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Strengthening the Child Protection Ecosystem through Microlearning: Evaluating Cross-Stakeholder Acceptance

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ABSTRACT

Child protection continues to present significant global and national challenges, with the private sector increasingly recognized as a key actor in promoting and safeguarding children's rights. However, corporate engagement is often hindered by limited awareness, time constraints, and the lack of accessible, flexible training models. To address these barriers, a microlearning-based e-learning program delivered through a Learning Management System (microlearning-LMS) was developed to strengthen cross-sector professional capacity in child protection. Using a quantitative approach, data were collected through a survey of 136 respondents representing business professionals, non-profit practitioners, government actors, and youth groups, employing purposive sampling. Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings reveal that digital learning acceptance is significantly influenced by Perceived Ease of Use—driven by System Quality and prior Experience—and Perceived Usefulness—determined by Content Quality and Information Quality. These results indicate that adult learners differentiate between technical usability considerations and the instrumental value of learning materials. This study contributes to the discourse on community engagement by demonstrating that participatory curriculum design enhances perceived usefulness and technology acceptance. High acceptance of microlearning reflects not only system effectiveness but also cross-sector readiness to integrate child protection principles, ultimately supporting community empowerment and Sustainable Development Goals (SDGs).

Keywords:
Microlearning; Child Protection; Community Engagement; Technology Acceptance Model; Private Sectors.

Introduction

The private sector bears an important responsibility to actively consider children's rights across all aspects of business operations, including relationships, organizational structures, processes, and outcomes (Collins, 2014). Business activities can impact children positively—for example, by providing access to education, supporting parenting roles, ensuring product safety, and protecting the environment—as well as negatively, through exploitative practices or violations of fundamental rights (Ennew Judith, 2000). In reality, however, the impact of business operations on children is often overlooked (Crane & Kazmi, 2010).

International frameworks, such as the United Nations Guiding Principles on Business and Human Rights (UNGPs) and the Child Rights and Business Principles (CRBP) adopted in 2011, emphasize the private sector's role in respecting and promoting child protection. In Indonesia, these principles have been integrated into Presidential Regulation No. 60 of 2023 concerning the National Strategy on Business and Human Rights (Stranas BHAM). In the 'Child Protection Systems Strengthening' guidelines, UNICEF (2021) also encourages the active involvement of the private sector in strengthening child protection systems through prevention and intervention in accordance with applicable regulations. Nevertheless, child labor and child sexual exploitation remain persistent global challenges, with nearly 138 million children worldwide still involved in child labor (UNICEF, 2025) and over 300 million children vulnerable to online sexual exploitation. (UNSW Media & Childlight Global Child Safety Institute, 2024). In Indonesia, the prevalence of child labor (Figure 1) tends to be stagnant, and sexual violence against children (Figure 2 and Figure 3) has increased in recent years, reflecting persistent gaps in child protection knowledge and practices.

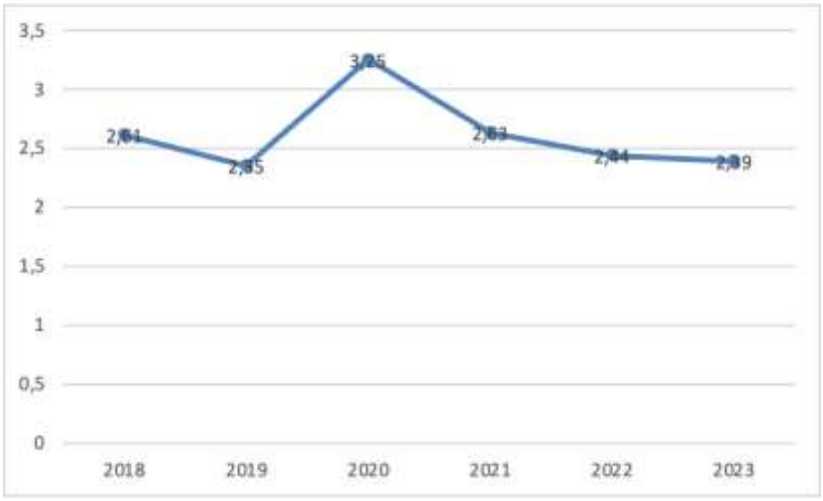

Figure 1. Processed Data on The Number of Working Children aged 10-17 years old in Indonesia between 2018 and 2023 (Source: Badan Pusat Statistik (BPS), 2023)

