



MORAL GROWTH IN A DIGITAL AGE: APPLYING THE THREEFOLD TRAINING TO ENHANCE THE LIFESTYLES AND TECHNOLOGY USE OF GENERATION C STUDENTS IN THE THAILAND 4.0 ERA

Kornkanok Sarapirom^{1*}, Sayam Aroonsrimorakot², Praneet Muangnual³, Panuwat Taerakul⁴

¹Ratchaburi Buddhist College, Mahachulalongkornrajavidyalaya University, Ratchaburi, Thailand

²Faculty of Environment and Resource Studies, Mahidol University, Nakhon Pathom, Thailand

³Faculty of Education, Bansomdejchaopraya Rajabhat University, Bangkok, Thailand

⁴Faculty of Engineering, Southeast Asia University, Bangkok, Thailand

*Corresponding author E-mail: kornkanoknet@hotmail.com

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Abstract

Background and Objectives: Within the Thailand 4.0 context, where digital transformation has reshaped education and society, the lifestyles of Generation C, defined by connectivity, creativity, and collaboration, are shaped by pervasive technology use. While these changes offer opportunities for innovation and learning, they raise concerns regarding ethical awareness, digital well-being, and value-based living. Educational institutions must therefore address both digital access and students' personal, social, and ethical development. Generation C favors personalized learning, online collaboration, and constant connectivity, yet also faces risks such as digital addiction, distraction, and psychological stress. Although Generation C's digital lifestyles have been widely studied, prior research has largely treated digital behavior, digital literacy, and moral education as separate domains. This fragmentation has limited empirical understanding of how moral development can be systematically cultivated in technology-mediated learning environments, revealing a clear gap in integrative models grounded in indigenous ethical frameworks. Drawing on Buddhadhamma, the Threefold Training, *sīla* (Moral Discipline), *saṃādhi* (Concentration), and *paññā* (Wisdom), offers a holistic theoretical foundation for addressing this gap. Accordingly, this study aimed to examine how integrating the Buddhist Threefold Training into the digital lifestyles of Generation C students in higher education contributes to moral growth, ethical awareness, and self-regulation, and to propose an educational model aligning digital literacy with moral cultivation in Thailand.

Methodology: A mixed-methods design was employed. Quantitative data were collected through a structured questionnaire administered to 480 undergraduate students from six universities across Thailand, using stratified random sampling. Data were analyzed using Structural Equation Modeling (SEM) and regression analysis to examine relationships among digital lifestyles, moral development, and the Threefold Training components. The instrument assessed digital literacy, lifestyle balance, and ethical awareness mapped to *sīla*, *saṃādhi*,



and paññā. Qualitative data were obtained through in-depth interviews with 15 experts, including educators, digital literacy specialists, and Buddhist scholars, and were analyzed thematically to complement the quantitative findings.

Main Results: The findings indicated that students' digital lifestyles significantly influenced moral development and digital well-being, presenting both strengths and risks. Reflective digital practices aligned with paññā emerged as the strongest predictor of digital moral growth. Ethical online collaboration associated with sīla supported empathy and responsible interaction, while samādhi enhanced attention regulation and reduced problematic technology use. Conversely, excessive social media engagement negatively affected ethical awareness and self-regulation. Qualitative findings highlighted Buddhist-informed practices-such as mindful pauses, pre-commitment rules, and purpose-driven routines- support healthier technology use. These integrated findings informed the development of the S-M-P Innovation Model, which embeds morality, concentration, and wisdom into digital learning environments to promote ethical and mindful digital living aligned with Thailand 4.0.

Involvement to Buddhadhamma: Grounded in Applied Buddhism and the development of wisdom and morality, this study employed the Threefold Training as an integrated theoretical and practical framework for digital ethics and lifestyle development. Its contributions include: Translating Buddhist principles into contemporary digital ethics; Applying mental cultivation to enhance technology self-regulation; Harnessing wisdom for media discernment; Embedding Buddhist pedagogy within Thailand 4.0 capital development; and Bridging Dhamma and education through empirical evidence. The findings demonstrate that Buddhadhamma remains both timeless and relevant in guiding Generation C toward ethical, mindful, and purposeful digital living.

Conclusions: The research confirms that the Buddhist Threefold Training constitutes a culturally grounded and pedagogically effective educational innovation for enhancing ethical attitudes, self-regulation, and reflective competencies among Generation C students. It recommends integrating the S-M-P Innovation Model into curricula, digital literacy programs, and student support systems to foster ethical technology use and value-driven digital lifestyles. Beyond Thailand, the model offers relevance for ASEAN and global education systems seeking to balance digital advancement with values-based human development.

Keywords: Generation C, Threefold Training, Educational Innovation, Technology Ethics, Digital Mindfulness

