Pellegrino, 2014; Saleme, 2022; Kurdi, 2022; Lin et al., 2022). Additionally, utilising online resources, educational apps, and multimedia platforms effectively facilitates discussions on moral dilemmas and values within the familial context. These approaches align with utilizing technology to augment traditional pedagogical methods, offering innovative avenues to instil moral virtues and digital citizenship skills.

The impact of technology on family dynamics and communication patterns has garnered significant attention in scholarly discourse. Research suggests that technology integration within family environments can influence communication dynamics and social interactions among family members. Studies by Kildare and Middlemiss (2017) and Van Hook (2018) reveal that technology usage, particularly excessive screen time or digital device distractions during family interactions, can potentially disrupt the quality of familial relationships. On the contrary, technology can also facilitate family communication by enabling distant interactions, fostering shared activities, and encouraging collaborative learning experiences (Caballé et al., 2010; Raffle et al., 2010; Yuill, 2013; Liu et al., 2013 Livingstone & Third, 2017). The complex interplay between technology and family dynamics underscores the need for a balanced approach to leverage technology's potential while mitigating its adverse effects on familial relationships.

Challenges and opportunities associated with implementing technology in character education at home highlight the nuanced landscape of technological integration within family-based moral education. Challenges include concerns related to digital addiction, online safety, privacy, cyberbullying, and the digital divide, which can hinder

the effective utilization of technology for moral development (Wisniewski et al., 2013; 2014; Kurdi, 2021, Eryadini, 2021; Susanto, 2022; Jolls, 2008; Hiniker et al., 2016). Moreover, discrepancies in access to technology and varying levels of digital literacy among families pose challenges in ensuring equitable opportunities for all children. However, amidst these challenges, technology offers opportunities for personalized learning experiences, access to diverse resources, and the development of critical thinking and problem-solving skills (Apriani, 2016; Grant & Basye, 2014; DeRoche & Williams, 2001). Addressing these challenges while capitalizing on the opportunities is imperative for creating an effective framework for integrating technology into character education within familial settings.

#### **4. Empirical Studies on Digital Citizenship and Moral Development**

Empirical studies examining the relationship between technology and moral development shed light on how technology influences moral values and decision-making in children. According to research findings by Funk (2005), Browne and Hamilton-Giachritsis (2005), Kenwright (2018), Content (2015), Kiesler et al. (2012), Sicert (2011), Gentile et al. (2007) prolonged exposure to violent or unethical content in digital environments –even games – can desensitize children to moral issues and lead to a blurring of ethical boundaries. Contrarily, other studies, such as those by Vaala and Bleakley (2015), Rekus (1991), Mulyani et al. (2017), Aiola (2014), Di Blas and Ferrari (2014), Cain and Smith (2009) highlight that technology-enabled moral education interventions, like digital storytelling or online discussions on ethical dilemmas, can significantly enhance children's moral reasoning abilities and empathetic responses. These findings illustrate the multifaceted impact of technology on moral values, indicating both potential risks and opportunities in shaping children's ethical understanding through digital platforms.

Moreover, the effects of technology use on digital literacy and ethical understanding in children are intricately linked. Research by Bajovic and Elliott (2011), Harrison and Polizzi (2022), Livingstone and Helsper (2007) emphasizes the critical role of digital literacy skills in navigating the complexities of online environments and making informed ethical judgments. Enhancing digital literacy involves technical proficiency and the ability to critically evaluate and interpret online information, discern ethical implications, and participate responsibly in digital spaces. Studies have shown that integrating technology into character education can enhance digital literacy skills while fostering ethical understanding and responsible online behaviour (Yulia et al., 2022;

Mubarok, 2019; Apriani, 2016; Kumpulainen, 2020). This confluence between technology use, digital literacy, and ethical understanding underscores the potential synergy between these domains for comprehensive moral development in children.

Comparative analyses between traditional methods and technology-enabled character education offer insights into the effectiveness of these approaches in fostering moral development. Technology-enabled character education programs can yield comparable or even superior outcomes in promoting moral reasoning and ethical decision-making. Technology-enabled interventions' interactive and immersive nature allows for experiential learning and engagement, facilitating deeper reflection on moral dilemmas and values. One example of this is using interactive online platforms that present ethical scenarios or dilemmas to learners. These platforms often incorporate multimedia elements, such as videos or interactive simulations, to engage participants in a more immersive and dynamic learning experience. Through these technology-enabled programs, learners can actively navigate and make decisions in various ethical situations, allowing for a hands-on and personalized approach to moral development. The interactive nature of technology can enhance engagement, critical thinking, and reflection, potentially leading to more profound insights and a better understanding of ethical principles. This suggests that, when well-designed and implemented, technology-enabled character education can offer outcomes comparable to, if not exceeding, those achieved through traditional educational methods.

However, caution is necessary, as some studies also suggest that over-reliance on technology without adequate guidance or reflection may diminish the effectiveness of character education programs. While technology can be a valuable tool, some studies indicate that an over-reliance on technology might compromise its effectiveness, particularly in the absence of proper guidance or reflective components (See also Grissinger, 2019; Jolls, 2008; Lee, 2013; Ghafar, 2015; Bergen & Davis, 2011). For instance, if a program heavily relies on gamified content or interactive modules without providing opportunities for meaningful reflection or discussion, learners or children may engage with the material superficially, missing out on the depth of moral reasoning and ethical understanding. This highlights the importance of balancing technology with thoughtful pedagogical strategies to ensure that the educational objectives of character education, such as fostering moral development, are not overshadowed by the allure of technology. It emphasizes the need for a holistic approach that combines the strengths of technology with effective guidance and reflective components to optimize the impact of

character education programs. Therefore, while technology presents promising avenues for enhancing moral development, its integration should be complemented by thoughtful pedagogical approaches and reflective practices.

## **5. Parental Involvement and Influence in Digital Citizenship Education**

Parental guidance plays a pivotal role in fostering digital citizenship skills in children within the contemporary technological landscape. Parental involvement significantly influences children's digital behaviours, shaping their understanding of ethical conduct and responsible use of technology (See also Nouwen, 2017). Livingstone, 2019; 2020). Parents are primary role models and educators, imparting critical lessons on online safety, privacy, respectful communication, and ethical decision-making. Furthermore, scholars like Zevenbergen (2007), Maureen (2018), Marsh (2005), Erstand and Gillen (2019) highlight the importance of initiating conversations about digital literacy and digital citizenship early in a child's development, stressing the need for parental guidance to instil these principles effectively.

Parental mediation strategies and practices are central to guiding children's online behaviour and cultivating digital citizenship skills. Studies by Livingstone and Helsper (2008) categorize parental mediation into three main approaches: active mediation, restrictive mediation, and co-use mediation. Active mediation involves discussions and guidance about online content, while restrictive mediation involves limiting access to certain content or platforms. Co-use mediation involves joint participation and supervision of online activities. These strategies are essential in guiding children's digital experiences, facilitating positive engagement, and nurturing responsible digital behaviour aligned with ethical principles.

However, challenges and implications arise concerning parental involvement in technology-based moral education. The rapid evolution of digital technologies often outpaces parents' knowledge and understanding of emerging online platforms and risks, posing challenges in effectively guiding children's digital behaviours (Livingstone & Haddon, 2009). The digital generation gap between parents and children may also lead to varying perceptions of online risks and appropriate behaviours, necessitating ongoing dialogue and education within families (Lauman, 2002; Swift & Taylor, 2003; Chassiakos et al., 2016). The implications of parental involvement in technology-based moral education underscore the need for continuous learning and adaptability among parents to navigate the evolving digital landscape and effectively guide children in practising digital citizenship.



