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# Revitalizing Local Knowledge to Address Students' Moral Degradation in the Metaverse Era: An Embedded Mixed Methods Digital Sociology Study

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**Abstract**
*The rapid development of digital technology, particularly the emergence of the metaverse, has fundamentally reshaped adolescents' patterns of social interaction, cultural practices, and moral frameworks. While the metaverse provides new opportunities for learning and communication, it also raises serious concerns regarding moral degradation, especially among high school students as digital natives who are highly vulnerable to global influences. The weakening of local cultural values, which have long served as moral compasses, further exacerbates this condition. Therefore, an integrative approach is required to safeguard moral resilience in digital environments. This study aims to measure the level of students' moral degradation, analyze the relationship between moral perception and moral construction, and explore strategies for revitalizing local wisdom as a mitigation effort. An embedded mixed methods design was employed. Quantitative data were collected from 202 students through a five-point Likert scale questionnaire and analyzed with Jamovi 2.6.44 using descriptive statistics, reliability testing, Pearson correlation, and linear regression. Qualitative data were obtained from semi-structured interviews and focus group discussions with teachers and cultural figures, then analyzed through thematic analysis following Braun and Clarke's procedures. The results show that both moral perception and moral construction are categorized as high. However, the significant correlation ($r = 0.675$; $p < 0.001$) reveals a gap between moral awareness and behavior. Qualitative findings emphasize that local values such as Maja Labo Dahu and Nggahi Rawi Pahu have potential as cultural filters, though their application in virtual interactions remains inconsistent.*



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## 1. INTRODUCTION

The rapid advancement of digital technology is inevitable and has brought extraordinary transformations to human life. The emergence of the metaverse, which represents the integration of physical and virtual spaces, has fundamentally reshaped social, cultural, and moral interaction patterns (Singh, 2024; Lei et al., 2023). Through platforms such as Facebook, Instagram, and TikTok, the metaverse offers significant opportunities for education, global communication, and identity expansion (Overvig & Alù, 2022; Gkatsonidou et al., 2022). However, behind these opportunities lies a serious threat in the form of misinformation, cyberbullying, pornography, online violence, and declining social empathy (Allemand et al., 2015; Konrath et al., 2011). Adolescents, particularly high school students as digital natives, occupy the most vulnerable position due to the increasing intensity of their engagement in digital spaces. When digital literacy remains low and the internalization of local cultural values continues to weaken, a sharp gap emerges between

technological progress and existing social norms (Waluyati et al., 2024). If this situation is not addressed through systematic interventions, moral degradation could further widen the divide between traditional ethics and social dynamics in cyberspace.

The phenomenon of moral decline triggered by uncontrolled digital interaction is becoming increasingly evident. International studies indicate that adolescents who are active users of social media are more easily influenced by global trends without filtering their impact on cultural identity and morality (Reid Chassiakos et al., 2016; Reisach, 2021). As a result, phenomena such as hate speech, hoaxes, and content that contradict cultural values are becoming widespread (Buckley & Schafer, 2022; Supriyantomo et al., 2024). Social media, which should serve as an educational tool, often turns into a trigger for social conflict (Van Dijck & Poell, 2013; González-Bailón & Lelkes, 2023). Declining empathy, growing individualism, and the formation of permissive social norms reveal that the digital moral crisis is not merely a local issue but also a global challenge faced by nearly all nations (Staksrud et al., 2013; Fire et al., 2014). On the other hand, regulations on social media use often lag behind the pace of technological development. The anonymity provided by digital platforms exacerbates the condition by offering unrestricted space for the spread of harmful content (Taylor & Pagliari, 2018; Marwick et al., 2017). If these trends persist, it is not impossible that the misuse of social media will evolve into a global moral crisis (Arogyaswamy, 2020).

In addition to technological factors, moral degradation is closely tied to the weakening role of local cultural values in the lives of young generations (Fabiano, 2020; Zhang, 2025). Globalization and digitalization contribute to the erosion of cultural identity, which undermines traditional social mechanisms for shaping individual character (Fernández-Llamazares et al., 2021; Franqueira et al., 2012). Local values, which should serve as moral filters in the face of global information flows, are increasingly marginalized by popular digital culture. This imbalance creates a tension between fast-paced modernity and the sustainability of social norms passed down through generations. As a result, young people often experience moral disorientation when confronted with ethical dilemmas in digital spaces (Baird et al., 2021). This highlights the importance of revitalizing local knowledge as a strategic step to strengthen the moral character of younger generations amidst the penetration of global culture (Sulianta, 2024; Febrianty et al., 2023).

Revitalizing local cultural values plays a crucial role not only in preserving heritage but also in mitigating the negative effects of digital interaction. Local values can serve as the foundation for more contextual moral education, enabling adolescents to develop stronger moral resilience when facing the challenges of the metaverse. For instance, the values of *Maja Labo Dahu* (shame and fear of wrongdoing) and *Nggahi Rawi Pahu* (commitment to keeping promises) found in Bima culture can be adapted to digital spaces to foster selectivity, integrity, and responsibility (Irmansah, 2023). When these values are instilled through both formal and informal education, high school students are expected to better filter information, limit deviant behavior, and maintain moral integrity even in permissive digital environments. This effort aligns with the perspective of digital sociology, which views cultural values as social capital relevant to responding to the dynamics of virtual spaces (Zhao & Wang, 2023; S. Zhang & Qiu, 2022).

Digital sociology itself becomes a critical analytical framework for understanding how social, cultural, and moral interactions are shaped within digital spaces (Irmansah, 2023). By positioning local culture as a variable that interacts with global forces, this approach enables a more comprehensive analysis of moral degradation phenomena. Classical moral theories such as Kohlberg's stages of moral development and Bandura's social learning theory can be extended into the digital context, demonstrating that the internalization of

moral values now occurs not only through face-to-face interactions but also within virtual spaces saturated with external influences.

Although numerous studies have examined the negative effects of social media on adolescent behavior, most international research has focused on individual psychological factors or the technical aspects of social media use (Creswell & Clark, 2017; Timans et al., 2019). Relatively few studies highlight how local cultural values can serve as a foundation for strengthening students' moral character in the face of digital challenges. In Indonesia, research on integrating local wisdom with digital moral education remains limited, particularly in the increasingly prevalent context of the metaverse (Pearce, 2012). This research gap highlights the need for a deeper exploration of strategies to revitalize local cultural values as mechanisms to mitigate moral degradation. Furthermore, few studies have employed an embedded mixed methods approach to comprehensively combine quantitative and qualitative data in examining moral phenomena in digital spaces.

Based on this gap, the present study seeks to explore strategies for revitalizing local knowledge in mitigating moral degradation among high school students in the metaverse era by integrating digital sociology perspectives and embedded mixed methods approaches. First, the study aims to measure the extent of students' moral degradation as a result of intensive use of social media and the metaverse. Second, it analyzes the relationship between social media use and the weakening application of local cultural values in students' lives. Third, it investigates students' perceptions of moral changes in the digital era and the factors influencing them. Fourth, it formulates strategies for revitalizing local knowledge that can be applied in both formal and informal education. With this comprehensive research design, the study is expected to provide a holistic picture of the moral condition of high school students in the metaverse era.

The contribution of this research is multidimensional. Theoretically, it extends classical moral and socio-cognitive theories by incorporating local culture as a key variable in digital moral dynamics. Methodologically, the use of an embedded mixed methods design provides an advantage by combining the strengths of quantitative and qualitative analyses, yielding more valid and contextually grounded findings. Practically, the study offers strategic recommendations for teachers, schools, policymakers, and communities in designing digital moral education that is both technologically relevant and rooted in local values. Globally, it contributes a fresh perspective to the international discourse on digital moral literacy by demonstrating that local values can serve as effective filters for addressing moral challenges in the metaverse era.