Introduction

Thailand's strategic vision for economic and social transformation, known as Thailand 4.0, aims to shift the nation toward a value-based and innovation-driven economy (NESDC, 2020). Central to this vision is the cultivation of human capital grounded in creativity, critical thinking, and ethical innovation, which are regarded as key drivers of sustainable economic and social development (Ministry of Digital Economy and Society, 2016). In the contemporary digital era, the rapid advancement of Information and Communication Technology (ICT) has profoundly



reshaped how individuals learn, work, interact, and socialize. This transformation has been especially visible in educational settings, where digital platforms increasingly mediate learning processes, student engagement, and knowledge construction. However, alongside these opportunities, concerns have emerged regarding reduced attention spans, surface-level learning, and diminished reflective thinking among digitally immersed learners. Challenges that directly complicate Thailand 4.0's policy aspiration to develop ethically grounded and cognitively resilient human capital. Within this landscape, Generation C has increasingly attracted scholarly attention for its distinctive lifestyles and behavioral patterns shaped by digital environments (Wongwuttiwat et al., 2020). Unlike generational cohorts defined strictly by birth year, Generation C transcends age categories and is instead characterized by digital fluency, active participation in user-generated content, and strong engagement in networked communities (Leeflang et al., 2014). Commonly described as connected, computerized, community-oriented, and content-centric, this group, largely comprising individuals born after 1990, thrives on constant connectivity and multimedia interaction (Rosen, 2013); (Goleman & Davidson, 2017). In Thailand, this pattern is particularly pronounced among higher education students, whose academic, social, and emotional lives are deeply intertwined with mobile devices, social media, and online learning systems. As a result, Generation C students experience both enhanced access to information and increased exposure to cognitive overload, social comparison, misinformation, and algorithm-driven content consumption. Generation C thus embodies both the promises and perils of the digital age: While it fosters creativity, collaboration, and innovation, it also confronts concrete moral and ethical dilemmas, including overstimulation, misinformation, digital dependency, ethical disengagement, and diminished empathic awareness (Tapscott, 2009); (Leung, 2013); (Turkle, 2015). These dilemmas are not abstract concerns but daily realities in students' online learning, social interaction, and identity construction. Understanding the lifestyles, technological needs, and ethical orientations of this generation is therefore vital for developing inclusive digital policies and educational innovations that genuinely support the human capital goals of Thailand 4.0 (Ministry of Industry, 2017); (OECD, 2019), without a clear understanding of how Generation C learners navigate digital environments, policy interventions risk focusing narrowly on infrastructure and technical skills while overlooking the ethical self-regulation and reflective capacities essential for responsible digital citizenship. In Thailand, rising concerns about these issues underscore the urgent need to complement digital skills with moral awareness and character-based digital literacy (OECD, 2019). Although recent policy discourse increasingly acknowledges that technological competence alone does not guarantee responsible digital citizenship, particularly in contexts marked by rapid social change and uneven digital regulation, current educational approaches still tend to prioritize technical competencies while neglecting the systematic integration of values-based learning (Sinlarat, 2005). As a result, technological advancement without ethical grounding may fail to promote social harmony, civic responsibility, or sustainable development (UNESCO, 2015); (Phra Dhammakosajarn, 2010). In response to these challenges, scholars have increasingly advocated for the revitalization of Buddhist principles in



modern education as a means of cultivating digital mindfulness, moral reasoning, and psychological resilience among young people (Gombrich, 2009). These principles are not antithetical to technological progress; Rather, they provide an ethical compass that enhances the responsible and meaningful application of technology. International examples such as Bhutan's Gross National Happiness (GNH) paradigm further illustrate how spiritual and cultural frameworks can guide socio-technological development in ways that balance material progress with human well-being (Ura et al., 2012).

Within the Thai context, such perspectives are particularly relevant given Buddhism's foundational role in shaping cultural values, social norms, and educational traditions. Among Buddhist educational frameworks, the Threefold Training (Tri-Sikkhā), comprising morality (Sīla), concentration (Samādhi), and wisdom (Paññā), offers a holistic and culturally grounded approach to human development. Rooted in holistic education, this framework emphasizes three interconnected domains: Head (Cognitive), fostering critical thinking, reflection, and ethical decision-making; Heart (Emotional and Moral), nurturing compassion, empathy, and moral sensitivity; and Hand (Behavioral and Practical), guiding responsible conduct and civic engagement. These domains directly correspond to the competencies required for navigating complex digital environments, where learners must evaluate information critically, regulate emotional responses, and act responsibly online. Scholars have recommended this approach as a way to embed moral formation in the digital era (Harwood, 2021). Prior studies in Thailand indicate that applying Buddhist principles in education strengthens self-discipline, cognitive regulation, and ethical reasoning (Phrakhru Suwannasuttalankara et al., 2020) while also suggesting their potential to mitigate risks of online engagement such as addiction, misinformation, and cyberbullying (Tamil & Kalaiyaran, 2022). However, despite these promising findings, most existing studies focus on general student populations or traditional learning environments, rather than digitally intensive lifestyles characteristic of Generation C. Although research has examined digital literacy and moral education separately, few studies have investigated how these areas intersect within holistic pedagogical models. In particular, the role of the Threefold Training in enhancing Generation C students' moral growth within digitally saturated environments remains underexplored.

Against this backdrop, the present study explores the lifestyles of Generation C in the digital age, with specific attention to their technological engagement, social interaction patterns, ethical considerations, and support needs. Generation C students in higher education are selected as the focal group because they represent a critical intersection of national digital policy, intensive technology use, and formative moral development (Janthapassa et al., 2024). Universities, as key sites of human capital formation under Thailand 4.0, provide an analytically significant context in which digital competencies, ethical reasoning, and identity formation converge. The primary aim of this study is to promote virtuous living in a digital society by integrating the Threefold Training into the lifestyles and technology use of Generation C students. Furthermore, it examines how embedding this framework within higher education can foster healthy digital habits, ethical technology use, and mental discipline. Ultimately, the study seeks to contribute



to the development of well-rounded individuals whose personal growth and digital practices align with the ethical and human-centered aspirations of Thailand 4.0.

Objectives

This study aimed to examine how integrating the Buddhist Threefold Training into the digital lifestyles of Generation C students in higher education contributes to moral growth, ethical awareness, and self-regulation, and to propose an educational model aligning digital literacy with moral cultivation in Thailand.