## **RESEARCH METHOD**

A library research approach employing descriptive analysis is utilized research (See also Zed, 2008). This method is chosen due to its effectiveness in systematically reviewing and synthesizing existing literature (Khatibah, 2011), allowing for a comprehensive understanding of the topic's multifaceted aspects. Descriptive analysis enables a detailed examination of diverse perspectives, trends, and debates surrounding digital citizenship, moral development, and technology integration within family-oriented character education. The literature search involves accessing various scholarly databases including but not limited to PubMed, PsycINFO, ERIC, Google Scholar, and academic journals. Keywords such as "digital citizenship," "moral development," "technology integration," "family-based character education," and combinations thereof guide the search strategy. Boolean operators (AND, OR, NOT) refine the search and directly identify relevant literature addressing the research questions. Inclusion criteria for the literature focus on peer-reviewed articles, books, and research studies published that emphasizes empirical studies, theoretical frameworks, case studies, and meta-analyses that specifically discuss the impact of technology on moral development and digital citizenship within familial contexts. Exclusion criteria involve materials needing more empirical evidence, duplicates, and those not directly related to the research questions.

The selection process entails an initial screening of titles and abstracts to identify relevant articles based on the predetermined inclusion criteria. Subsequently, selected articles are thoroughly read, and their content is evaluated to ascertain their suitability for the research objectives. Relevant information, key findings, methodological approaches, and theoretical frameworks from the chosen literature are synthesized and organized thematically to provide a comprehensive overview and descriptive analysis. The research literature involves a sequence of tasks associated with gathering data through various methods, reviewing literature, and documenting and analyzing information from library resources (Khatibah, 2011). A library research approach and descriptive analysis method enable the systematic exploration and synthesis of existing literature on digital citizenship, moral development, and technology integration within family-based character education. This methodological framework facilitates the identification of trends, debates, and gaps in current literature, offering insights to inform and guide discussions, recommendations, and future research endeavours in this domain.

## **FINDINGS AND DISCUSSION**

### **Impact of Tech in Family Character Education on Children's Morals and Digital Skills**

Incorporating technology into family-oriented character education programs profoundly impacts the formation and reinforcement of moral values and digital citizenship skills in children compared to traditional methods:

#### **1. Interactive Learning Platforms**

Integrating technology into family-oriented character education programs revolutionizes the learning experience by introducing interactive and engaging platforms. Unlike traditional methods, technology offers various educational apps, online resources, and digital tools that employ multimedia, simulations, and gamified content to explore and convey moral values. For instance, consider an educational app that uses interactive simulations or storytelling techniques to present moral dilemmas, allowing children to navigate these scenarios and make decisions, thus actively engaging them in learning.

An illustrative example could be an online platform that utilizes gamification to teach digital citizenship and ethical decision-making. Through an interactive game, children are presented with various scenarios where they must make choices reflecting moral values. These scenarios might involve dilemmas related to online behaviour, cyberbullying, or internet safety. By engaging in such activities, children understand the consequences of their choices and internalize moral principles in a more interactive and memorable way compared to traditional lectures or readings. This dynamic engagement enhances children's receptiveness and understanding of moral principles by making the learning experience more enjoyable, immersive, and impactful.

#### **2. Diverse and Personalized Learning**

Integrating technology in family-oriented character education programs significantly transforms the learning landscape by offering children a more diverse and personalized educational experience. Unlike traditional methods, technology enables children to access many resources tailored to their unique learning styles and preferences. For instance, educational apps, online forums, videos, and podcasts present multifaceted content that caters to different interests and approaches to learning. This multimedia content exposes children to perspectives on moral values and ethical dilemmas, fostering critical thinking and nuanced understanding.

For example, consider an interactive online platform designed for character education that offers a range of resources, such as videos depicting real-life scenarios, podcasts discussing moral dilemmas, and interactive discussion forums. A child inclined

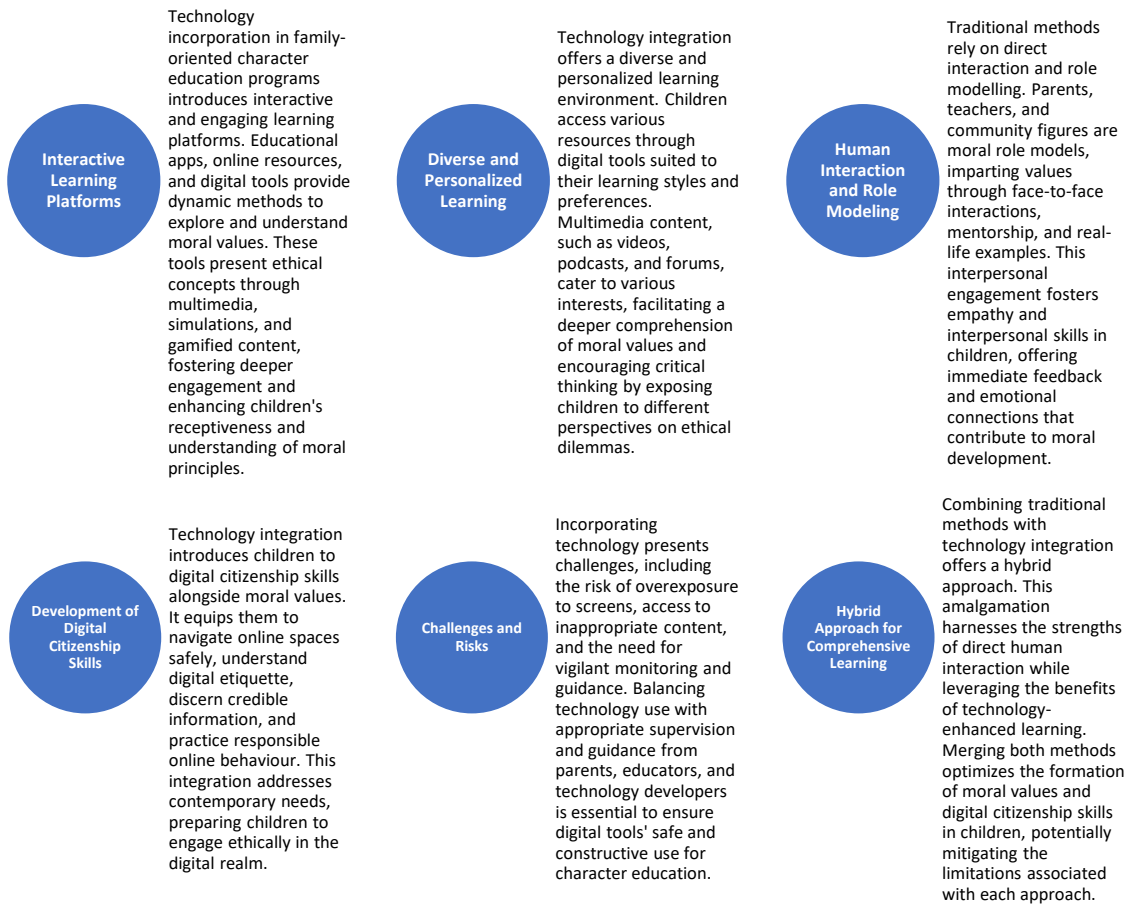
towards visual learning might engage more deeply with the video content showcasing ethical situations, while an auditory learner might resonate better with the podcasts discussing moral values. Additionally, the forums provide opportunities for diverse perspectives and discussions, encouraging children to consider multiple viewpoints. Through this diverse and personalized approach enabled by technology, children can explore moral values in ways that resonate with their learning preferences, fostering deeper comprehension and critical thinking about ethical dilemmas. This personalized learning environment extends beyond traditional classroom settings, providing a rich and multifaceted learning experience conducive to moral development and digital citizenship skills.

### **3. Human Interaction and Role Modeling**

The reliance on direct human interaction and role modelling in traditional character education methods involving parents, teachers, and community figures is fundamental for imparting moral values through personal connections and real-life examples. These role models support children's moral development by offering face-to-face interactions, mentorship, and direct guidance. Through these interactions, children learn about moral principles and witness their application in real-world scenarios, fostering empathy and interpersonal skills. Moreover, the immediate feedback and emotional connections derived from personal interactions play a pivotal role in shaping children's moral compass, providing nuanced insights and a deeper understanding of ethical behaviours.

For example, consider a traditional character education program where parents discuss moral values, such as honesty or kindness, during dinner time. During these conversations, parents share personal experiences or stories that illustrate the importance of these values in daily life. Through these interactions, children learn about the values and witness their parents' embodiment of these principles. The emotional connection and direct involvement in these discussions offer children immediate feedback and a firsthand experience of applying moral values, fostering their moral development through personal connections and real-life examples.