## 2. LITERATURE REVIEW

### Moral Degradation in the Digital and Metaverse Era

The advancement of digital technology and the emergence of the metaverse have expanded the discourse on moral degradation, where the boundary between ethical awareness and actual practice has become increasingly blurred. Moral development theories proposed by Piaget (2013) and Kohlberg (1981), as well as Bandura's concepts of moral disengagement (Bandura, 1999; Bandura, 2002), explain how individuals may fail to apply moral principles in specific social contexts. This condition now finds renewed relevance in the virtual domain. Empirical studies reveal a consistent pattern: students and adolescents demonstrate relatively high levels of digital moral awareness, yet rarely translate this awareness into consistent ethical behavior in online spaces (Stephens et al., 2007; Zvereva, 2023; Huang et al., 2025). Other research identifies similar gaps, for instance Jorge and Farrugia (Jorge & Farrugia, 2017), Staksrud and Livingstone (Sandberg, 2005), (Slavtcheva-Petkova et al., 2015), and (Leduc et al., 2018). These studies highlight

significant discrepancies between moral risk perception and the actual behavior of children and adolescents when engaging digitally.

This phenomenon becomes even more complex with the integration of the metaverse. Its characteristics of anonymity, avatarization, and immersive interaction influence users' moral consistency. (Al-Kfairy et al., 2025) emphasize ethical challenges in the metaverse, including privacy, security, identity representation, and digital governance. Grinbaum and Adomaitis (2022) introduce the concept of moral equivalence to describe the tendency of users to project moral values onto virtual actions with little cognitive consideration. Efe (2025) positions the metaverse as a convergence of real and virtual worlds saturated with ethical risks, while (Zou & Hu, 2024) stress the protection of personal rights within the legal and moral framework. Global research further confirms that moral degradation in the metaverse era transcends cultural and geographical boundaries (Chen et al., 2025; Tukur et al., 2023).

**Digital Sociology and Moral Education**

Digital sociology has emerged as a field that examines how digital technology functions not merely as a communication tool but also as a social space that generates meaning, values, and norms. Digital technology forms a new arena for moral education, where ethical values are not only taught through formal institutions but are also practiced and negotiated within online interactions. Several theoretical perspectives affirm this view. Säljö (2010) notes that digital tools transform institutional learning traditions through "social memory." Ciolfi (2013) and Abdel-Aziz et al. (2016) highlight digital spaces as new public places rich with social meaning. Scolari (2009) emphasizes how discourses surrounding new media shape digital communication, and North et al. (2008) reveal class-based differences in technology consumption. Together, these perspectives reinforce the notion that digital moral education cannot be understood merely as knowledge transfer but as a social practice embedded within technological dynamics, digital spaces, and social stratification.

Empirical studies further underscore the interrelationship between digital technology and moral formation. Scuotto et al. (2024) demonstrate that digital interventions can support the internalization of moral values. Huda et al. (2017), Iivari (2020), Birch (2011), and Brereton (2009) stress the need to empower adaptive technological skills to address the ethical risks of the information age. Flores & James (2013) identify a gap between adolescents' moral awareness and their daily digital practices, whereas Lau & Yuen (2014) highlight demographic factors in shaping internet ethics. Collectively, this body of literature consistently shows that moral education in digital spaces is influenced by both structural factors such as technological architectures and platform policies and cultural factors such as social values and local norms.

**Local Knowledge as Moral Filters**

Local wisdom is an integral part of indigenous knowledge systems that guide social behavior and sustain cultural cohesion. Fine, (2010) argues that local values operate within social action spaces and construct broader collective and public meaning. Chodak (2001) highlights the role of symbols and slogans in shaping collective identity, while Paasi (2001) and Settimini (2020) demonstrate how local cultural practices contribute to constructing identity, boundaries, and cultural heritage. Within education, contemporary studies underscore that local wisdom can serve as a foundation for character education. Sakti et al. (2024), for example, elaborate on the revitalization of local values through an ethnopedagogical approach in early childhood education in Yogyakarta. This is further supported by Hidayati et al. (2020), who found that education based on local values strengthens character formation and global citizenship readiness. International studies echo this point. Filial piety in East Asia functions as a family ethic while shaping digital behavior (Yeh, 2003), whereas Ubuntu in Africa emphasizes solidarity and social responsibility in

digital interaction (Chisale, 2018). Collectively, these findings demonstrate that local knowledge possesses the capacity to serve as both a moral compass and an ethical filter in the face of technological disruption.

In the Indonesian context, cultural values such as *Maja Labo Dahu*, meaning a sense of shame and fear of wrongdoing, and *Nggahi Rawi Pahu*, meaning a commitment to keeping promises, are concrete examples of local wisdom that remain relevant in shaping youth behavior (Irwan et al., 2023; ZM et al., 2022; Zuriatin et al., 2025). These values are not only practiced within traditional social contexts but are also being integrated into education. One example is the development of learning media based on local wisdom such as an anti-bullying pocket book (Gafar Hidayat et al., 2024). Such studies illustrate that *Maja Labo Dahu* can be reconstructed as both a socio-political ethic (Zuriatin et al., 2025) and a foundation for character education (Irwan et al., 2023). However, while existing literature acknowledges the relevance of local wisdom in education and society, research explicitly linking it to digital moral education, particularly in the metaverse, remains limited. Consequently, this study expands the global discourse by presenting Indonesian local wisdom as a moral filter that is not only effective in the physical world but also highly relevant in addressing moral challenges within immersive digital spaces.

## 3. METHODS

### Research Design

This study employed an embedded mixed methods approach (Creswell and Pablo-Clark, 2011) which combines the collection of quantitative and qualitative data simultaneously, analyzed separately, and later integrated during the interpretation stage (Timans et al., 2019; Pearce, 2012). This design was chosen because it allows a more comprehensive exploration of students' moral degradation, not only through quantitative measurement but also through narrative insights from teachers and cultural figures. The strength of this approach lies in its ability to address complex research questions by combining the reliability of numerical data with the depth of qualitative findings, resulting in a more holistic and layered understanding.

Research using an embedded mixed methods design on digital morality, particularly in the context of the metaverse, remains rare. Previous studies adopting similar designs have generally focused on other domains, such as ethics education for prospective teachers (Albez, 2025) and morality in smartphone use (Jansson et al., 2025). There are also studies on moral framing in news-sharing behavior on social media (Valenzuela et al., 2017). However, these studies only marginally address aspects of digital morality and have not incorporated the context of local wisdom or the ethical challenges posed by the metaverse. Therefore, the use of this design in the present study contributes both methodologically and substantively by offering an integrative model of digital morality research grounded in local wisdom.

### Population and Sample

The population of this study consisted of all high school students in Bima City. The quantitative sample included 202 twelfth-grade students selected through purposive sampling to represent diversity in socioeconomic background, level of digital technology exposure, and involvement in local cultural activities. This strategy ensured that the data collected were not only sufficient in number but also diverse in respondent characteristics. From a methodological perspective, the sample size met the rule of thumb for correlation and regression analyses ($N > 200$), thereby ensuring statistical power and reliability of the findings (Austin & Steyerberg, 2015).

To complement the quantitative data, the study also involved 15 qualitative informants consisting of teachers, school principals, and cultural figures. Informants were selected

using snowball sampling to capture individuals with in-depth knowledge of moral education and local cultural values. This strategy was oriented toward achieving data saturation, which occurs when the information obtained becomes repetitive and no longer yields new insights (Low, 2019; Saunders et al., 2018; Bouncken et al., 2025).