Methodology

This research adopted a mixed-methods Exploratory Sequential Design (QUAL → QUAN) to examine how the Buddhist Threefold Training, comprising *sīla* (Moral Discipline), *samādhi* (Concentration), and *paññā* (Wisdom), influences the lifestyles, moral development, and technology use of Generation C students within the Thailand 4.0 context. In this design, qualitative inquiry was conducted first to explore key constructs, contextual meanings, and relationships relevant to moral development in digitally mediated environments. Insights derived from the qualitative phase informed the refinement of survey instruments and the construction of the conceptual and analytical model, which was subsequently tested and validated using quantitative data. This sequential approach enhanced methodological rigor by ensuring that the proposed model was both contextually grounded and empirically tested.

The study was conducted in three interrelated phases. In the first phase (QUAL), in-depth interviews and focus group discussions were used to explore students' and experts' perspectives on digital lifestyles and the applicability of the Threefold Training in higher education. In the second phase (QUAN), a large-scale survey was administered to test relationships among digital behaviors, moral development, and the Threefold Training components using statistical modeling. In the final phase, findings from both strands were integrated to develop and validate the S-M-P Innovation Model, which was reviewed by experts in Buddhist studies and educational innovation.

Population and Sample: The population consisted of undergraduate students aged 18 to 25 years enrolled in public and private universities across Thailand, together with moral and educational experts specializing in Buddhist and digital education. Sampling was carried out in three stages. First, universities were purposively selected from provinces strategically aligned with Thailand 4.0 development policies, including Bangkok, Ratchaburi, Chiang Mai, Khon Kaen, Chonburi, and Surat Thani. Second, a stratified random sampling technique was applied to select students from various faculties such as Social Sciences, Education, Nursing, Information and Communication Technology, Business Administration, and Religious Studies. Third, purposive sampling was used to recruit participants for the qualitative phase, including students, educators, digital literacy experts, and Buddhist scholars. The final sample comprised 480 undergraduate students for the quantitative survey, based on Krejcie and Morgan's (1970) sample size determination, and 15 participants for the qualitative phase in focus group discussions.



Research Instruments: The quantitative instrument was a structured questionnaire assessing three key areas: 1) Lifestyle behaviors in the digital age; 2) Moral development and ethical awareness through *sīla* indicators; and 3) Technology use and digital citizenship. Items were rated on a five-point Likert scale. Content validity was evaluated using the Item Objective Congruence (IOC) method, yielding values above 0.80, while reliability testing produced Cronbach's alpha coefficients of at least 0.80. The qualitative instrument consisted of semi-structured interviews and focus group protocols designed to elicit participants' experiences, perceptions, and suggestions regarding the integration of the Threefold Training into digital learning environments.

Data Collection and Analysis: Data were collected over a two-month period. Quantitative surveys were administered both online and in person, with informed consent obtained prior to participation. Qualitative interviews and focus groups were conducted face-to-face or via secure video conferencing, audio-recorded with permission, transcribed verbatim, and analyzed thematically using NVivo software. Quantitative data were analyzed using descriptive statistics, Pearson correlation, and multiple regression, while Structural Equation Modeling (SEM) was applied to test the proposed model. Qualitative data were coded and categorized thematically in alignment with the *sīla-samādhi-paññā* framework, and triangulation was used to integrate findings from both data sources, thereby enhancing the validity and depth of the results.

Results and Discussion

As overall, quantitative results indicated a significant positive correlation between exposure to Threefold Training-based education and students' reported lifestyle balance ($r = 0.68, p < .01$) and ethical decision-making in digital contexts ($r = 0.74, p < .01$). Regression models demonstrated that the "Morality" component accounted for the largest variance in ethical awareness scores ($\beta = .51, p < .001$), while "Concentration" predicted better time management and reduced screen fatigue ($\beta = .37, p < .01$). The qualitative findings reinforced these results, with interviewees noting that structured meditation practices improved focus during online learning, and moral reflection sessions increased empathy in online communications. These findings align with previous work by Kabat-Zinn (2015) on mindfulness-based learning and by Turkle (2015) on empathy in digital interactions.

The S-M-P Innovation Model, proposed in this paper, illustrates how spiritual grounding, mental focus, and practical application can be systematically embedded into digital-age curricula. This model supports the dual objectives of Thailand 4.0-technological advancement and human capital development.

The research findings were presented in four sections as follows,

1. Summary of demographic characteristics
2. Current Digital Lifestyles and Technology Use of Generation C
3. Qualitative Findings on Ethical and Mindful Use of Technology
4. S-M-P Innovation Model for Ethical and Mindful Digital Living



1. Summary of Demographic Characteristics

The demographic profile of the respondents (Table 1) indicated that the sample consisted of slightly more females (56.2%) than males (43.8%). The majority of students were aged between 20 and 21 years (47.9%), reflecting the typical age range of undergraduate cohorts, with smaller proportions in the younger (18-19 years, 24.0%) and older age groups (22-23 years, 19.8%; 24 years and above, 8.3%). Students were distributed across all years of study, with the highest representation from second-year students (28.1%), followed by first-year (25.0%) and third-year (26.0%) groups, while final-year students accounted for 20.9%. In terms of academic disciplines, Humanities and Social Sciences (33.3%) and Science and Technology (29.2%) comprised the largest segments, followed by Business and Management (22.9%) and Education (14.6%). The participants were drawn from six regions across Thailand, with the largest proportion from Central Thailand (25.0%), followed by the Northeastern (20.8%) and Northern regions (16.7%), while the Eastern, Western, and Southern regions were more modestly represented. Overall, the distribution of respondents reflected a diverse and representative cross-section of Generation C students in Thai higher education. The majority were female (60.6%), with males comprising 39.4%. All respondents were university students aged 18-24 years, representing 100% of the sample. Absolutely, these characteristics confirmed that the sample represented a digitally immersed cohort central to Thailand's human capital strategy under Thailand 4.0. The diversity of disciplines and regions strengthened the generalizability of the findings and supported the relevance of focusing on Generation C as a group experiencing intensive digital exposure alongside increasing ethical and mental challenges, as shown in Table 1.