**DIGITAL CITIZENSHIP AND MORAL DEVELOPMENT:  
INTEGRATING TECHNOLOGY INTO FAMILY-BASED CHARACTER EDUCATION**



**Picture 1.** Impact of Tech in Family Character Education on Children's Morals and Digital Skills

#### **4. Development of Digital Citizenship Skills**

The integration of technology in family-oriented character education programs emphasises moral values and addresses the crucial aspect of developing digital citizenship skills in children. Children acquire essential competencies to navigate the digital landscape responsibly through digital tools and educational resources. They learn to discern between credible and misleading information, understand the importance of online privacy and security, and cultivate respectful and ethical behaviour in online interactions. For instance, interactive modules or courses specifically designed for digital citizenship education can simulate various online scenarios, teaching children about the implications of their actions online and guiding them towards responsible online conduct.

An illustrative example might involve an online platform or app dedicated to teaching digital citizenship to children. This platform could include modules on cybersecurity, privacy settings, recognizing online threats like phishing, and promoting respectful communication in digital spaces. Children learn about safe online practices through interactive tutorials or gamified content and engage in scenarios that simulate

real-world digital dilemmas. This immersive approach equips them with the necessary skills and knowledge to navigate the digital world responsibly, addressing contemporary needs and preparing them to engage ethically and safely in the digital realm.

## **5. Challenges and Risks**

Integrating technology in family-oriented character education programs introduces challenges and potential risks that require careful navigation. One significant challenge is the risk of overexposure to screens and excessive use of digital devices, which can adversely affect children's physical and psychological well-being. Moreover, the accessibility of inappropriate or harmful content online poses a concern, necessitating vigilance and measures to safeguard children from exposure to such content. Balancing the benefits of technology-enhanced learning with the risks requires a collaborative effort involving parents, educators, and technology developers. It necessitates implementing robust monitoring systems, parental controls, and age-appropriate content filters to ensure children's safe and constructive engagement with digital tools for character education.

For example, consider an educational app designed for character education that offers interactive modules on moral values. While the app aims to educate children about ethics and digital citizenship, it also exposes them to potential risks such as excessive screen time or accidental access to inappropriate content if not adequately supervised. To address these risks, parents and educators might collaborate to set usage limits, establish guidelines for responsible digital behaviour, and periodically review the app's content and features to ensure its appropriateness for children. Implementing these measures enables a balanced approach where technology is a beneficial tool for character education while minimizing potential risks associated with its use.

## **6. Hybrid Approach for Comprehensive Learning**

The hybrid approach, blending traditional methods with technology integration, presents a comprehensive framework for character education. This amalgamation capitalizes on the strengths of both methods, synergizing direct human interaction from traditional approaches with the advantages of technology-enhanced learning. For instance, combining face-to-face discussions or mentorship sessions with digital tools such as educational apps, online forums, or interactive platforms creates a multifaceted learning environment. This integration allows children to benefit from the emotional connections, role modelling, and immediate feedback offered by traditional methods while engaging with diverse, interactive content that technology provides, thus optimizing the learning experience.

An illustrative example is a character education program incorporating classroom discussions on moral values facilitated by teachers or parents and using digital resources for further exploration. For instance, after a face-to-face discussion about the importance of honesty, children could engage with an online platform offering interactive scenarios or games related to honesty and integrity. This hybrid model amalgamates the strengths of direct human interaction with the interactive and engaging features of technology, fostering a more comprehensive learning experience that optimizes the formation of moral values and digital citizenship skills in children while mitigating the limitations associated with relying solely on traditional or technological approaches.

### **Tech Challenges and Opportunities in Family-based Moral Development**

Families encounter various challenges and opportunities when leveraging technology to foster digital citizenship and moral development among children. One significant challenge is managing and regulating screen time and digital device usage. Excessive screen time adversely affects children's health, including sleep disturbances, sedentary behaviour, and potential cognitive and emotional development issues (Twenge & Campbell, 2018; Lissak, 2018; Stiglic & Viner, 2019; Domoff et al., 2019). Balancing the utilization of technology for educational purposes while ensuring that it does not compromise overall well-being poses a challenge for families. Moreover, the digital divide persists as an obstacle, as not all families have equal access to technology and high-quality educational resources, potentially exacerbating disparities in learning opportunities among children (Van Dijk, 2020).

Another challenge revolves around the evolving nature of technology, making it challenging for parents to keep pace with rapid changes and understand new digital platforms or social media trends. This lack of digital literacy among parents hinders their ability to effectively guide children in navigating the digital world safely and responsibly (Romero, 2014; López, 2017). Additionally, exposure to inappropriate or harmful content online remains a concern. Despite parental controls and filters, children may still inadvertently access content that contradicts the values parents aim to instil, necessitating continuous vigilance and open communication within the family (Livingstone & Haddon, 2009; Clark, 2011).

Conversely, leveraging technology offers various opportunities for families to cultivate digital citizenship and moral development among children. One significant opportunity lies in the accessibility of diverse educational resources and online tools that facilitate learning about moral values and responsible online behaviour. Educational apps, interactive websites, and digital platforms provide engaging and diverse content tailored to

children's learning needs, offering ample opportunities for fostering digital literacy and ethical understanding (McDougall, 2011; Nascimbeni & Vosloo, 2019). Additionally, the potential for remote learning and online educational programs allows families to access resources and expertise beyond their geographical boundaries, enabling a more inclusive approach to character education and moral development.

Moreover, technology provides a platform for parents and children to engage in meaningful discussions about digital citizenship and moral values. Utilizing digital tools, families can initiate conversations, share experiences, and address ethical dilemmas together, fostering stronger family bonds while addressing crucial aspects of digital citizenship (See also Gonzalez-DeHass et al., 2022). Furthermore, the capacity for personalized learning experiences through technology allows families to cater to individual learning styles and preferences, promoting a more engaging and tailored approach to character education (See also Grant, 2009; Jolls, 2008). However, these opportunities are not without challenges. While technology opens doors to a wealth of resources, online information may overwhelm families, making it challenging to discern credible sources from misinformation or unreliable content. This abundance of information also complicates identifying suitable digital tools or educational apps aligned with character education goals. Additionally, privacy and security concerns in online environments pose a significant challenge. Families must navigate the complexities of safeguarding personal information and ensuring online safety while engaging in digital platforms for character education (Maurer, 2021; Garon, 2022). Influence from external factors, such as peer interactions and online communities, presents both challenges and opportunities for families. While digital platforms allow children to connect with peers and diverse communities, thereby broadening their perspectives and fostering collaborative learning experiences, the influence of these external sources on children's moral development and digital behaviours may sometimes conflict with family values or guidelines. Striking a balance between the influence of peers and external communities with the values upheld within the familial environment becomes crucial for effective character education.

Moreover, the influence of technology on family dynamics requires careful consideration. While technology can facilitate family interactions and shared activities, it can also lead to potential negative impact - distractions and fragmented attention - within the family unit (See also Reis, 2021; Gutierrez, 2022, Nursyifa, 2019). Thus, the challenge lies in utilizing technology to strengthen familial relationships while ensuring that it does not detract from quality family time or hinder effective communication among family members.

Families' challenges and opportunities when leveraging technology for character education and digital citizenship underscore the complex landscape of navigating the digital realm within the familial environment. Balancing the potential of technology-enhanced learning with mitigating associated risks requires continuous effort, digital literacy development among both parents and children, open communication within the family, and proactive engagement with technological tools and resources aligned with character education goals (See also Putri, 2018; Adzim, 2021; Kurdi, 2022; Chassiakos et al., 2016; Van Dijk, 2020). Addressing these challenges while leveraging the opportunities offered by technology can significantly influence the effectiveness of character education within families, ultimately fostering ethical values and responsible digital behaviours in children.