**Research Instruments, Data Collection, and Reliability and Validity Testing**

The research instruments were designed within the embedded mixed methods framework to comprehensively capture the phenomenon of students' digital morality. The quantitative instrument consisted of a five-point Likert scale questionnaire (1 = strongly disagree to 5 = strongly agree) with 54 items. Of these, 30 items measured the Moral Construction variable, covering dimensions such as moral understanding, learning experiences, moral self-efficacy, moral behavior in the metaverse, and digital moral attitudes. The remaining 24 items measured the Moral Perception variable, including perceptions of moral change, technological influence, socio-psychological factors, risk and benefit perceptions, and trust in the metaverse.

The qualitative instruments included semi-structured interview protocols and focus group discussion (FGD) guides, designed to explore strategies employed by teachers and cultural figures in instilling moral values based on local wisdom. Content validation was conducted through expert judgment by four specialists in education, sociology, and digital technology. The validation process produced an Aiken's V index greater than 0.80, which indicates high content validity. An example of the interview protocol is presented in Table 1.

**Table 1.**
*Interview Protocol*

| No | Main Question |
|---|---|
| 1 | How does the school implement strategies to instill moral values in students who actively use the metaverse? |
| 2 | What are the main challenges you face in maintaining students' moral behavior in digital spaces? |
| 3 | In your opinion, how relevant are the values of *Maja Labo Dahu* and *Nggahi Rawi Pahu* in addressing the phenomenon of the metaverse? |
| 4 | What efforts can be made to ensure that local cultural values continue to serve as moral filters for young people in digital environments? |

Data collection was carried out over six months using both online and offline modes. Quantitative data were obtained through online and printed questionnaires, while qualitative data were collected through in-depth interviews lasting 45 to 60 minutes and FGDs lasting 90 minutes, conducted either face-to-face or via Zoom. All procedures were carried out with informed consent, data confidentiality safeguards, and adherence to ethical research standards.

The reliability test results indicated very good internal consistency, with Cronbach's Alpha of 0.803 ($\alpha > 0.80$). This value demonstrates high reliability according to Nunnally and Bernstein's (1994) criteria, which consider $\alpha \geq 0.70$ adequate and $\alpha \geq 0.80$ good. A summary of the reliability test results is presented in Table 2.

**Table 2.**
*Reliability Test Results*

| | Mean | SD | Cronbach's α | Interpretation |
|---|---|---|---|---|
| Scale | 4.31 | 0.492 | 0.803 | Reliable |

The α value of 0.803 indicates that the instrument possesses high reliability and sufficient internal consistency to measure digital morality constructs among students. This not only shows statistical reliability but also reflects the instrument's ability to consistently articulate the complexity of digital morality.

Qualitative validity was reinforced through source triangulation, collaborative member checking with teachers and participants, and an audit trail reviewed by two independent experts online. This multi-layered approach aligns with the trustworthiness criteria in qualitative research (Lincoln, Y.S. and Guba, 1985; Creswell & Miller, 2000; Nowell et al., 2017; Lub, 2015) and is consistent with practices adopted in prior studies across various fields (De Oliveira & Maciel, 2013; Lietz et al., 2006).

**Data Analysis**

Quantitative data were analyzed using Jamovi 2.6.44 (The jamovi project, 2024), chosen for its open-source nature, transparency, and compatibility with modern statistical procedures, which facilitate replication by other researchers. Jamovi is based on the R programming language (Team, 2018) and utilizes supporting packages such as *psych* (Revelle, 2015)(Revelle, 2015) for reliability and psychometric analysis, and *car* (Fox, J., & Weisberg, 2023) for regression and advanced analysis. The analyses conducted included descriptive statistics, reliability testing (Cronbach's Alpha), Pearson correlation to examine relationships between variables, and linear regression to evaluate predictive strength.

Qualitative data were analyzed using the Thematic Analysis approach developed by (Braun & Clarke, 2013), which is considered the gold standard in social research due to its flexibility and systematic nature. The process involved six stages: familiarization, coding, theme generation, reviewing, defining, and reporting. These stages allowed the identification of thematic patterns from the narratives of teachers and cultural figures. Integration of quantitative and qualitative results was carried out using joint display analysis, which presents findings in integrative tables that align numerical outcomes with qualitative themes. This technique is consistent with the embedded mixed methods design and provides complementary and layered insights into the phenomenon of students' digital morality.

**Research Ethics**

This study received official approval from Kesbangpol Bima City, BRIDA Bima City, and the Bima City Education Office. All participants signed informed consent forms, student identities were anonymized, and data were managed in accordance with Indonesia's Law No. 27 of 2022 on Personal Data Protection. The data were used exclusively for academic purposes and will be destroyed after five years in compliance with regulatory requirements.

## 4. RESULTS

**Descriptive Analysis**

Descriptive measurements were conducted to provide an overview of the levels of students' moral construction and moral perception in the context of the metaverse. This analysis was essential for observing data tendencies before performing correlation and regression tests.

**Table 3.**

*Descriptive Statistics and Normality Test of Research Variables*

| Variable | N | Mean | SD | Skewness | SE Skew | Kurtosis | SE Kurt | Shapiro-Wilk W | Shapiro-Wilk p |
|---|---|---|---|---|---|---|---|---|---|
| Moral Construction | 202 | 4.13 | 0.567 | −0.466 | 0.171 | 0.197 | 0.341 | 0.966 | <0.001 |
| Moral Perception | 202 | 4.48 | 0.509 | −1.299 | 0.171 | 3.898 | 0.341 | 0.861 | <0.001 |

The mean scores indicate that both moral construction and moral perception are at a high level, although the moral construction score (M = 4.13) is lower than the moral perception score (M = 4.48). This finding suggests that students' cognitive-affective moral

awareness is relatively higher than their demonstrated moral behavior. The Shapiro-Wilk test results show that the data distribution is not normal ($p < 0.001$). However, the large sample size ($N = 202$) ensures the validity of parametric analyses in line with the Central Limit Theorem.

**Correlation Analysis**

To examine the relationship between moral perception and moral construction among students in the context of the metaverse, a Pearson correlation test was conducted. The results are presented in Table 4.

**Table 4.**

*Correlation between Moral Perception and Moral Construction*

| | Moral Construction | Moral Perception |
|---|---|---|
| Moral Construction | — | |
| Moral Perception | r = 0.675*** | — |
| df = 200 | | |
| p < 0.001 | | |
| N = 202 | | |

The results in Table 4 demonstrate a strong and significant positive correlation ($r = 0.675$; $p < 0.001$) between moral perception and moral construction. This indicates that the higher students' moral awareness, the greater their tendency to display moral behavior in digital spaces. The findings confirm that moral perception is a critical foundation for the formation of ethical attitudes and behavior. However, the correlation is not perfect, revealing the influence of other factors such as family, peer pressure, and the limited internalization of local cultural values. This highlights that moral formation among students in the global context requires integrative strategies, including digital literacy enhancement, the active role of schools and communities, and the revitalization of local wisdom as a universal ethical filter in addressing the complexity of the metaverse.

**Regression Analysis**

A simple linear regression analysis was conducted to examine the extent to which moral perception predicts moral construction in the context of digital and metaverse interaction. The results are summarized in Tables 5 and 6.