Table 1 Demographic Characteristics of Respondents (n = 480)

Demographic Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	210	43.8
	Female	270	56.2
Age Group (Years)	18-19	115	24.0
	20-21	230	47.9
	22-23	95	19.8
	24 and above	40	8.3
Year of Study	1st year	120	25.0
	2nd year	135	28.1
	3rd year	125	26.0
	4th year	100	20.9
Field of Study	Humanities & Social Sciences	160	33.3

**Table 1** Demographic Characteristics of Respondents (n = 480) (Continued)

Demographic Variable	Category	Frequency (n)	Percentage (%)
University Region	Science & Technology	140	29.2
	Business & Management	110	22.9
	Education	70	14.6
	Northern Thailand	80	16.7
	Northeastern Thailand	100	20.8
	Central Thailand	120	25.0
	Eastern Thailand	60	12.5
	Western Thailand	50	10.4
	Southern Thailand	70	14.6

2. Current Digital Lifestyles and Technology Use of Generation C

In relation to the objective of examining the digital lifestyles and technology use patterns of Generation C students in Thailand's higher education context. The survey findings indicated that Generation C students spend an average of 7-8 hours per day using digital technologies, particularly social media accessed via mobile devices. Empirically, this finding demonstrated the intensity of digital immersion that frames students' academic, social, and personal lives. Students perceived digital platforms as enabling borderless communication, entertainment, and rapid access to information, thereby reducing reliance on traditional learning resources such as physical libraries.

From a descriptive perspective, these results highlighted the efficiency and accessibility of digital tools in contemporary education. However, when interpreted analytically in relation to Thailand 4.0, they also revealed a pattern of prolonged screen exposure that may contribute to cognitive fatigue, reduced reflective learning, and weakened attentional control. This finding directly addressed the study's concern that digital proficiency alone did not guarantee holistic human development. It extended Turkle's (2015) critique of constant connectivity by situating the problem within Thailand's policy-driven push for digital acceleration, where moral and mental dimensions risk being overshadowed by technical performance indicators.

Table 2 Primary Purposes of Daily Technology Use among Generation C Students (n = 480)

Purpose of Technology Use	Frequency (n)	Percentage (%)
Social Networking & Communication	420	87.5
Academic Learning & Research	355	74.0
Entertainment (Videos, Music, Gaming)	372	77.5
Online Shopping & Transactions	190	39.6
Content Creation & Sharing (Blogs, Vlogs, Posts)	165	34.4
Information & News Updates	280	58.3
Personal Management (Calendar, Health Apps, Productivity Tools)	210	43.8



Further descriptive analysis shows in Table 2 presented the primary purposes for which Generation C students engaged with digital technologies on a daily basis. The most frequently reported activity was social networking and communication (87.5%), underscoring the centrality of connectivity in students' lifestyles. Entertainment (77.5%) and academic learning and research (74.0%) were also highly prominent, reflecting both recreational use and technology's vital role in supporting education. Over half of the respondents reported using technology for information and news updates (58.3%), while personal management tools (43.8%) and online shopping and transactions (39.6%) were moderately common. Content creation and sharing (34.4%) was least frequent, suggesting that while students were active consumers of digital media, fewer engaged in active production. Collectively, these findings highlighted the multifaceted role of technology in students' daily lives, balancing social, educational, and personal functions, with a stronger emphasis on consumption over creation.

Analytically, this consumption-oriented pattern contributed to the theoretical gap identified in prior research: While digital literacy studies often emphasized access and skills, they rarely addressed how such usage patterns shaped moral agency, self-regulation, and reflective judgment. Consistent with Rosen et al (2011), these findings reflected a state of "Continuous Partial Attention" across multiple platforms. While education remained a key driver of engagement, many students experienced difficulties managing screen time, maintaining attention spans, and cultivating healthy online habits (Young & de Abreu, 2011). However, this study extended existing literature by explicitly linking such fragmented attention to moral and ethical implications, namely, diminished reflection, impulsive engagement, and ethical disengagement, rather than treating attention solely as a cognitive issue.

Table 3 Patterns of lifestyles integration with technology (n = 480)

Lifestyle Dimension	Indicator (Daily/Weekly Habit)	Mean (M)	Standard Deviation (SD)
Social Connectivity	Hours spent on social media per day	4.2	1.8
	Frequency of online group collaboration	3.9	1.2
Learning & Information	Hours spent on online learning platforms	2.6	1.4
	Use of digital tools for assignments	4.3	1.1
Entertainment & Leisure	Hours spent on streaming/video games	3.7	1.9
	Frequency of online shopping activities	2.5	1.3
Health & Well-being	Frequency of mindful/digital detox breaks	2.1	1.5
	Reported digital stress/distraction level	3.8	1.4

The analysis of digital lifestyles (Table 3) shows that Generation C students devote a substantial portion of their daily routines to online activities, with the highest engagement in social media (M = 4.2, SD = 1.8) and digital tools for academic work (M = 4.3, SD = 1.1). While students actively utilize online platforms for learning (M = 2.6, SD = 1.4), their technology



use is also strongly oriented toward entertainment ($M = 3.7$, $SD = 1.9$), indicating a dual focus on both productivity and leisure. However, lower scores for digital detox practices ($M = 2.1$, $SD = 1.5$) and elevated reports of stress or distraction ($M = 3.8$, $SD = 1.4$) suggest challenges in maintaining digital well-being.