The challenges and opportunities presented by leveraging technology profoundly impact the effectiveness of character education within the familial environment. Excessive screen time and digital device usage, one of the challenges families face, can impede the efficacy of character education efforts. Research has indicated a correlation between increased screen time and adverse effects on children's physical and mental health (Domingues-Montanar, 2017; Lissak, 2018). Balancing technology use is essential to maintain a conducive environment for family character education. Excessive screen time might detract from valuable family interactions and hinder opportunities for discussions on moral values. However, leveraging technology presents opportunities to engage children in meaningful discussions and activities centred around character education, strengthening familial bonds and enhancing the effectiveness of imparting moral values.

The evolving nature of technology poses a challenge for parents in keeping up with rapid changes and understanding new digital platforms or social media trends. Limited digital literacy among parents can impact their ability to guide children effectively in the digital world (See also research by Fransori, 2019; Jati, 2021; Livingstone & Helsper, 2007). This challenge can be mitigated by empowering parents through digital literacy programs or workshops designed to enhance their understanding of digital tools and their implications on children's moral development. Consequently, by improving parental digital literacy, families can leverage technology more effectively for character education, maximizing its potential to impart ethical values and reinforce digital citizenship skills in children. The risk of exposure to inappropriate or harmful content online remains a concern for families. Despite parental controls and filters, children may inadvertently access content that conflicts with the values parents aim to instil. This challenges families to foster open communication and proactive engagement in discussing online experiences and ethical behaviour. Effective parental



involvement and open dialogue about online content and behaviour can significantly influence children's understanding of ethical conduct in the digital realm.

Conversely, technology offers families opportunities to engage in collaborative learning experiences, utilizing diverse educational resources and online tools that facilitate discussions on moral values. Educational apps, interactive websites, and digital platforms provide engaging and diverse content tailored to children's learning needs, fostering digital literacy and ethical understanding (See also Hobbs, 2017; Banaszewski, 2005). This diversity of resources allows families to cater to individual learning styles and preferences, promoting a more engaging and personalized approach to character education.

Furthermore, technology provides a platform for families to strengthen familial relationships while addressing critical aspects of digital citizenship and moral values. Utilizing digital tools, families can initiate conversations, share experiences, and address ethical dilemmas together, fostering stronger family bonds. By leveraging technology to enhance family interactions and discussions, parents can effectively reinforce moral values and digital citizenship skills in children (See also Third & Collin, 2016). However, the overwhelming abundance of information online may overwhelm families, making it challenging to discern credible sources from misinformation. This challenge emphasizes the need for critical thinking and digital literacy skills within the familial environment. Developing these skills can empower families to navigate the digital landscape effectively, distinguish reliable information from misleading content, and facilitate constructive discussions about digital ethics and responsible online behaviour.

The influence of peer interactions and external communities on children's moral development and digital behaviours can pose challenges by conflicting with family values or guidelines. Striking a balance between the influence of peers and external communities with the values upheld within the familial environment is crucial (See also research by Soh et al., 2018). Effective communication and parental guidance are pivotal in helping children navigate conflicting information or values encountered outside the family circle.

The challenges and opportunities stemming from leveraging technology significantly influence the effectiveness of character education within the familial environment. Balancing the challenges presented by technology with the opportunities it provides requires active parental involvement, fostering open communication, and promoting digital literacy within families. Empowering parents with digital literacy skills enhances their ability to guide children effectively in the digital world, maximizing the potential of technology to reinforce ethical values and digital citizenship skills in children. Leveraging technology to facilitate

family discussions, collaborative learning experiences, and personalized educational resources can strengthen familial bonds and effectively impart moral values in the digital age.

### **Parental Digital Influence and Tech's Role in Child Moral Development**

Parental involvement and modeling of digital behaviors influence children's ethical decision-making and online conduct, and this involvement can be observed from various aspects, including:

**Table 1. Factors Demonstrating Parental Influence on Children's Ethical Online Behaviour**

No	Factors	How does the factor work?	Example
1	<b>Parental Role Modeling</b>	Parents play a crucial role in shaping children's digital behaviours and ethical decision-making by serving as role models. Research indicates that children often emulate their parents' online conduct and adopt similar digital behaviours (Livingstone & Helsper, 2007; Livingstone & Blum-Ross, 2020; Clark, 2011).	If parents prioritize privacy settings and exhibit responsible online behaviour, their children are likelier to adopt similar practices, learning ethical digital conduct through observation and emulation.
2	<b>Active Communication</b>	Engaging in open and ongoing discussions about digital conduct and ethical decision-making can positively influence children's behaviour. Research suggests that frequent conversations about online behaviour and setting guidelines contribute to children's understanding of appropriate digital conduct (See also Helsper & Eynon, 2010; Sharples et al., 2009; Phippen, 2016)	Parents discussing the consequences of sharing personal information online or addressing cyberbullying incidents provide valuable insights that guide children's ethical decision-making in the digital space.
3	<b>Monitoring and Guidance</b>	Parental monitoring and guidance are essential factors shaping children's online conduct. Studies highlight that active parental supervision positively impacts children's adherence to online safety guidelines and ethical behaviour (See also Livingstone & Haddon, 2009; Livingstone et al., 2011; Kurdi, 2022; Tennakoon et al., 2018; Kochanska & Aksan, 1995)	Parents monitor children's Internet usage and help with guidance on discerning credible sources online in fostering ethical digital behaviour.
4	<b>Setting Boundaries and Rules</b>	Establishing clear boundaries and rules regarding screen time, online activities, and content consumption significantly impacts children's ethical decision-making. Research shows that parental involvement in setting rules improves children's adherence to online safety guidelines (Chassiakos et al., 2016; Hill et al., 2016; Carlson et al., 2010).	Parents setting guidelines on appropriate screen time and content access empowers children to make ethical decisions aligned with the established rules.

5	<b>Digital Literacy Instruction</b>	Parental involvement in teaching digital literacy skills contributes significantly to children's ethical online conduct. Research indicates that parents offering guidance on verifying information sources and evaluating online content enhance children's digital literacy (See also Aryanto et al., 2020; Livingstone & Helsper, 2007).	Parents teaching children to critically assess information found online aids in developing their ethical decision-making skills.
6	<b>Co-Engagement in Online Activities</b>	Participating in online activities together fosters ethical decision-making in children. Studies show that joint engagement in educational online content or gaming experiences allows parents to model ethical behaviour and reinforce positive digital conduct (See also Huda et al., 2017; Morgan, 2020; Richardson, 2019; Livingstone & Haddon, 2009; Duerager & Livingstone, 2012).	Parents engaging in online educational activities with their children reinforce ethical behaviours and facilitate discussions about responsible online conduct.
7	<b>Parental Support during Online Challenges</b>	Providing support and guidance during challenging online situations significantly influences children's ethical decision-making. Research suggests that children seek parental support when encountering online dilemmas (See also Helsper & Eynon, 2010; Staksrud & Livingstone, 2009; Hasson & Mesch, 2017).	Parents offering guidance when children face cyberbullying incidents helps in developing ethical responses and coping mechanisms.
8	<b>Emphasizing Respectful Online Communication</b>	Parents emphasizing respectful communication in online interactions contribute to children's ethical conduct. Studies highlight that parental guidance on respectful behaviour positively influences children's online interactions (See also Blum-Ross & Livingstone, 2016; Livingstone & Helsper, 2007; Valcke et al., 2010).	Parents modelling respectful communication in online forums or social media platforms set examples for children to emulate.
9	<b>Feedback and Corrective Measures</b>	Offering constructive feedback and corrective measures when children exhibit inappropriate online behaviours aids in shaping ethical decision-making. Research suggests that parental involvement in addressing and rectifying unethical online behaviour promotes ethical conduct in children (See also Nensen et al., 2012; Chassiakos et al., 2016; Livingstone & Helsper, 2008).	Parents discussing the consequences of inappropriate online behaviour and implementing corrective measures contribute to children's understanding of ethical conduct.
10	<b>Consistent and Positive Reinforcement</b>	Providing consistent and positive reinforcement for ethical online behaviour reinforces children's decision-making. Studies show that praising and acknowledging children's adherence to online safety guidelines and ethical conduct reinforces positive behaviours (See also Brady, 2010; Livingstone & Helsper, 2007; Sharples et al., 2009; Chang, 2010; Livingstone & O'Neill, 2014)	parents praising children for adhering to set online rules encourage ethical decision-making in future online interactions.