**Table 5.**

*Linear Regression Results of Moral Perception on Moral Construction*

| Model | R | $R^2$ | Adjusted $R^2$ | AIC | BIC | RMSE | F | df1 | df2 | p |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.675 | 0.456 | 0.453 | 226 | 236 | 0.417 | 168 | 1 | 200 | <0.001 |

**Table 6.**

*Regression Coefficients*

| Predictor | Estimate | SE | t | p |
|---|---|---|---|---|
| Intercept | 0.761 | 0.262 | 2.91 | 0.004 |
| Moral Perception | 0.752 | 0.058 | 12.95 | <0.001 |

Based on Tables 5 and 6, moral perception is a significant predictor of students' moral construction ($\beta = 0.752$, $p < 0.001$). The model explains 45.6% of the variance in moral construction. This indicates that students' moral beliefs and judgments strongly contribute to their moral behavior in the metaverse era. Nevertheless, 54.4% of the variance remains unexplained, suggesting that other determinants such as peer influence, family support, digital media exposure, and the limited internalization of local values also play significant roles. This finding emphasizes that high moral awareness does not automatically translate into consistent moral behavior, thereby strengthening the global argument that cognitive-based moral education alone is insufficient for addressing the ethical complexities of digital life.

**Qualitative Findings: Teachers and School Leaders**

The results of interviews with teachers and school principals are summarized in Table 7.

**Table 7.**

*Themes from Interviews with Teachers and Principals*

| Main Theme | Sub-Theme | Representative Quote |
|---|---|---|
| Importance of moral education | Teachers view moral values as increasingly crucial | "If students are not equipped with moral values, they are easily influenced by non-educational metaverse content." (High School Teacher A) |
| Teaching strategies | Integrating moral values into digital learning | "We insert moral values into every lesson, even when using digital platforms." (High School Teacher B) |
| Implementation challenges | Limited understanding and resources | "We are still limited in understanding metaverse technology." (Principal of High School C) |
| School support | Collaboration with stakeholders | "Schools need support from authorities and communities for training." (Principal of High School D) |

The results indicate that teachers and principals recognize moral education as increasingly urgent in the face of digitalization and metaverse penetration. Moral values are integrated into digital learning as a mitigation strategy. However, limited technological competence, lack of metaverse knowledge, and inadequate facilities serve as major barriers. This highlights a gap between educators' normative awareness and their practical capacity to implement moral values in digital contexts. The findings suggest that without structural support such as intensive training and adequate infrastructure, teachers' efforts remain ad hoc and risk being unsustainable. The call for collaboration with educational authorities and communities further emphasizes that moral education in the digital era cannot rest solely on schools but must involve the broader educational ecosystem.

**Qualitative Findings: Cultural Figures and Experts**

The results of interviews with cultural figures and experts are summarized in Table 8.

**Table 8.**

*Themes from Interviews with Cultural Figures and Experts*

| Main Theme | Sub-Theme | Representative Quote |
|---|---|---|
| Relevance of local values | Cultural values as moral filters | "The value of Maja Labo Dahu remains relevant to resist deviant behavior in cyberspace." (Cultural Figure, Bima) |
| Technology-culture integration | Digitalizing local values | "We need to create metaverse content that highlights local traditions." (Educational Technology Expert) |
| Integration challenges | Lack of creativity and policy support | "If culture is only conveyed conventionally, students are less interested." (Local Cultural Figure) |
| Cross-sector collaboration | Synergy among teachers, cultural figures, and experts | "Strengthening morality through culture must be collaborative." (School Principal) |

The results indicate that cultural figures regard local wisdom as a crucial moral safeguard against the challenges of the metaverse. The value of *Maja Labo Dahu* is considered especially relevant to control deviant behavior in digital spaces. However, the application of cultural values in digital form remains limited, marked by a lack of creativity

and weak policy support. This leads to a disinterest among students who are accustomed to interactive media. The findings reveal a gap between the potential of cultural values as moral filters and students' need for engaging digital content. Therefore, cross-sector collaboration among teachers, cultural figures, and technology experts becomes a strategic necessity to ensure that local knowledge is not only preserved symbolically but also transformed into innovative digital formats that effectively strengthen students' morality in the metaverse era.

**Integration of Quantitative and Qualitative Findings**

The integration of quantitative and qualitative results is presented in Table 9.

**Table 9.**

*Integration of Quantitative and Qualitative Findings*

| Quantitative Findings | Qualitative Findings | Interpretive Integration |
|---|---|---|
| Moral perception is higher (M = 4.48) than moral construction (M = 4.13). | Teachers state that students "know what is right" but struggle to apply it. | There is a gap between moral awareness and moral behavior. Internalization of values needs reinforcement. |
| Strong correlation (r = 0.675) and significant regression (β = 0.752). | Cultural figures emphasize *Maja Labo Dahu* as a bridge. | Moral perception must be supported by local values to manifest in behavior. |
| Regression model explains 45.6% of variance in moral construction. | Teachers and experts highlight external factors (family, school, culture). | A multilevel strategy is needed: synergy among teachers, schools, families, and cultural communities. |

The integrated findings confirm a consistent gap between students' high moral awareness and their insufficiently internalized moral behavior. This phenomenon indicates that moral perception as a cognitive-affective dimension significantly influences moral construction but is not strong enough to ensure behavioral application. Local culture, particularly the value of *Maja Labo Dahu*, functions as a normative bridge to narrow this gap. However, its effectiveness relies heavily on the involvement of multiple actors, including teachers, schools, families, and communities.

**Discussion**

The findings of this study reveal a strong and significant positive correlation between moral perception and moral construction among high school students in the metaverse era ($r = 0.675$; $p < 0.001$). More specifically, although students' moral perception is categorized as high (M = 4.48), their moral construction is slightly lower (M = 4.13). This highlights a gap between moral awareness, which represents what students believe, and moral behavior, which reflects what they demonstrate in daily actions. The correlation, while strong, is not perfect, suggesting the influence of other external factors such as the social environment, digital interaction dynamics, and the limited internalization of local cultural values. Therefore, this research not only confirms the relationship between moral perception and moral behavior but also opens space for discussion on how digital literacy and the revitalization of local wisdom can serve as integrative strategies to bridge the gap.

These findings are consistent with studies by Stephens et al. (2007), Zvereva (2023), and Huang et al. (2025), which showed that students possess relatively high levels of digital moral awareness, but this awareness is not always reflected in consistent ethical behavior in online environments. Similar results were also reported by Aarsand and (Aarsand & Melander Bowden, 2024), who found gaps between moral awareness and practice among children and adolescents in digital activities. Latonero & Sinnreich (2014) emphasized that demographic and cultural factors significantly influence internet ethics, a finding also supported by Gong et al. (2007), Lopez et al. (2005), and Chai (2020).

Moreover, integrative reviews such as Chen et al. (2025) confirm that moral deviance in online spaces is a global phenomenon. Scuotto et al. (2024) highlight the importance of digital interventions to strengthen moral capacity, Huda et al. (2017) stress the empowerment of adaptive technological skills to prepare young people for the information era. Within the Indonesian context, this study extends international discussions by incorporating local perspectives. The cultural values of *Maja Labo Dahu* (a sense of shame and fear of wrongdoing) (Umar et al., 2025; Hermawansyah et al., 2025) and *Nggahi Rawi Pahu* (commitment to keeping promises) emerge as potential moral filters in digital spaces. Although their application remains inconsistent, these forms of local wisdom contribute both methodologically and conceptually to the global literature on cross-cultural digital moral education.

From a theoretical perspective, the results support Bandura's socio-cognitive theory (Bandura, 2018), which emphasizes the role of self-efficacy in shaping moral behavior. Students with strong moral perception typically possess confidence to act in accordance with moral values. However, this study shows that such confidence is often constrained by the complex socio-digital environment. Thus, this research expands the application of Bandura's theory within the context of digital society, particularly in the metaverse era. The results are also relevant to Kohlberg's stages of moral development, which describe progress from the conventional to the post-conventional level (Kohlberg & Hersh, 1977; Yaqin, 2020; Sham et al., 2021; Mathes, 2021). Students' high moral perception can be understood as a reflection of conventional moral reasoning, but has not yet fully developed into consistent post-conventional moral actions.