Table 4 Technology Use and Ethical Awareness of Respondents (n = 480)

Technology Engagement Area	High Users (%)	Moderate Users (%)	Low Users (%)
Social Networking (e.g., Facebook, Instagram, TikTok)	68.5	23.0	8.5
Educational Tools (e.g., Google Classroom, Zoom, E-learning platforms)	55.2	34.0	10.8
Entertainment (e.g., YouTube, Netflix, Gaming Apps)	62.1	25.8	12.1
Productivity Tools (e.g., MS Office, Project Apps)	47.5	39.6	12.9
Online Shopping/Transactions	36.8	40.2	23.0
Digital Ethics Awareness (e.g., Copyright, Privacy)	41.0	37.5	21.5
Mindful Technology Use (e.g., Screen Time Control)	32.9	44.4	22.7

Note: Classification based on self-reported usage frequency (High = Daily, Moderate = Weekly, Low = Rarely/Never).

Complementing these findings, the technology engagement profile (Table 4) indicated that social networking (68.5% High Users) and entertainment platforms (62.1% High Users) dominated daily use, followed by educational tools (55.2% High Users). Productivity-related applications showed moderate to high engagement, while online shopping and transactions were less prominent. Notably, ethical awareness of digital issues (41.0% High Users) and mindful technology practices (32.9% High Users) were less frequently reported, underscoring the need for structured interventions, such as the Threefold Training framework, to strengthen responsible and balanced digital engagement among Generation C students.

Table 5 Regression Analysis - Moderating Effect of Digital Lifestyle on Moral Growth (n = 480)

Predictor Variable	B	SE	β	t	p
Social Media Time (Hrs./Day)	-0.12	0.05	-0.20	-2.40	.018
Online Collaboration Frequency	0.25	0.07	0.28	3.57	.001
Digital Reflection Activities	0.40	0.06	0.35	6.67	<.001

The quantitative analysis demonstrated that elements of digital lifestyle significantly predicted moral growth among Generation C students when examined through the lens of the



Threefold Training. As shown in Table 5, time spent on social media exhibited a significant negative effect on moral growth ($\beta = -0.20$, $p = .018$), indicating that prolonged unstructured digital exposure is associated with reduced ethical awareness and reflective judgment. This finding highlighted a key digital challenge for Generation C students, where excessive connectivity may undermine moral sensitivity and self-regulation.

In contrast, online collaboration frequency showed a significant positive relationship with moral growth ($\beta = 0.28$, $p = .001$), suggesting that digitally mediated interactions emphasizing cooperation, shared responsibility, and respectful communication contributed positively to ethical development. This result reflected the influence of morality (*Sīla*) within digital environments, where socially oriented and norm-guided interactions foster responsible online behavior.

Furthermore, engagement in digital reflection activities emerged as the strongest positive predictor of moral growth ($\beta = 0.35$, $p < .001$). This finding underscored the importance of reflective practices aligned with concentration (*Samādhi*) and wisdom (*Paññā*), as intentional reflection enabled students to regulate attention, evaluate online content critically, and act with greater ethical awareness. Together, these results demonstrated that moral development in digital contexts was not determined by technology use alone, but by the quality and intentionality of digital engagement.

These findings were consistent with Kabat-Zinn's (2015) work on mindfulness-based learning, which emphasized reflective attention as a foundation for ethical awareness, and with Turkle's (2015) argument that meaningful and reflective digital interaction could restore empathy and moral depth in online communication. In contrast to prior studies that focused primarily on digital skills or usage frequency, this study provided empirical evidence that ethically grounded, reflective, and collaborative digital practices, rather than mere access or exposure, were critical for fostering moral growth among Generation C students in the context of Thailand 4.0.

3. Qualitative Findings on Ethical and Mindful Use of Technology

The qualitative analysis of interviews with 15 participants, including students, educators, digital literacy experts, and Buddhist scholars, revealed strong concerns about misinformation, cyberbullying, digital addiction, and mental exhaustion caused by constant online engagement. Many students acknowledged that they rarely considered the ethical implications of their online behavior prior to exposure to value-based or mindfulness-oriented learning. These findings represented empirical outcomes derived directly from participants' lived experiences rather than theoretical assumptions.

Descriptively, many students acknowledged that they rarely considered the ethical implications of their online behavior prior to exposure to value-based or mindfulness-oriented learning. This observation supported Livingstone et al. (2011), who argued that insufficient digital citizenship education had contributed to unethical online behavior. However, this study extended that argument by demonstrating that ethical lapses were not merely due to a lack of rules or knowledge, but also to limited reflective capacity and attentional instability within digitally saturated environments.



Participants further reported that practices associated with the Threefold Training, such as meditation, ethical reflection, and mindful awareness, helped them feel more focused, emotionally regulated, and considerate in online communication. While Goleman and Davidson (2017) emphasized contemplative practices as tools for emotional intelligence, the present findings deepen this perspective by situating such practices within a Buddhist ethical framework explicitly applied to digital behavior, rather than to general well-being alone.