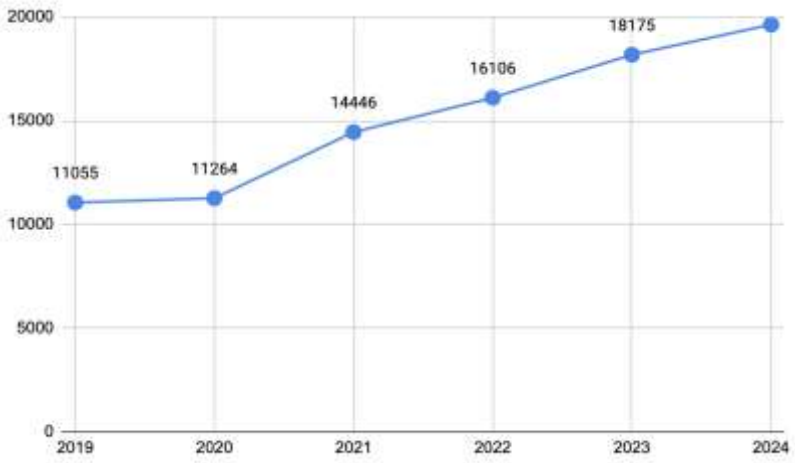

Figure 2. Processed Data on Child Violence Cases in Indonesia from 2019 to 2024 (Source: SIMFONI PPA (Sistem Informasi Online Perlindungan Perempuan dan Anak), 2024)

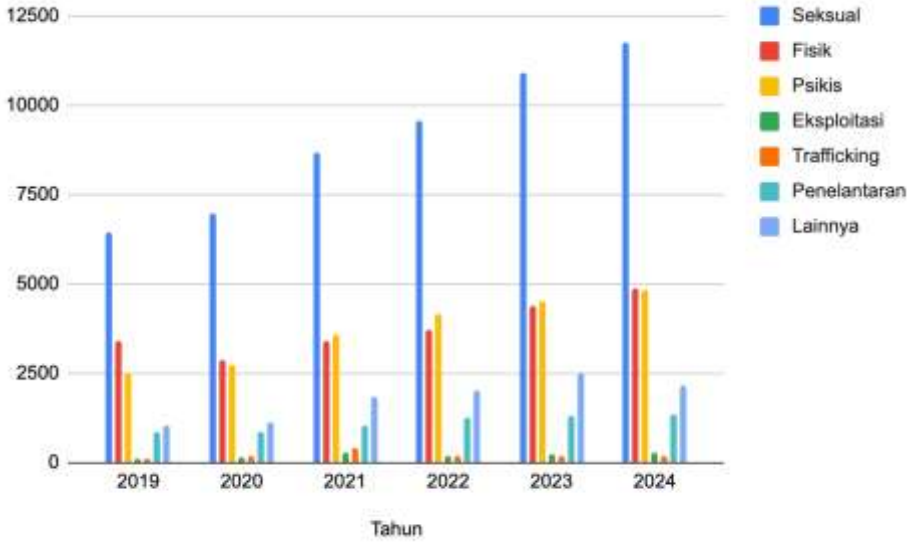

Figure 3. Processed Data on The Types of Child Violence in Indonesia from 2019 to 2024 (Source: (SIMFONI PPA (Sistem Informasi Online Perlindungan Perempuan dan Anak), 2024))

Private sector awareness regarding child rights violations remains limited. Many companies are more active in philanthropy rather than systemic policy development, which, although capable of meeting immediate needs, does not create a long-term protective environment (Collins, 2014). Globally, only 65% of surveyed companies in 2024 had a child labor policy (Global Child Forum & Boston Consulting Group, 2024), while in Indonesia, the number of companies actively participating in networks promoting responsible business practices—such as APSAI and the Indonesia Global Compact Network (IGCN)—remains limited. Government and non-government initiatives, including PRISMA, Norma 100, APSAI, and the Business and Human Rights Accelerator program by IGCN, aim to strengthen corporate capacity in child protection, but available training is often infrequent, long in duration, and difficult to repeat, thus posing a challenge for professionals who tend to have limited time (Table 1).