Beyond individual factors, the qualitative findings reveal that teachers and schools play a strategic role in shaping students' morality, although they face significant challenges. Teachers acknowledge limitations in integrating digital moral education into the curriculum, and schools often rely only on extracurricular activities or simple disciplinary rules. These results are consistent with Champion et al. (2023) in Australia, who found that schools still lack comprehensive curriculum models for digital ethics education. This suggests that schools in Indonesia, particularly in Bima, require innovative strategies that not only emphasize technical aspects of digital literacy but also incorporate local cultural values into teaching. For instance, digital learning materials could be developed using folklore, traditional values, or cultural practices contextualized in digital platforms.

At the same time, the roles of cultural figures and local community leaders are equally important in strengthening students' morality. Interviews showed that although students are still familiar with *Maja Labo Dahu* and *Nggahi Rawi Pahu*, they rarely apply these values in digital interactions. Cultural figures emphasize the need to transform these values into creative digital content such as short videos, educational memes, or animated stories relevant to students' digital lives. This aligns with recommendations by (Buragohain et al., 2024), who highlight that revitalizing local culture within digital spaces can be an effective strategy for addressing moral identity crises in the context of digital globalization (Zulkarnain, 2024; Zhanbayev et al., 2023; Conversi, 2012). Thus, this study enriches global literature by demonstrating that local wisdom serves not only as cultural conservation but also as a strategic resource for global digital moral education.

The practical implications of these findings span multiple levels. At the micro level, teachers and schools need to integrate digital moral education into the core curriculum rather than treating it as an extracurricular or supplementary activity. At the meso level, local cultural communities must be actively engaged in transforming traditional values into formats aligned with digital youth culture. At the macro level, policymakers should design regulatory frameworks and education policies that emphasize digital moral literacy rooted in local cultural values as part of a national strategy for character education.

Despite its contributions, this study has limitations. First, the quantitative data focused only on students' moral perception and construction, without including external variables such as the intensity of social media use, parental roles, or detailed school environmental factors. Second, the qualitative data were limited to interviews with teachers and cultural figures from a single region, which restricts generalization to broader national or international contexts. However, these limitations open avenues for further research, such as cross-cultural comparative studies in other countries or longitudinal studies that track changes in students' morality over time. Future research could also test the effectiveness of digital education interventions based on local wisdom and examine how integrating cultural values can strengthen students' moral resilience when facing ethical challenges in the metaverse.

## 5. CONCLUSION

This study affirms that students' morality in the metaverse era is a multidimensional phenomenon influenced by the interrelation of moral perception, behavioral construction, and the social and cultural contexts in which they interact. Although students demonstrate relatively high moral awareness, there remains a clear gap between moral beliefs and daily practices in digital spaces. These findings indicate that moral education cannot rely solely on cognitive aspects, but requires integrative strategies that connect digital literacy with the internalization of local wisdom. Cultural values such as *Maja Labo Dahu* and *Nggahi Rawi Pahu* have proven to hold potential as moral filters that can strengthen students' resilience against moral degradation, particularly when creatively transformed into the digital ecosystem.

Conceptually, this research extends classical and socio-cognitive moral theories by illustrating how moral dynamics operate within immersive and cross-cultural metaverse contexts. Practically, the study provides multi-level contributions. At the micro level, teachers and schools need to integrate digital moral education into the core curriculum. At the meso level, cultural communities can serve as strategic partners in revitalizing values. At the macro level, policymakers should formulate regulatory frameworks that emphasize digital moral literacy rooted in local cultural traditions.

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## 7. REFERENCES

A. Gafar Hidayat, Tati Haryati, & Taufik, T. (2024). Development of an Anti-Bullying Pocket Book Cua Meci Angi Based on Local Wisdom Values of Maja Labo Dahu for Elementary School Students. *Jurnal Pendidikan Ips*, *14*(2), 318–328. https://doi.org/10.37630/jpi.v14i2.2024

Aarsand, P., & Melander Bowden, H. (2024). Mobile phones and moral order: Children's appropriation of and accounting for digital media rules in schools. *Childhood*, *31*(2), 230–246. https://doi.org/10.1177/09075682241246386

Abdel-Aziz, A. A., Abdel-Salam, H., & El-Sayad, Z. (2016). The role of ICTs in creating

the new social public place of the digital era. *Alexandria Engineering Journal*, *55*(1), 487–493. https://doi.org/10.1016/j.aej.2015.12.019

Al-Kfairy, M., Alrabaee, S., Alfandi, O., Taha Mohamed, A., & Khaddaj, S. (2025). Navigating Ethical Dimensions in the Metaverse: Challenges, Frameworks, and Solutions. In *IEEE Access* (Vol. 13). IEEE Access. https://doi.org/10.1109/ACCESS.2025.3564498

Albez, C. (2025). Does Online Ethics Education Affect Pre-service Teachers' Ethics Position? A Mixed-Method Study. *SAGE Open*, *15*(3). https://doi.org/10.1177/21582440251356756

Allemand, M., Steiger, A. E., & Fend, H. A. (2015). Empathy Development in Adolescence Predicts Social Competencies in Adulthood. *Journal of Personality*, *83*(2), 229–241. https://doi.org/10.1111/jopy.12098

Arogyaswamy, B. (2020). Big tech and societal sustainability: an ethical framework. *AI and Society*, *35*(4), 829–840. https://doi.org/10.1007/s00146-020-00956-6

Austin, P. C., & Steyerberg, E. W. (2015). The number of subjects per variable required in linear regression analyses. *Journal of Clinical Epidemiology*, *68*(6), 627–636. https://doi.org/10.1016/j.jclinepi.2014.12.014

Baird, I. G., Silvano, R. A. M., Parlee, B., Poesch, M., Maclean, B., Napoleon, A., Lepine, M., & Hallwass, G. (2021). The Downstream Impacts of Hydropower Dams and Indigenous and Local Knowledge: Examples from the Peace–Athabasca, Mekong, and Amazon. *Environmental Management*, *67*(4), 682–696. https://doi.org/10.1007/s00267-020-01418-x

Bandura, A. (1999). Moral disengagement in the perpetration of inhumanities. *Personality and Social Psychology Review*, *3*(3), 193–209. https://doi.org/10.1207/s15327957pspr0303_3

Bandura, A. (2002). Selective moral disengagement in the exercise of moral agency. *Journal of Moral Education*, *31*(2), 101–119. https://doi.org/10.1080/0305724022014322

Bandura, A. (2018). *Moral disengagement in digital contexts. Ethics & Behavior,*.

Birch, C. (2011). Rethinking Education in the Age of Technology: The Digital Revolution and Schooling in America by Allan Collins and Richard Halverson. In *American Journal of Education* (Vol. 117, Issue 3). Teachers College Press. https://doi.org/10.1086/659215

Bouncken, R. B., Czakon, W., & Schmitt, F. (2025). Purposeful sampling and saturation in qualitative research methodologies: recommendations and review. *Review of Managerial Science*. https://doi.org/10.1007/s11846-025-00881-2

Braun, V., & Clarke, V. (2013). Teaching thematic analysis : Overcoming challenges and developing strategies for effective learning. *The Psychologist*, *26*(2013), 120–123.