Table 6 Qualitative Themes on Ethical and Mindful Use of Technology Linked to the S-M-P Innovation Model

S-M-P Dimension	Key Behaviors/ Practices	Illustrative Quotes from Respondents
Sīla (Morality)	- Respecting privacy and intellectual property - Avoiding cyberbullying and harmful content - Applying ethical judgment in online interactions	"I Try to Think Twice Before Sharing Something Online, Especially If It Might Affect Someone Else. But Sometimes It's Easy to Forget When Everyone Else Is Posting Without Thinking."
Samādhi (Concentration)	- Managing screen time through timers - Practicing mindfulness breaks - Focusing on tasks without distraction	"I Set a Timer When Using Social Media and Take Short Breaks to Avoid Spending Hours Unconsciously Scrolling. It Helps Me Stay Focused on My Work."
Paññā (Wisdom)	- Selecting apps and content purposefully - Reflecting on value and consequences of digital actions - Making informed, ethical decisions online	"Before I Follow a Trend or Share Content, I Ask Myself If It Adds Value or Spreads Misinformation. It's About Using Technology Purposefully."
Integrated Mindful Practices	- Mindful pauses before posting - Digital fasting during meals - Journaling or reflecting on daily technology use	

Beyond descriptive reporting, the qualitative research objective was to examine how the Threefold Training could be conceptually integrated into a coherent educational framework for digital moral development. The qualitative findings summarized in Table 6 illustrated how the dimensions of the S-M-P Innovation Model were empirically reflected in students' digital behaviors. At the empirical level, morality (*Sīla*) was reflected in students' growing awareness of online ethics, including respect for privacy, avoidance of harmful content, and concern for the impact of online speech.



However, these behaviors were sometimes inconsistent, particularly under peer pressure, indicating that ethical awareness alone did not automatically translate into sustained moral conduct. Concentration (*Samādhi*) was evident in students' reported use of practical self-regulation strategies, such as timers, mindfulness breaks, and focused study sessions, to manage screen time and reduce distraction. Empirically, these strategies were associated with reduced mental exhaustion and improved attentional control. Conceptually, this finding extended prior Buddhist-education research by demonstrating *samādhi* as a functional mechanism for digital self-regulation, not merely a contemplative practice. Wisdom (*Paññā*) emerged most strongly through deliberate and reflective technology choices. Students described selective engagement with applications and content that supported learning and personal growth, alongside conscious avoidance of misinformation and purposeless digital consumption. This dimension represented a key theoretical contribution of the study, as *paññā* moved beyond ethical intention (*Sīla*) and attentional control (*Samādhi*) to enable critical discernment and value-based decision-making in digital environments.

In interpretive terms, these findings supported the proposition that *sīla* promoted respectful interaction, *samādhi* stabilized attention and emotion, and *paññā* enabled critical digital discernment, together forming an integrated pathway for moral development in the digital age (Thanissaro Bhikkhu, 2012). While previous studies have suggested that Buddhist principles foster self-regulation and ethical awareness (Goleman & Davidson, 2017), this study advanced theory by operationalizing these principles within a structured, empirically grounded innovation model applicable to technology-mediated learning contexts.

In summary, the results demonstrated that Generation C students faced significant moral and psychological challenges within digitally saturated environments, including ethical disengagement, attentional fragmentation, and emotional exhaustion. At the same time, the findings showed that integrating the Threefold Training provided not only descriptive insight but also a conceptual framework for addressing these challenges systematically. By distinguishing empirical patterns from theoretical interpretation, this study contributed to theory-building in digital ethics and Buddhist education, while offering practical implications for higher education under Thailand 4.0.

4. S-M-P Innovation Model for Ethical and Mindful Digital Living

The idea for developing the educational innovation model in this study was grounded in the integration of Buddhism's timeless moral principles with Thailand's contemporary development agenda. This integration created a distinctive and holistic approach to addressing the challenges of ethical development among Generation C in the digital age. By drawing upon the moral foundation of Buddhism, the framework emphasized the cultivation of spiritual grounding, which nurtured inner values and moral consciousness; Mental focus, which strengthened cognitive regulation and self-discipline in technology-mediated environments; And practical application, which translated ethical understanding into responsible behaviors in daily digital practices. These three dimensions were systematically embedded into educational curricula designed for the digital era, thereby ensuring that technological learning was complemented by moral and humanistic growth. Such an approach aligned directly with the dual objectives of



Thailand 4.0, on one hand, advancing technological innovation and economic competitiveness, and on the other, fostering sustainable human capital development rooted in ethics, resilience, and social responsibility.