Parental involvement and modelling of digital behaviours significantly influence children's ethical decision-making and online conduct. Through active communication, setting boundaries, teaching digital literacy, and positive role modelling, parents can effectively shape children's ethical behaviours in the digital realm. These efforts contribute to fostering responsible and ethical digital citizens. Technology-based interventions can significantly augment and transform parental influences on children's moral development and digital citizenship by providing innovative tools and platforms. Here is an exploration of how technology interventions can impact parental influence:

Firstly, technology can extend parental guidance by offering educational resources and interactive tools that reinforce ethical values. Educational apps and online platforms curated for character education provide children access to diverse content aligned with parental values. For instance, parents leveraging educational apps that promote empathy or ethical decision-making supplement their guidance, reinforcing moral values outside traditional interactions. Secondly, technology facilitates active parental involvement in children's online activities, enabling real-time monitoring and guidance. Parental control features embedded in devices or applications allow parents to supervise online behaviour and enforce age-appropriate content restrictions. For example, parental controls on internet browsers can filter inappropriate content, extending parents' ability to regulate and guide children's online experiences.

Furthermore, technology provides a platform for open communication and discussions within the family. Messaging apps or family-friendly social media platforms allow parents to engage in ongoing conversations about digital conduct and ethical dilemmas. Such platforms create opportunities for collaborative learning experiences, enabling parents to address online challenges and reinforce ethical decision-making skills in children. Moreover, technology interventions enhance children's digital literacy, complementing parental efforts in guiding responsible online behaviour. Digital literacy programs or online tutorials teach children critical thinking, discernment of credible information, and online safety practices. When parents actively support and reinforce these skills, technology becomes a valuable tool in shaping children's ethical digital citizenship.

Another aspect where technology impacts parental influence is through modelling ethical behaviour. Parents demonstrating responsible and respectful online conduct set examples for children to emulate. For instance, parents participating in online forums or social media platforms with ethical behaviour model appropriate online interactions, reinforcing positive digital conduct in children. Furthermore, technology-based interventions

facilitate joint participation in online activities between parents and children. Collaborative gaming experiences or educational platforms allow for shared engagement, enabling parents to model ethical decision-making and reinforce digital citizenship skills in interactive settings. This shared engagement augments parental influence by providing immediate guidance and feedback during online interactions.

Moreover, technology interventions enable parents to address digital challenges effectively. Online resources and forums offer parents guidance on navigating complex online dilemmas, equipping them with strategies to guide children through challenging digital situations. By empowering parents with knowledge and tools, technology interventions enhance their capacity to influence children's ethical responses to online challenges. Additionally, technology interventions foster personalized learning experiences, tailoring educational content to individual needs and preferences. Adaptive learning platforms cater to diverse learning styles, reinforcing parental efforts to promote moral values and digital citizenship. For example, personalized educational apps can adjust content based on a child's learning pace, facilitating a more effective transfer of ethical principles. Furthermore, technology-based interventions enable parents to provide constructive feedback and corrective measures for children's online behaviour. Digital tools that track and monitor online activities empower parents to address inappropriate conduct promptly. By offering immediate feedback and implementing corrective measures, technology supports parents in shaping ethical digital behaviours in children.

Technology-based interventions significantly augment parental influences on children's moral development and digital citizenship by extending parental guidance, enabling active involvement, fostering open communication, enhancing digital literacy, modelling ethical behaviour, enabling joint engagement, facilitating effective problem-solving, offering personalized learning experiences, and providing feedback mechanisms. When used thoughtfully and in tandem with parental guidance, technology becomes a powerful tool for shaping ethical digital citizens.

## **CONCLUSION AND RECOMMENDATION**

This research underscores the intricate interplay between parental influences, technology-based interventions, and the shaping of children's moral development and digital citizenship. The existing literature reveals that parental involvement remains a cornerstone, with active communication, setting boundaries, and serving as ethical role models being pivotal elements. Technology interventions emerge as transformative tools, extending

parental influence through educational apps, monitoring features, and collaborative online activities. The synergistic integration of technology with parental guidance facilitates personalized learning experiences, fosters digital literacy, and addresses contemporary challenges. Acknowledging the potential risks and challenges, such as overexposure and the need for vigilant monitoring, a balanced and thoughtful approach is crucial. As families navigate the digital landscape, the effective fusion of parental influences with technology-based interventions emerges as a promising avenue for instilling robust moral values and cultivating responsible digital citizenship in the younger generation.

## **REFERENCES**

- Abiola, L. L. (2014). The effect of digital storytelling on kindergarten pupils' achievement in moral instruction in basic schools in Oyo State. *IOSR Journal of Research & Method in Education*, 4(5), 26-34.
- Adzim, A. K. (2021). Konsep Pendidikan Karakter Anak Berbasis Keluarga Islami Era Society 5.0. *journal TALIMUNA*, 10(1), 14-23.
- Apriani, E. (2016). A New Literacy: The role of technology to develop student's character. *Ta'dib: Jurnal Pendidikan Islam*, 21(1), 59-72.
- Bajovic, M., & Elliott, A. (2011). The intersection of critical literacy and moral literacy: Implications for practice. *Critical Literacy: Theories & Practices*, 5(1).
- Banaszewski, T. M. (2005). *Digital storytelling: Supporting digital literacy in grades 4-12* (Doctoral dissertation, Information Design and Technology, Georgia Institute of Technology).
- Bergen, D., & Davis, D. (2011). Influences of Technology-Related Playful Activity and Thought on Moral Development. *American Journal of Play*, 4(1), 80-99.
- Berkowitz, M. W., & Grych, J. H. (1998). Fostering goodness: Teaching parents to facilitate children's moral development. *Journal of moral Education*, 27(3), 371-391.
- Bingimlas, K. A. (2009). Barriers to the successful integration of ICT in teaching and learning environments: A review of the literature. *Eurasia Journal of Mathematics, science and technology education*, 5(3), 235-245.
- Blum-Ross, A., & Livingstone, S. (2016). Families and screen time: Current advice and emerging research.
- Browne, K. D., & Hamilton-Giachritsis, C. (2005). The influence of violent media on children and adolescents: a public-health approach. *The Lancet*, 365(9460), 702-710.
- Buckingham, D. (2013). *Beyond technology: Children's learning in the age of digital culture*. John Wiley & Sons.
- Caballé, S., Xhafa, F., & Barolli, L. (2010). Using mobile devices to support online collaborative learning. *Mobile information systems*, 6(1), 27-47.
- Cain, J., & Smith, D. (2009). Increasing moral reasoning skills through online discussions. *Quarterly Review of Distance Education*, 10(2), 149.