Brereton, P. (2009). Review: Beyond Technology: Children's Learning in the Age of Digital Culture. In *Convergence* (Vol. 15, Issue 4). John Wiley & Sons. https://doi.org/10.1177/1354856509342346

Buckley, N., & Schafer, J. S. (2022). "Censorship-free" platforms: Evaluating content moderation policies and practices of alternative social media. *For(e)Dialogue*, *Vol 4*, *Issue 1*. https://doi.org/10.21428/e3990ae6.483f18da

Buragohain, D., Meng, Y., Deng, C., Li, Q., & Chaudhary, S. (2024). Digitalizing cultural heritage through metaverse applications: challenges, opportunities, and strategies. *Heritage Science*, *12*(1), 295. https://doi.org/10.1186/s40494-024-01403-1

Chai, S. (2020). Does cultural difference matter on social media? An examination of the ethical culture and information privacy concerns. *Sustainability (Switzerland)*, *12*(19), 8286. https://doi.org/10.3390/su12198286

Champion, K. E., Newton, N. C., Gardner, L. A., Chapman, C., Thornton, L., Slade, T., Sunderland, M., Hides, L., McBride, N., O'Dean, S., Kay-Lambkin, F., Allsop, S., Lubans, D. R., Parmenter, B., Mills, K., Spring, B., Osman, B., Ellem, R., Smout, S., … Mewton, L. (2023). Health4Life eHealth intervention to modify multiple lifestyle risk behaviours among adolescent students in Australia: a cluster-randomised controlled trial. *The Lancet Digital Health*, *5*(5), e276–e287. https://doi.org/10.1016/S2589-7500(23)00028-6

Chassiakos, Y. R., Radesky, J., Christakis, D., Moreno, M. A., Cross, C., Hill, D., Ameenuddin, N., Hutchinson, J., Boyd, R., Mendelson, R., Smith, J., & Swanson, W. S. (2016). Children and adolescents and digital media. *Pediatrics*, *138*(5). https://doi.org/10.1542/peds.2016-2593

Chen, X., Saharuddin, N., Yasin, M., & Wang, M. (2025). Online moral deviance: an integrative review of digital behaviors. *Frontiers in Psychology*, *16*, 1573164. https://doi.org/10.3389/fpsyg.2025.1573164

Chisale, S. S. (2018). Ubuntu as care: Deconstructing the gendered Ubuntu. *Verbum et Ecclesia*, *39*(1), 1–9. https://doi.org/10.4102/ve.v39i1.1790

Chodak, J. (2001). Symbols, Slogans and Taste in Tactics: Creation of Collective Identity in Social Movements. *Political Science*, *4*(1), 139–187. https://www.researchgate.net/publication/308624258

Ciolfi, L. (2013). Space and place in digital technology research: A theoretical overview. In *The SAGE Handbook of Digital Technology Research* (pp. 159–173). https://doi.org/10.4135/9781446282229.n12

Conversi, D. (2012). Irresponsible Radicalisation: Diasporas, Globalisation and Long-Distance Nationalism in the Digital Age. *Journal of Ethnic and Migration Studies*, *38*(9), 1357–1379. https://doi.org/10.1080/1369183X.2012.698204

Creswell and Pablo-Clark. (2011). *Designing and Conducting Mixed Methods Research*. Sage publications.

Creswell, J. W., & Miller, D. L. (2000). Determining validity in qualitative inquiry. *Theory into Practice*, *39*(3), 124–130. https://doi.org/10.1207/s15430421tip3903_2

De Oliveira, L. K. B., & Maciel, C. (2013). Transparency and social control via the citizen's portal: A case study with the use of triangulation. *Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, *8061 LNCS*, 112–124. https://doi.org/10.1007/978-3-642-40160-2_10

Efe, A. (2025). The Metaverse as a Convergence of Virtual and Real Worlds: A Risk Assessment in the Context of Ethics. *Online Journal of Technology Addiction and Cyberbullying*, *12*(1), 28–59.

Fabiano, J. (2020). Technological moral enhancement or traditional moral progress? Why not both? *Journal of Medical Ethics*, *46*(6), 405–411. https://doi.org/10.1136/medethics-2019-105915

Febrianty, Y., Sriwidodo, J., & Priyaldi, P. (2023). Establishing Regional Regulations for the Protection of Local Wisdom. *Fiat Justisia: Jurnal Ilmu Hukum*, *17*(3), 193–220. https://doi.org/10.25041/fiatjustisia.v17no3.2708

Fernández-Llamazares, Á., Lepofsky, D., Lertzman, K., Armstrong, C. G., Brondizio, E. S., Gavin, M. C., Lyver, P. O. B., Nicholas, G. P., Pascua, P., Reo, N. J., Reyes-García, V., Turner, N. J., Yletyinen, J., Anderson, E. N., Balée, W., Cariño, J., David-Chavez, D. M., Dunn, C. P., Garnett, S. C., … Vaughan, M. B. (2021). Scientists' Warning to Humanity on Threats to Indigenous and Local Knowledge Systems. *Journal of Ethnobiology*, *41*(2), 144–169. https://doi.org/10.2993/0278-0771-41.2.144

Fine, G. A. (2010). The Sociology of the Local: Action and its Publics. *Sociological*

*Theory*, *28*(4), 355–376. https://doi.org/10.1111/j.1467-9558.2010.01380.x

Fire, M., Goldschmidt, R., & Elovici, Y. (2014). Online social networks: Threats and solutions. *IEEE Communications Surveys and Tutorials*, *16*(4), 2019–2036. https://doi.org/10.1109/COMST.2014.2321628

Flores, A., & James, C. (2013). Morality and ethics behind the screen: Young people's perspectives on digital life. *New Media and Society*, *15*(6), 834–852. https://doi.org/10.1177/1461444812462842

Fox, J., & Weisberg, S. (2023). *car: Companion to Applied Regression.*

Franqueira, T., Gomes, G., & Costa, R. (2012). Project Action for Age 2: Design process in service design. *Strategic Design Research Journal*, *5*(1), 14. https://doi.org/10.4013/sdrj.2012.51.02

Gkatsonidou, N., Kortikis, C., Vasileiadou, I., Zamaria, A., & Lioupras, E. (2022). Body perception in virtual worlds: The case of Second Life. *Homo Virtualis*, *5*(1), 111–135. https://doi.org/10.12681/homvir.30319

Gong, W., Li, Z. G., & Stump, R. L. (2007). Global internet use and access: Cultural considerations. *Asia Pacific Journal of Marketing and Logistics*, *19*(1), 57–74. https://doi.org/10.1108/13555850710720902

González-Bailón, S., & Lelkes, Y. (2023). Do social media undermine social cohesion? A critical review. *Social Issues and Policy Review*, *17*(1), 155–180. https://doi.org/10.1111/sipr.12091

Hermawansyah, Naro, W., Muzakkir, & Syamsuddin. (2025). Transformation of Islamic education values "MAJA LABO DAHU" through parents in Bima. *Edelweiss Applied Science and Technology*, *9*(2), 969–974. https://doi.org/10.55214/25768484.v9i2.4631

Hidayat, O. T., Muhibbin, A., Prasetiyo, W. H., Setyadi, Y. B., Yanzi, H., Drupadi, R., Johnstone, J. M. G., & Dewantara, J. A. (2020). Global citizen preparation: Enhancing early childhood education through Indonesian local wisdom. *Universal Journal of Educational Research*, *8*(10), 4545–4554. https://doi.org/10.13189/ujer.2020.081023

Hidayati, N. A., Waluyo, H. J., Winarni, R., & Suyitno. (2020). Exploring the implementation of local wisdom-based character education among indonesian higher education students. *International Journal of Instruction*, *13*(2), 179–198. https://doi.org/10.29333/iji.2020.13213a

Huang, C. L., Shao, X., Wu, C., & Yang, S. C. (2025). Navigating the digital learning landscape: insights into ethical dilemmas and academic misconduct among university students. *International Journal of Educational Technology in Higher Education*, *22*(1), 29. https://doi.org/10.1186/s41239-025-00516-2

Huda, M., Hehsan, A., Jasmi, K. 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.