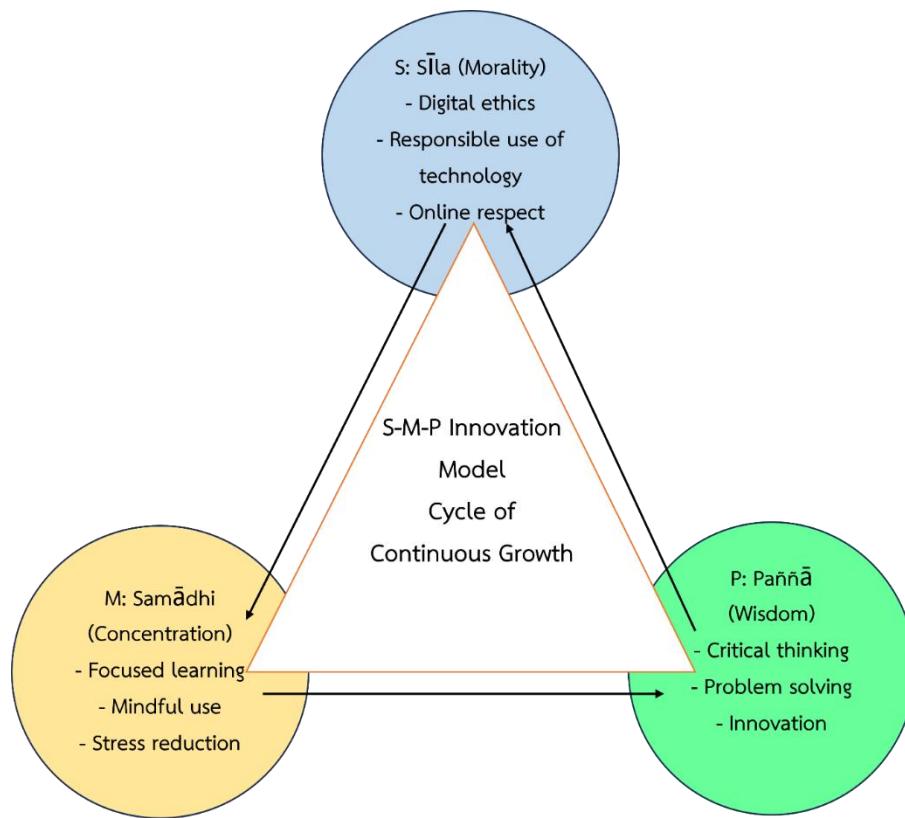


Figure 1 S-M-P Innovation Model for Ethical and Mindful Digital Living of Generation C Students

As shown in Figure 1, the S-M-P Innovation Model for Ethical and Mindful Digital Living of Generation C Students illustrates the developmental pathway for integrating the Buddhist Threefold Training into the digital lives of Generation C students. The model positioned morality (*Sīla*) as the ethical foundation, guiding responsible digital citizenship through respect for privacy, intellectual property, and compassionate online interactions. Building upon this, concentration (*Samādhi*) strengthened self-regulation by cultivating attentional control, mindful screen-time management, and resistance to digital distractions. At the highest level, wisdom (*Paññā*) enabled critical discernment, empowering students to evaluate information, make value-based technology choices, and align digital practices with personal and societal well-being. Together, these dimensions converged in the outcome of ethical and mindful digital living, fostering balanced, resilient, and purposeful technology use. The model underscored a continuous cycle of growth, where morality grounds conduct, concentration regulates behavior, and wisdom directs decision-making, thus offering a culturally resonant and pedagogically innovative framework for human capital development in the Thailand 4.0 era.



Originality and Body of Knowledge

Originality: This study represents the first empirical investigation in Thailand to systematically apply the Threefold Training framework (Head-Heart-Hand) within a structured digital learning environment specifically designed for Generation C students, in alignment with the Thailand 4.0 policy agenda. Beyond synthesizing existing moral education and digital literacy frameworks, the study conceptually extends the Threefold Training by reconceptualizing it as a dynamic mechanism of moral knowledge construction in technology-mediated contexts rather than a static ethical doctrine. While previous research has tended to address moral education and digital literacy as separate domains, this study integrates them into a unified pedagogical model that embeds moral development directly into technology-mediated learning activities. Importantly, this integration moves beyond alignment by specifying functional correspondences between wisdom (Head), moral action (Hand), and mental discipline (Heart) and established constructs in digital citizenship, self-regulation theory, and socio-emotional learning, thereby extending these theories through a culturally grounded ethical lens. By bridging the principles of classical Buddhist pedagogy with contemporary theories of digital citizenship, self-regulation, and socio-emotional learning, the research introduces an indigenous, values-driven framework for cultivating responsible, ethical, and balanced technology use among Thai youth. The proposed model thus contributes new theoretical knowledge by demonstrating how Buddhist ethical principles can operate as generative learning mechanisms that actively shape cognitive, affective, and behavioral outcomes in digital environments, rather than merely coexisting alongside Western-derived educational theories. This dual emphasis, rooted in cultural heritage yet responsive to modern digital realities, positions the study as both academically innovative and contextually relevant for Thailand's human capital development goals, while offering a structured model that can inform future theory-building at the intersection of ethics, technology, and education.

Body of Knowledge Contribution: This study contributes to the body of knowledge by empirically validating the "Threefold Training for Moral Growth Model" as a holistic framework for ethical development in digitally intensive learning environments. Specifically, the model explicates the mechanism through which moral knowledge is generated and transformed: Digital learning activities function as mediating processes that translate ethical principles into observable cognitive reflection, emotional regulation, and ethical action. Empirical findings strongly support the proposed model. Results show that digital reflection activities, representing the wisdom component, are the strongest predictor of moral growth, indicating that structured reflective engagement serves as a key pathway for ethical reasoning and internalization of moral values in digital contexts. Ethically guided online collaboration, linked to morality, positively enhances empathy and responsible interaction, demonstrating how moral norms are socially reinforced and enacted through digitally mediated peer engagement. Meanwhile, mindfulness-oriented practices, associated with concentration, improve students' self-regulation and balanced digital lifestyles, highlighting concentration as a stabilizing mechanism that enables learners to manage digital stimuli and align behavior with ethical intentions. Conversely, excessive social media use



undermines these processes, reinforcing the model's emphasis on intentional and regulated digital engagement rather than unrestricted technology exposure, and empirically delineating the conditions under which digital practices support or hinder moral development.