- Carlson, S. A., Fulton, J. E., Lee, S. M., Foley, J. T., Heitzler, C., & Huhman, M. (2010). Influence of limit-setting and participation in physical activity on youth screen time. *Pediatrics*, *126*(1), e89-e96.
- Chang, C. (2010). Internet safety survey: Who will protect the children. *Berkeley Tech. LJ*, *25*, 501.
- Choi, M., Glassman, M., & Cristol, D. (2017). What it means to be a citizen in the internet age: Development of a reliable and valid digital citizenship scale. *Computers & education*, *107*, 100-112.
- CONTENT, A. (2015). Children and digital media. *Handbook of Child Psychology and Developmental Science, Ecological Settings and Processes*, *4*, 375.
- Cortesi, S., Hasse, A., Lombana-Bermudez, A., Kim, S., & Gasser, U. (2020). Youth and digital citizenship+ (plus): Understanding skills for a digital world. *Berkman Klein Center Research Publication*, (2020-2).
- Clark, L. S. (2011). Parental mediation theory for the digital age. *Communication theory*, *21*(4), 323-343.
- DeRoche, E. F., & Williams, M. M. (2001). *Educating hearts and minds: A comprehensive character education framework*. Corwin Press.
- Di Blas, N., & Ferrari, L. (2014). Digital storytelling at school: what kind of educational benefits?. *International Journal of Arts and Technology*, *7*(1), 38-54.
- Domoff, S. E., Borgen, A. L., Foley, R. P., & Maffett, A. (2019). Excessive use of mobile devices and children's physical health. *Human Behavior and Emerging Technologies*, *1*(2), 169-175
- Domingues-Montanari, S. (2017). Clinical and psychological effects of excessive screen time on children. *Journal of paediatrics and child health*, *53*(4), 333-338.
- Duerager, A., & Livingstone, S. (2012). How can parents support children's internet safety?.
- Dwiyanti, R. (2013). Peran Orangtua Dalam Perkembangan Moral Anak (Kajian Teori Kohlberg).
- Erstad, O., & Gillen, J. (2019). Theorizing digital literacy practices in early childhood. In *The Routledge handbook of digital literacies in early childhood* (pp. 31-44). Routledge.
- Eryadini, N. (2021). Strengthening character education in fostering a wise attitude using social media. *Journal of diversity in learning (JDIL)*, *1*(4), 136-142.
- Frabutt, J. M. (2001). Parenting and child development: Exploring the links with children's social, moral, and cognitive competence. *Handbook of research on Catholic education*, 183-204.
- Fransori, A., Sulistijani, E., & Parwis, F. Y. (2019). Penyuluhan Pola Asuh Orang Tua Terhadap Anak Dalam Penguatan Pendidikan Karakter Anak Dan Literasi Digital Pada Ibu-Ibu Majelis Taklim Al-Hidayah Depok. *Jurnal Pengabdian Masyarakat Ilmu Keguruan dan Pendidikan (JPM-IKP)*, *2*(01).
- Friedman, B., & Hendry, D. G. (2019). *Value sensitive design: Shaping technology with moral imagination*. Mit Press.
- Funk, J. B. (2005). Children's exposure to violent video games and desensitization to violence. *Child and Adolescent Psychiatric Clinics*, *14*(3), 387-404.

- Garcia, O. F., Fuentes, M. C., Gracia, E., Serra, E., & Garcia, F. (2020). Parenting warmth and strictness across three generations: Parenting styles and psychosocial adjustment. *International Journal of environmental research and public health*, 17(20), 7487.
- Garon, J. M. (2022). *Parenting for the Digital Generation: A Guide to Digital Education and the Online Environment*. Rowman & Littlefield.
- Gentile, D. A., Saleem, M., & Anderson, C. A. (2007). Public policy and the effects of media violence on children. *Social Issues and Policy Review*, 1(1), 15-61.
- Ghafar, M. N. A. (2015). CHARACTER EDUCATION AND TECHNOLOGY. In *International Conference on Education* (p. 7).
- Ghavifekr, S., & Rosdy, W. A. W. (2015). Teaching and learning with technology: Effectiveness of ICT integration in schools. *International journal of research in education and science*, 1(2), 175-191.
- Gilligan, C., Kohlberg, L., Lerner, J., & Belenky, M. (1971). Moral Reasoning. *Technical Report of the Commission on Obscenity and Pornography: Preliminary studies*, 1, 141.
- Gonzalez-DeHass, A. R., Willems, P. P., Powers, J. R., & Musgrove, A. T. (2022). Parental involvement in supporting students' digital learning. *Educational Psychologist*, 57(4), 281-294.
- Grant, L. (2009). Learning in Families: A review of research evidence and the current landscape of Learning in Families with digital technologies. *General Educators Report*, 59.
- Grant, P., & Basye, D. (2014). *Personalized learning: A guide for engaging students with technology*. International Society for Technology in Education.
- Grissinger, M. (2019). Understanding human over-reliance on technology. *Pharmacy and Therapeutics*, 44(6), 320.
- Gutierrez, F. J., Ochoa, S. F., & Vassileva, J. (2017). Mediating intergenerational family communication with computer-supported domestic technology. In *Collaboration and Technology: 23rd International Conference, CRIWG 2017, Saskatoon, SK, Canada, August 9-11, 2017, Proceedings 23* (pp. 132-147). Springer International Publishing.
- Hale, L., & Guan, S. (2015). Screen time and sleep among school-aged children and adolescents: a systematic literature review. *Sleep medicine reviews*, 21, 50-58.
- Harrison, T., & Polizzi, G. (2022). (In) civility and adolescents' moral decision making online: Drawing on moral theory to advance digital citizenship education. *Education and Information Technologies*, 27(3), 3277-3297.
- Sasson, H., & Mesch, G. (2017). The role of parental mediation and peer norms on the likelihood of cyberbullying. *The Journal of genetic psychology*, 178(1), 15-27.
- Hawkins, S. M. (2005). The influence of parenting styles on the development of moral judgment in college level adolescents.
- Haryanto, H., Ghufron, A., Suyantiningsih, S., & Kumala, F. N. (2022). The Correlation between Digital Literacy and Parents' Roles towards Elementary School Students' Critical Thinking. *Cypriot Journal of Educational Sciences*, 17(3), 828-839.
- Helsper, E. J., & Eynon, R. (2010). Digital natives: where is the evidence?. *British educational research journal*, 36(3), 503-520.



- Hirsch, E., & Silverstone, R. (2003). Information and communication technologies and the moral economy of the household. In *Consuming technologies* (pp. 25-40). Routledge.
- Hoffman, M. L. (1975). Moral internalization, parental power, and the nature of parent-child interaction. *Developmental psychology*, 11(2), 228.
- Hobbs, R. (2017). *Create to learn: Introduction to digital literacy*. John Wiley & Sons.
- Hollandsworth, R., Dowdy, L., & Donovan, J. (2011). Digital citizenship in K-12: It takes a village.
- Huda, M., Jasmi, K. A., Hehsan, A., Mustari, M. I., Shahrill, M., Basiron, B., & Gassama, S. K. (2017). Empowering children with adaptive technology skills: Careful engagement in the digital information age. *International Electronic Journal of Elementary Education*, 9(3), 693-708.
- Jati, W. D. P. (2021). Literasi Digital Ibu Generasi Milenial terhadap Isu Kesehatan Anak dan Keluarga. *Jurnal Komunikasi Global*, 10(1), 1-23.
- Jolls, T. (2008). The impact of technology on character education. *USA [United States of America]: Center for Media Literacy*. Available online also at: <http://www.medialit.org/sites/default/files> [accessed in Serang City, Indonesia: April 15, 2017].
- Karmakar, R. (2015). Does parenting style influence the internalization of moral values in children and adolescents?. *Psychological Studies*, 60, 438-446.
- Kenwright, B. (2018). Virtual reality: ethical challenges and dangers [opinion]. *IEEE Technology and Society Magazine*, 37(4), 20-25.
- Khaironi, M. (2017). Pendidikan moral pada anak usia dini. *Jurnal Golden Age*, 1(01), 1-15.
- Kildare, C. A., & Middlemiss, W. (2017). Impact of parents mobile device use on parent-child interaction: A literature review. *Computers in Human Behavior*, 75, 579-593.
- Kim, M., & Choi, D. (2018). Development of youth digital citizenship scale and implication for educational setting. *Journal of Educational Technology & Society*, 21(1), 155-171.
- Kochanska, G., & Aksan, N. (1995). Mother-child mutually positive affect, the quality of child compliance to requests and prohibitions, and maternal control as correlates of early internalization. *Child development*, 66(1), 236-254.
- Kohlberg, L., & Kramer, R. (1969). Continuities and discontinuities in childhood and adult moral development. *Human development*, 12(2), 93-120.
- Kumpulainen, K., Sairanen, H., & Nordström, A. (2020). Young children's digital literacy practices in the sociocultural contexts of their homes. *Journal of Early Childhood Literacy*, 20(3), 472-499.
- Kurdi, M. S., & Afif, Y. U. (2021). The enhancement of islamic moral values through sex education for early children in the family environment. *Religio Education*, 1(2), 106-116. <https://doi.org/10.17509/re.v1i2.41346>
- Kurdi, M. S. (2021). Dampak Globalisasi pada Konten dan Mata Pelajaran Pada Kurikulum di Madrasah Ibtidaiyah: Tantangan Dan Peluang. *CENDEKIA: Jurnal Ilmu Sosial, Bahasa dan Pendidikan*, 1(4), 32-59.
- Kurdi, M. S., & Kurdi, M. S. (2021). Analisis Bibliometrik dalam Penelitian Bidang Pendidikan: Teori dan Implementasi. *Journal on Education*, 3(4), 518-537. <https://doi.org/10.31004/joe.v3i4.2858>