Iivari, N. (2020). Empowering children to make and shape our digital futures – from adults creating technologies to children transforming cultures. *International Journal of Information and Learning Technology*, *37*(5), 279–293. https://doi.org/10.1108/IJILT-03-2020-0023

Irmansah, I. (2023). Hubungan Perkembangan Moral Dengan Interaksi Sosial Remaja Di Sman 3 Kota Bima. *Edu Sociata ( Jurnal Pendidikan Sosiologi)*, *6*(1), 186–190. https://doi.org/10.33627/es.v6i1.1163

Irwan, I., Haris, A., Khozin, K., Hendra, H., & Anwar, S. (2023). Unveiling Maja Labo Dahu: a Local Wisdom in Implementing Character Values. *Tadris: Jurnal Keguruan Dan Ilmu Tarbiyah*, *8*(2), 463–474. https://doi.org/10.24042/tadris.v8i2.18144

Jansson, A., Fast, K., Bengtsson, S., & Lindell, J. (2025). Smartphone morality: A mixed-method study of how young adults judge their own and other people's digital media reliance. *Nordicom Review*, *46*(1), 1–24. https://doi.org/10.2478/nor-2025-0001

Jorge, A., & Farrugia, L. (2017). Are victims to blame? Youth, gender and moral discourse on online risk. *Catalan Journal of Communication and Cultural Studies*, *9*(2), 285–301. https://doi.org/10.1386/cjcs.9.2.285_1

Kohlberg, L. (1981). Moral Stages and the Idea of Justice. In *The Philosophy of Moral Development.* (Vol. 1). Harper & Row.

Kohlberg, L., & Hersh, R. H. (1977). Moral Development: A Review of the Theory. *Theory Into Practice*, *16*(2), 53–59. https://doi.org/10.1080/00405847709542675

Konrath, S. H., O'Brien, E. H., & Hsing, C. (2011). Changes in dispositional empathy in American college students over time: A meta-analysis. *Personality and Social Psychology Review*, *15*(2), 180–198. https://doi.org/10.1177/1088868310377395

Latonero, M., & Sinnreich, A. (2014). The hidden demography of new media ethics. *Information Communication and Society*, *17*(5), 572–593. https://doi.org/10.1080/1369118X.2013.808364

Lau, W. W. F., & Yuen, A. H. K. (2014). Internet ethics of adolescents: Understanding demographic differences. *Computers and Education*, *72*, 378–385. https://doi.org/10.1016/j.compedu.2013.12.006

Leduc, K., Conway, L., Gomez-Garibello, C., & Talwar, V. (2018). The influence of participant role, gender, and age in elementary and high-school children's moral justifications of cyberbullying behaviors. *Computers in Human Behavior*, *83*, 215–220. https://doi.org/10.1016/j.chb.2018.01.044

Lei, C., Jia, L., & Chang, H. (2023). Education Meta-universe Research Knowledge Base Transfer and Research Analysis of Hotspot Evolution—Based on the CiteSpace Visualization Analysis. *Information and Knowledge Management*, *4*(1), 1–8. https://doi.org/10.23977/infkm.2023.040101

Lietz, C. A., Langer, C. L., & Furman, R. (2006). Establishing Trustworthiness in Qualitative Research in Social Work: Implications from a Study Regarding Spirituality. *Qualitative Social Work*, *5*(4), 441–458. https://doi.org/10.1177/1473325006070288

Lincoln, Y.S. and Guba, E. G. (1985). *Naturalistic Inquiry. SAGE, Thousand Oaks*.

Lopez, Y. P., Rechner, P. L., & Olson-Buchanan, J. B. (2005). Shaping ethical perceptions: An empirical assessment of the influence of business educaction, culture, and demographic factors. *Journal of Business Ethics*, *60*(4), 341–358. https://doi.org/10.1007/s10551-005-1834-4

Low, J. (2019). A Pragmatic Definition of the Concept of Theoretical Saturation. *Sociological Focus*, *52*(2), 131–139. https://doi.org/10.1080/00380237.2018.1544514

Lub, V. (2015). Validity in Qualitative Evaluation: Linking Purposes, Paradigms, and Perspectives. *International Journal of Qualitative Methods*, *14*(5). https://doi.org/10.1177/1609406915621406

Marwick, A., Fontaine, C., & Boyd, D. (2017). "Nobody sees it, nobody gets mad": Social media, privacy, and personal responsibility among low-SES youth. *Social Media and Society*, *3*(2), 2056305117710455. https://doi.org/10.1177/2056305117710455

Mathes, E. W. (2021). An evolutionary perspective on Kohlberg's theory of moral development. *Current Psychology*, *40*(8), 3908–3921. https://doi.org/10.1007/s12144-019-00348-0

North, S., Snyder, I., & Bulfin, S. (2008). Digital tastes: Social class and young people's technology use. *Information Communication and Society*, *11*(7), 895–911. https://doi.org/10.1080/13691180802109006

Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic Analysis: Striving to Meet the Trustworthiness Criteria. *International Journal of Qualitative Methods*, *16*(1). https://doi.org/10.1177/1609406917733847

Overvig, A., & Alù, A. (2022). Diffractive Nonlocal Metasurfaces. *Laser and Photonics Reviews*, *16*(8), 2100633. https://doi.org/10.1002/lpor.202100633

Paasi, A. (2001). Europe as a Social Process and Discourse: Considerations of Place, Boundaries and Identity. *European Urban and Regional Studies*, *8*(1), 7–28. https://doi.org/10.1177/096977640100800102

Pearce, L. D. (2012). Mixed Methods Inquiry in Sociology. *American Behavioral Scientist*, *56*(6), 829–848. https://doi.org/10.1177/0002764211433798

Piaget, J. (2013). The moral judgment of the child. In *The Moral Judgment of the Child*. Routledge. https://doi.org/10.4324/9781315009681

Reisach, U. (2021). The responsibility of social media in times of societal and political manipulation. *European Journal of Operational Research*, *291*(3), 906–917. https://doi.org/10.1016/j.ejor.2020.09.020

Revelle, W. (2015). Package "psych" - Procedures for Psychological, Psychometric and Personality Research. In *R Package* (pp. 1–358). http://personality-project.org/r/psych-manual.pdf

Sakti, S. A., Endraswara, S., & Rohman, A. (2024). Revitalizing local wisdom within character education through ethnopedagogy apporach: A case study on a preschool in Yogyakarta. *Heliyon*, *10*(10). https://doi.org/10.1016/j.heliyon.2024.e31370

Säljö, R. (2010). Digital tools and challenges to institutional traditions of learning: Technologies, social memory and the performative nature of learning. *Journal of Computer Assisted Learning*, *26*(1), 53–64. https://doi.org/10.1111/j.1365-2729.2009.00341.x

Sandberg, H. (2005). Information and communication in society. *Acta Paediatrica, International Journal of Paediatrics, Supplement*, *94*(448), 38–39. https://doi.org/10.1080/08035320510035285

Saunders, B., Sim, J., Kingstone, T., Baker, S., Waterfield, J., Bartlam, B., Burroughs, H., & Jinks, C. (2018). Saturation in qualitative research: exploring its conceptualization and operationalization. *Quality and Quantity*, *52*(4), 1893–1907. https://doi.org/10.1007/s11135-017-0574-8

Scolari, C. A. (2009). Mapping conversations about new media: The theoretical field of digital communication. *New Media and Society*, *11*(6), 943–964. https://doi.org/10.1177/1461444809336513

Scuotto, C., Triberti, S., Iavarone, M. L., & Limone, P. (2024). Digital interventions to support morality: A scoping review. *British Journal of Educational Psychology*, *94*(4), 1072–1090. https://doi.org/10.1111/bjep.12706

Settimini, E. (2020). Cultural landscapes: exploring local people's understanding of cultural practices as "heritage." *Journal of Cultural Heritage Management and Sustainable Development*, *11*(2), 185–200. https://doi.org/10.1108/JCHMSD-03-2020-0042

Sham, F. M., Yaqin, A. I. N. U. L., & Wachidah, H. N. (2021). Moral Reasoning Theory: Between Kohlberg's and al-Ghazali's Perspective. *International Journal of Islamic Thought*, *20*, 25–33.