Overall, this study contributes to the body of knowledge by operationalizing Buddhist pedagogy within a contemporary digital education framework and providing empirical evidence that moral development can be systematically cultivated among digital-native learners. At the same time, the study acknowledges boundary conditions of applicability: The model is most directly transferable to cultural and educational contexts where Buddhist or contemplative ethical traditions are recognized or where value-based education is institutionally supported. While the core mechanisms, reflection, ethical action, and self-regulation, may be adaptable to non-Buddhist contexts, cultural reinterpretation would be required to ensure relevance and legitimacy outside Thai or Buddhist-informed educational systems.

Practically, the model offers educators a clear, implementable approach: Curricula can incorporate structured digital reflection tasks, mindfulness-based learning activities, and ethically framed collaborative projects to promote responsible digital citizenship. Policymakers and institutions can apply the model to align digital education initiatives with moral and ethical competencies, ensuring that technological advancement under Thailand 4.0 is accompanied by sustainable moral growth and human capital development without overstating universal generalizability, and by integrating contextual foundations, structured interventions, and intended outcomes to guide Generation C's ethical development in the digital age, as shown in Figure 2.

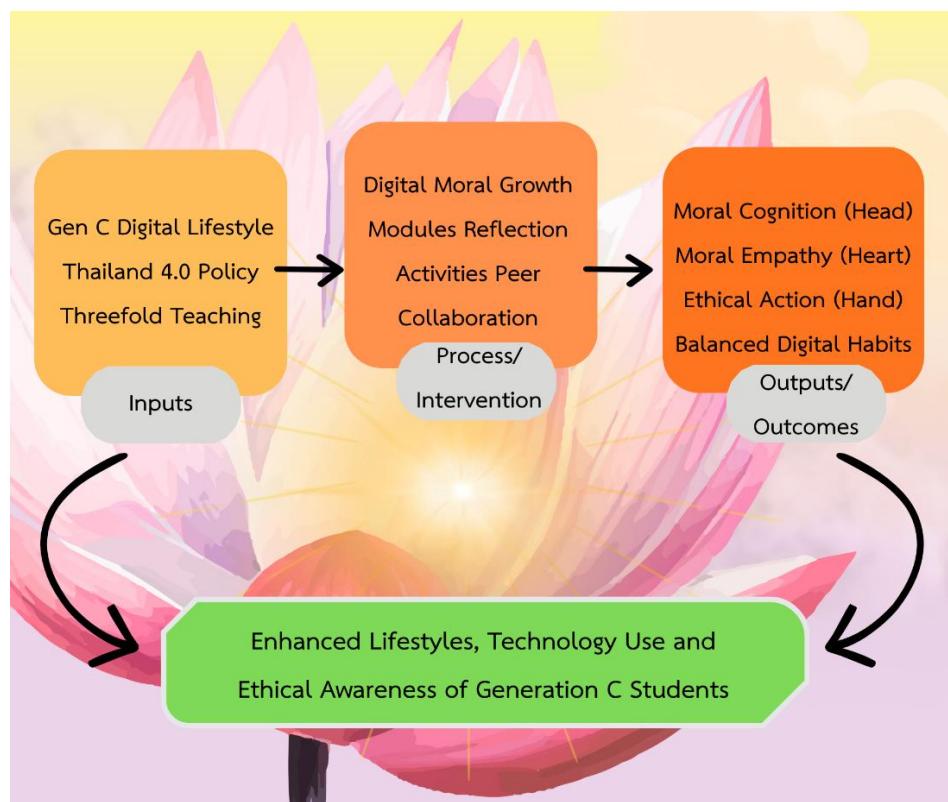


Figure 2 Threefold Training for Moral Growth Model



Conclusions and Recommendations

The study demonstrates that students' digital lifestyles play a decisive role in shaping their moral development, with excessive social media use negatively associated with ethical growth due to distraction, superficial engagement, and conflicting values in unregulated online spaces, whereas quantitative and qualitative findings show that digital reflection activities are the strongest positive predictor of moral growth, supported by ethically guided online collaboration that promotes empathy, responsibility, and respectful interaction. In contrast, excessive social media use emerges as a significant negative influence, contributing to distraction, superficial engagement, and weakened ethical judgment in unregulated digital environments. Together, these results demonstrate that moral development in the digital age depends less on technology use itself than on the quality, intentionality, and reflective nature of digital engagement. Grounded in these findings, the S-M-P Innovation Model is proposed as a pedagogically robust framework aligned with Thailand 4.0's human capital development agenda. The model integrates moral conduct, mental discipline, and reflective wisdom to promote responsible digital citizenship characterized by ethical discernment, focused attention, and compassionate action. Educational institutions are therefore encouraged to embed the S-M-P framework into curriculum design, faculty development, and digital literacy initiatives, ensuring that technological competence is complemented by ethical and reflective capacities. Despite these contributions, this study has important limitations. The sample was confined to Generation C undergraduate students within Thai higher education institutions, which may limit the generalizability of the findings across age groups, professional contexts, and cultural settings. Furthermore, as a model development study, the present research establishes conceptual validity and empirical associations but does not yet provide causal evidence of the model's effectiveness when implemented in real educational settings. Consequently, the most critical recommendation for future research is to rigorously test the efficacy of the S-M-P Innovation Model through experimental or quasi-experimental designs. Future studies should implement the model in authentic classroom or digital learning environments and evaluate its impact on students' moral development, digital well-being, and ethical technology use over time. To strengthen generalization, subsequent research should also expand the scope to other populations, such as early adolescents (Generation Alpha), working professionals, or learners in different cultural and national contexts. Such experimental validation and broader application are essential to establishing the S-M-P Model as a scalable and evidence-based educational innovation for ethical development in the digital age.

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