- Kurdi, M. S. (2020). Inovasi Doktrin Ajaran Islam Di Masa Pandemi Untuk Generasi Digital Native. *Jurnal Hawa: Studi Pengarus Utamaan Gender dan Anak*, 2(2). <http://dx.doi.org/10.29300/hawapsga.v2i2.3361>
- Kurdi, M. S., Mardiah, M., Kurdi, M. S., Usman, M. I. G., & Taslimurrahman, T. T. (2020). Speaking Activities In Madrasah Ibtidaiyah: A Meta Narrative About Character Building And Multiculturalism Point Of View. *Al-Bidayah: jurnal pendidikan dasar Islam*, 12(1), 55-82. <https://dx.doi.org/10.14421/al-bidayah.v12i1.534>
- Kurdi, M. S. (2018). Madrasah Ibtidaiyah dalam Pandangan Dunia: Isu-Isu Kontemporer dan Tren dalam Pendidikan. *Al Ibtida: Jurnal Pendidikan Guru MI*, 5(2), 231-248.
- Kurdi, M. S. (2021). Realitas Virtual Dan Penelitian Pendidikan Dasar: Tren Saat Ini dan Arah Masa Depan. *CENDEKIA: Jurnal Ilmu Sosial, Bahasa dan Pendidikan*, 1(4), 60-85.
- Kurdi, M. S. (2020). Meta Narasi Nilai-Nilai Responsif Gender Dalam Mata Pelajaran Fiqh Di Madrasah Ibtidaiyah. *Jurnal Hawa: Studi Pengarus Utamaan Gender dan Anak*, 2(2).
- Kurdi, M. S. (2018). Evaluasi Implementasi Desain Pendidikan Karakter Berbasis Pendekatan Humanistik. *Elementary: Jurnal Ilmiah Pendidikan Dasar*, 4 (2), 125. 2011).
- Ladd, G. W., & Kochenderfer-Ladd, B. (2019). Parents and children's peer relationships. *Handbook of parenting*, 278-315.
- Lai, E. R. (2011). Critical thinking: A literature review. *Pearson's Research Reports*, 6(1), 40-41.
- Laible, D. J., Karahuta, E., Van Norden, C., Interra, V., & Stout, W. (2019). The socialization of children's moral understanding in the context of everyday discourse. *The Oxford handbook of parenting and moral development*, 287-300.
- Lapsley, D. K. (2006). Moral stage theory. In *Handbook of moral development* (pp. 55-84). Psychology Press.
- Lauman, D. J. (2002). Exploring the digital gap between parents and their adolescent children.
- Lee, C. Y., Der Pan, P. J., Liao, C. J., Chen, H. Y., & Walters, B. G. (2013). E-character education among digital natives: Focusing on character exemplars. *Computers & Education*, 67, 58-68.
- Lin, W., Wang, J. Y., & Yueh, H. P. (2022). Learning information ethical decision making with a simulation game. *Frontiers in Psychology*, 13, 933298.
- Lissak, G. (2018). Adverse physiological and psychological effects of screen time on children and adolescents: Literature review and case study. *Environmental research*, 164, 149-157.
- LIU, C. C., TSENG, K. H., & WU, L. Y. (2013). A participatory learning framework for enhancing children's reading experience with electronic book readers. *Research and Practice in Technology Enhanced Learning*, 8(1), 129-151.
- Livingstone, S. (2006). Children's privacy online: experimenting with boundaries within and beyond the family.

- Livingstone, S., & Blum-Ross, A. (2020). *Parenting for a digital future: How hopes and fears about technology shape children's lives*. Oxford University Press, USA.
- Livingstone, S., & Helsper, E. J. (2008). Parental mediation of children's internet use. *Journal of broadcasting & electronic media*, 52(4), 581-599.
- Livingstone, S., & Haddon, L. (Eds.). (2009). *Kids online: Opportunities and risks for children*. Policy press.
- Livingstone, S., & Haddon, L. (2009). EU Kids Online. *Zeitschrift Für Psychologie/Journal of Psychology*, 217(4), 236.
- Livingstone, S., & Haddon, L. (Eds.). (2009). *Kids online: Opportunities and risks for children*. Policy press.
- Livingstone, S., Mascheroni, G., Dreier, M., Chaudron, S., & Lagae, K. (2015). How parents of young children manage digital devices at home: The role of income, education and parental style.
- Livingstone, S., Ólafsson, K., Helsper, E. J., Lupiáñez-Villanueva, F., Veltri, G. A., & Folkvord, F. (2017). Maximizing opportunities and minimizing risks for children online: The role of digital skills in emerging strategies of parental mediation. *Journal of communication*, 67(1), 82-105.
- Livingstone, S., Haddon, L., Görzig, A., & Ólafsson, K. (2011). Risks and safety on the internet: the perspective of European children: full findings and policy implications from the EU Kids Online survey of 9-16 year olds and their parents in 25 countries.
- Livingstone, S., & Helsper, E. J. (2007). Taking risks when communicating on the Internet: The role of offline social-psychological factors in young people's vulnerability to online risks. *Information, Communication & Society*, 10(5), 619-644.
- Livingstone, S., & Helsper, E. (2007). Gradations in digital inclusion: Children, young people and the digital divide. *New media & society*, 9(4), 671-696.
- Livingstone, S., & O'Neill, B. (2014). Children's rights online: Challenges, dilemmas and emerging directions. *Minding minors wandering the web: Regulating online child safety*, 19-38.
- Livingstone, S., & Third, A. (2017). Children and young people's rights in the digital age: An emerging agenda. *New media & society*, 19(5), 657-670.
- Livingstone, S., & Helsper, E. J. (2008). Parental mediation of children's internet use. *Journal of broadcasting & electronic media*, 52(4), 581-599.
- López, N. M., Robles, A. C. G., Gómez, A. C. T., & Hernández, J. A. (2017). Digital literacy to parents in the use of social networks. *Alteridad: Revista de Educación*, 12(1), 8.
- Maccoby, E. E. (1994). The role of parents in the socialization of children: An historical overview.
- Marsh, J. (Ed.). (2005). *Popular culture, new media and digital literacy in early childhood*. Psychology Press.
- Maurer, K. S. (2021). *A Qualitative Study of Parental Involvement in Middle School Character Education and Social and Emotional Learning Programming* (Doctoral dissertation, Point Park University).