Singh, M. (2024). Exploring the possibilities to implement metaverse in higher education institutions of India. *Education and Information Technologies*, *29*(15), 20715–20728. https://doi.org/10.1007/s10639-024-12691-2

Slavtcheva-Petkova, V., Nash, V. J., & Bulger, M. (2015). Evidence on the extent of harms experienced by children as a result of online risks: implications for policy and

research. *Information Communication and Society*, *18*(1), 48–62. https://doi.org/10.1080/1369118X.2014.934387

Staksrud, E., Ólafsson, K., & Livingstone, S. (2013). Does the use of social networking sites increase children's risk of harm? *Computers in Human Behavior*, *29*(1), 40–50. https://doi.org/10.1016/j.chb.2012.05.026

Stephens, J. M., Young, M. F., & Calabrese, T. (2007). Does moral judgment go offline when students are online? A comparative analysis of undergraduates' beliefs and behaviors related to conventional and digital cheating. *Ethics and Behavior*, *17*(3), 233–254. https://doi.org/10.1080/10508420701519197

Sulianta, F. (2024). *Local Wisdom in the Digital Landscape*. Feri Sulianta.

Supriyantomo, N. A., Tatimmussa'adah, R., Aulia, P. V., Sukmana, N., Sihombing, A. P. R., Danova, M. G., & Furnamasari, Y. F. (2024). Literature Study: Dynamics of Young Generation Political Ethics in the Digital Era. *Malikussaleh Social and Political Reviews*, *5*(1), 23–29. https://doi.org/10.29103/mspr.v5i1.16283

Taylor, J., & Pagliari, C. (2018). Mining social media data: How are research sponsors and researchers addressing the ethical challenges? *Research Ethics*, *14*(2), 1–39. https://doi.org/10.1177/1747016117738559

Team, R. C. (2018). A Language and Environment for Statistical Computing. *R Foundation for Statistical Computing*. https://doi.org/10.4236/oalib.1107821

The jamovi project. (2024). *jamovi. (Version 2.6) [Computer Software]. Retrieved from https://www.jamovi.org.*

Timans, R., Wouters, P., & Heilbron, J. (2019). Mixed methods research: what it is and what it could be. *Theory and Society*, *48*(2), 193–216. https://doi.org/10.1007/s11186-019-09345-5

Tukur, M., Schneider, J., Househ, M., Dokoro, A. H., Ismail, U. I., Dawaki, M., & Agus, M. (2023). The metaverse digital environments: a scoping review of the challenges, privacy and security issues. *Frontiers in Big Data*, *6*, 1301812. https://doi.org/10.3389/fdata.2023.1301812

Umar, Ghufron, A., & Wuryandani, W. (2025). Integrating Maja Labo Dahu culture in Islamic education: a module for character development in elementary students. *Journal of Education and Learning*, *19*(2), 711–723. https://doi.org/10.11591/edulearn.v19i2.21801

Valenzuela, S., Piña, M., & Ramírez, J. (2017). Behavioral Effects of Framing on Social Media Users: How Conflict, Economic, Human Interest, and Morality Frames Drive News Sharing. *Journal of Communication*, *67*(5), 803–826. https://doi.org/10.1111/jcom.12325

van Dijck, J., & Poell, T. (2013). Understanding social media logic. *Media and Communication*, *1*(1), 2–14. https://doi.org/10.12924/mac2013.01010002

Waluyati, I., Irmansyah, I., & Syaifullah, S. (2024). Edukasi Dampak Perundungan Di SDN Inpres Simpasai Lambu. *Jompa Abdi: Jurnal Pengabdian Masyarakat*, *3*(2), 61–69. https://doi.org/10.57218/jompaabdi.v3i2.1086

Yaqin, A. (2020). Enhancing Cognitive Developmental Approach To Moral Education in Moslem Society. *1st International Conference on Morality (InCoMora)*.

Yeh, K.-H. (2003). Review-The Beneficial and Harmful Effects of F ilial Piety: An Integrative Analysis. In K. S. Yang (Ed.), *Progress in Asian Social Psychology: Conceptual and Empirical Contributions* (pp. 67–82). http://books.google.com/books?hl=en&lr=&id=F04k6UPieHsC&oi=fnd&pg=PA67&dq=Beneficial+and+harmful+effects+of+filial+piety:+an+integrative+analysis&ots=x6j9iC2jeJ&sig=Ptktk5_FZdy4rkRJPMBfNPuO0cI

Zhanbayev, R. A., Irfan, M., Shutaleva, A. V., Maksimov, D. G., Abdykadyrkyzy, R., &

Filiz, Ş. (2023). Demoethical Model of Sustainable Development of Society: A Roadmap towards Digital Transformation. *Sustainability (Switzerland)*, *15*(16), 12478. https://doi.org/10.3390/su151612478

Zhang, S., & Qiu, Z. (2022). What makes rural e-commerce successful? An analytical framework for the realization of technology dividends. *Sociological Studies*, *37*(2), 114–136.

Zhang, Y. qin. (2025). The negative impacts of technological progress on humanity: existential anxiety in Kurt Vonnegut's Galapagos. *Disability and Rehabilitation: Assistive Technology*, 1–11. https://doi.org/10.1080/17483107.2025.2477677

Zhao, Y., & Wang, M. (2023). Digital sociology: origin, development, and prospects from a global perspective. *Journal of Chinese Sociology*, *10*(1), 19. https://doi.org/10.1186/s40711-023-00198-1

ZM, H., Syafruddin, S., & Handayani, N. (2022). The Impact of The Idea of Rangga (Masculinity) Towards Domestic Violence in The Maja Labo Dahu Culture: Study of Sociology and Social Sciences Education. In *QALAMUNA: Jurnal Pendidikan, Sosial, dan Agama* (Vol. 14, Issue 2, pp. 631–648). https://doi.org/10.37680/qalamuna.v14i2.3604

Zou, J., & Hu, X. (2024). Personality Rights Protection in the Metaverse Era: Challenges and Strategies in Law and Ethics. *Pakistan Journal of Life and Social Sciences (PJLSS)*, *22*(1). https://doi.org/10.57239/pjlss-2024-22.1.00129

Zulkarnain, M. A. Bin. (2024). The Dynamics of Globalization and Local Cultural Identity: Challenges, Opportunities, and the Role of Digital Technology in Cultural Preservation. *Bulletin of Science, Technology and Society*, *3*(1), 71–77.

Zuriatin, Z., Nurhasanah, N., Junaidin, J., & Nurlaila, N. (2025). The Reconstruction of Local Wisdom as Socio-Political Ethics: A Conceptual Inquiry into the Philosophy of Maja Labo Dahu in Bima Society. *JURNAL SYNTAX IMPERATIF: Jurnal Ilmu Sosial Dan Pendidikan*, *6*(3), 474–480.

Zvereva, E. (2023). Digital ethics in higher education: Modernizing moral values for effective communication in cyberspace. *Online Journal of Communication and Media Technologies*, *13*(2), 202319. https://doi.org/10.30935/ojcmt/13033