- Maureen, I. Y., van der Meij, H., & de Jong, T. (2018). Supporting literacy and digital literacy development in early childhood education using storytelling activities. *International Journal of Early Childhood*, 50, 371-389.
- McCuddy, T. (2021). Peer delinquency among digital natives: The cyber context as a source of peer influence. *Journal of Research in Crime and Delinquency*, 58(3), 306-342.
- McDougall, J., Readman, M., & Wilkinson, P. (2018). The uses of (digital) literacy. *Learning, Media and Technology*, 43(3), 263-279.
- Morgan, N. (2020). Children as digital citizens: Closing the gap on parental engagement. *Information Technology, Education and Society*, 17(1), 41-54.
- Mubarok, H. (2019, November). Family Digital Literacy for Character Building in Primary Education. In *Proceeding of International Conference on Islamic Education: Challenges in Technology and Literacy Faculty of Education and Teacher Training, Universitas Islam Negeri Maulana Malik Ibrahim Malang* (Vol. 4, No. 1, pp. 419-425).
- Mulyani, S. H., Hendrik, B., Putra, M. R., Gushelmi, Naf'an, E., Ali, N. M., & Ismail, K. (2017). Technological intervention for moral education among teenagers: A review. In *Advances in Visual Informatics: 5th International Visual Informatics Conference, IVIC 2017, Bangi, Malaysia, November 28–30, 2017, Proceedings 5* (pp. 647-657). Springer International Publishing.
- Nascimbeni, F., & Vosloo, S. (2019). Digital literacy for children: Exploring definitions and frameworks. *Scoping Paper, 1*.
- Nouwen, M., JafariNaimi, N., & Zaman, B. (2017). Parental controls: reimagining technologies for parent-child interaction. In *Proceedings of 15th European Conference on Computer-Supported Cooperative Work-Exploratory Papers* (Vol. 2017, pp. 18-34). European Society for Socially Embedded Technologies (EUSSET).
- Nucci, L. P., & Gingo, M. (2010). The development of moral reasoning. *The Wiley-Blackwell handbook of childhood cognitive development*, 420-445.
- Nursyifa, A. (2019). The Socialization of the Important of Family Roles as Prevention Actions toward the Negative Impact of Technology on Children in the Digital Age [Sosialisasi Peran Penting Keluarga Sebagai Upaya Pencegahan Dampak Negatif Teknologi pada Anak dalam Era Digital]. *Proceeding of Community Development*, 2, 648-657.
- Pellegrino, K. C., Pellegrino, R., & Perkins, D. (2014). "Call of Duty" in the classroom: Can gamification improve ethical student learning outcomes? A pilot study. *Journal of Business Ethics Education*, 11, 89-104.
- Phippen, A. (2016). *Children's online behaviour and safety: Policy and rights challenges*. Springer.
- Pinquart, M., & Fischer, A. (2022). Associations of parenting styles with moral reasoning in children and adolescents: A meta-analysis. *Journal of Moral Education*, 51(4), 463-476.
- Putra, A. (2020). Ragam Studi Fungsi Keluarga Dalam Membentuk Moral Anak (Analisis Melalui Konseling Keluarga). *Jurnal Al-Irsyad: Jurnal Bimbingan Konseling Islam*, 2(2), 215-230.
- Putri, D. P. (2018). Pendidikan karakter pada anak sekolah dasar di era digital. *AR-RIAYAH: Jurnal Pendidikan Dasar*, 2(1), 37-50.

- Raffle, H., Ballagas, R., Revelle, G., Horii, H., Follmer, S., Go, J., ... & Spasojevic, M. (2010, April). Family story play: reading with young children (and elmo) over a distance. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (pp. 1583-1592).
- Reid Chassiakos, Y. L., Radesky, J., Christakis, D., Moreno, M. A., Cross, C., Hill, D., ... & Swanson, W. S. (2016). Children and adolescents and digital media. *Pediatrics*, 138(5).
- Reis, L., Mercer, K., & Boger, J. (2021). Technologies for fostering intergenerational connectivity and relationships: Scoping review and emergent concepts. *Technology in Society*, 64, 101494.
- Rekus, J. (1991). Teaching technology with a focus on moral education. *International Journal of Technology and Design Education*, 2(2), 41-46.
- Ribble, M. (2015). *Digital citizenship in schools: Nine elements all students should know*. International Society for technology in Education.
- Richardson, J., & Milovidov, E. (2019). *Digital citizenship education handbook: Being online, well-being online, and rights online*. Council of Europe.
- Romero, M. (2014). Digital literacy for parents of the 21st century children. *Elearning Papers*, 38, 32-40.
- Saleme, P., Dietrich, T., Pang, B., & Parkinson, J. (2020). A gamified approach to promoting empathy in children. *Journal of Social Marketing*, 10(3), 321-337.
- Sarwar, S. (2016). Influence of parenting style on children's behaviour. *Journal of Education and Educational Development*, 3(2).
- Selwyn, N. (2000). Creating a “connected” community? Teachers’ use of an electronic discussion group. *Teachers College Record*, 102(4), 750-778.
- Sharples, M., Graber, R., Harrison, C., & Logan, K. (2009). E-safety and Web 2.0 for children aged 11–16. *Journal of Computer Assisted Learning*, 25(1), 70-84.
- Sicart, M. (2011). *The ethics of computer games*. MIT press.
- Siegal, M., & Francis, R. (1982). Parent-child relations and cognitive approaches to the development of moral judgement and behaviour. *British Journal of Psychology*, 73(2), 285-294.
- Stiglic, N., & Viner, R. M. (2019). Effects of screentime on the health and well-being of children and adolescents: a systematic review of reviews. *BMJ open*, 9(1), e023191.
- Suson, R. L. (2019). Appropriating digital citizenship in the context of basic education. *International Journal of Education, Learning and Development*, 7(4), 44-66.
- Susanto, S., Ritonga, A. W., & Desrani, A. (2022). The Challenge Of The Integrated Character Education Paradigm With 21st-Century Skills During The COVID-19 Pandemic. *Cendekia: Jurnal Kependidikan Dan Kemasyarakatan*, 20(1), 74-87.
- Staksrud, E., & Livingstone, S. (2009). Children and online risk: Powerless victims or resourceful participants?. *Information, Communication & Society*, 12(3), 364-387.
- Steinberg, S. B. (2016). Sharenting: Children's privacy in the age of social media. *Emory Lj*, 66, 839.
- Swift, C., & Taylor, A. (2003). The digital divide—a new generation gap. Parental knowledge of their children's Internet use. *Paediatrics & Child Health*, 8(5), 275-278.

- Tan, W. N., & Yasin, M. (2020). Parents' roles and parenting styles on shaping children's morality. *Universal Journal of Educational Research*, 8(3C), 70-76.
- Tennakoon, H., Saridakis, G., & Mohammed, A. M. (2018). Child online safety and parental intervention: a study of Sri Lankan internet users. *Information Technology & People*, 31(3), 770-790.
- Thaiposri, P., & Wannapiroon, P. (2015). Enhancing students' critical thinking skills through teaching and learning by inquiry-based learning activities using social network and cloud computing. *Procedia-Social and Behavioral Sciences*, 174, 2137-2144.
- Third, A., & Collin, P. (2016). Rethinking (children's and young people's) citizenship through dialogues on digital practice. *Negotiating digital citizenship: Control, contest and culture*, 41-60.
- Twenge, J. M., & Campbell, W. K. (2018). Associations between screen time and lower psychological well-being among children and adolescents: Evidence from a population-based study. *Preventive medicine reports*, 12, 271-283.
- Vaala, S. E., & Bleakley, A. (2015). Monitoring, mediating, and modeling: Parental influence on adolescent computer and Internet use in the United States. *Journal of Children and Media*, 9(1), 40-57.
- Valcke, M., Bonte, S., De Wever, B., & Rots, I. (2010). Internet parenting styles and the impact on Internet use of primary school children. *Computers & Education*, 55(2), 454-464.
- Van Dijk, J. (2020). *The digital divide*. John Wiley & Sons.
- Van Hook, J., McHale, S. M., & King, V. (Eds.). (2018). *Families and Technology*. Springer International Publishing.
- Verbeek, P. P. (2011). *Moralizing technology: Understanding and designing the morality of things*. University of Chicago press.
- Wisniewski, P., Xu, H., Carroll, J., & Rosson, M. B. (2013). Grand challenges of researching adolescent online safety: a family systems approach.
- Wisniewski, P. J., Xu, H., Rosson, M. B., & Carroll, J. M. (2014, February). Adolescent online safety: the "moral" of the story. In *Proceedings of the 17th ACM conference on Computer supported cooperative work & social computing* (pp. 1258-1271).
- Yuill, N., Rogers, Y., & Rick, J. (2013, April). Pass the iPad: collaborative creating and sharing in family groups. In *Proceedings of the SIGCHI Conference on human factors in computing systems* (pp. 941-950).
- Yulia, R., Henita, N., Gustiawan, R., & Erita, Y. (2022). Efforts to Strengthen Character Education for Elementary School Students by Utilizing Digital Literacy in Era 4.0. *JOURNAL OF DIGITAL LEARNING AND DISTANCE EDUCATION*, 1(6), 240-249.
- Zed, M. (2008). *Metode penelitian kepustakaan*. Yayasan Pustaka Obor Indonesia.
- Zevenbergen, R. (2007). Digital natives come to preschool: Implications for early childhood practice. *Contemporary issues in early childhood*, 8(1), 19-29.