Table 1. Comparison of Child Protection Programs for the Private Sector (Source: Author, 2025)

Child Protection Programs for the Private Sector	Training Available?	Language	Delivery Method	Duration	Topics	Paid?
Business Human Rights Accelerator	Yes	Indonesian and English	Online dan Offline	6 months	Business and Human Rights Principles, Child Labour	Yes
The Code	Yes	English	Online	N/A	Child Sexual Exploitation in Travel and Tourism Destinations	Yes
BCorporation	No	N/A	N/A	N/A	N/A	Yes

To address these challenges, the Center for Child Study and Protection Foundation (Yayasan PKPA) in Indonesia developed a microlearning-based e-learning program titled "Business Protecting Children's Rights" delivered through a Learning Management System (LMS) (hereinafter: Microlearning-LMS). This program aims to increase private sector capacity in integrating child protection into corporate policies and practices, covering social and environmental responsibilities, common violations, and national and international policy frameworks. Microlearning is considered an approach that can bridge the needs of the private sector, which has limited time due to work, to acquire continuous and dialogic learning (Lohman, 2024).

Various empirical studies demonstrate the effectiveness of microlearning for adult learners, both in educational and professional environments, in improving knowledge retention, attitudes, and practical application (Bobbitt et al., 2023; Orwoll et al., 2018; Yao & Ho, 2024). Advantages of microlearning include asynchronous learning, which allows participants to pace the curriculum according to their busy schedules. Microlearning also supports spaced learning, namely the completion of a curriculum over a certain period with repetition, which is proven to increase knowledge retention (Adams et al., 2024). The concise presentation of microlearning information is similar to practices applied in the corporate world, namely for employee training that is timely and specific to certain tasks (Taylor & Hung, 2022).

Nevertheless, careful instructional design is still required to prevent content fragmentation and maintain participant motivation (Adams et al., 2024; Sichani et al., 2018). To obtain the optimal benefits of microlearning, Yayasan PKPA structured the 'Business Protecting Children's Rights' microlearning curriculum based on the Kern’s Six-Step principles, a systematic method often used in developing online curricula and short educational sessions (microlearning). (Chen et al., 2019; Gómez et al., 2021; Lai-Kwon et al., 2023). In developing the curriculum, PKPA curated existing materials from guidelines, case studies, and articles, such as Business and Human Rights Principles, Business and Child Rights

Principles, child rights violation materials like Child Labor from JARAK Indonesia and Child Sexual Exploitation from ECPAT Indonesia, as well as materials on child participation from UNICEF and Save The Children. The developed curriculum was also consulted with various stakeholders, including UNICEF, IGCN, Save The Children, ECPAT Indonesia, JARAK Indonesia, and youth communities (Forum Anak, KOPPETA HAM, and KOMPAK Jakarta).

Strengthening child protection through responsible corporate engagement aligns directly with the Sustainable Development Goals (SDGs), particularly SDG 8 on decent work and economic growth, and SDG 16 on peace, justice, and strong institutions. By empowering the private sector to respect children's rights, this microlearning initiative not only strengthens professional capacity but also empowers local and grassroots communities, creates a safer environment for children, improves community practices, and supports sustainable community development.

Despite having a significant potential for social impact, the successful implementation of this microlearning-LMS heavily depends on the extent to which users accept and integrate the system into their daily work practices. Professionals often face challenges such as time constraints, work pressure, and varying levels of digital literacy, which can affect their learning experience (Kahiigi et al., 2007; Liaw et al., 2007). These conditions underscore the importance of understanding the determinants of learning technology acceptance in a professional context to ensure the sustainability of this intervention. To obtain a comprehensive evaluation, this study involved various stakeholders, including business sector practitioners, government, non-profit organization workers, and community members. This study aims to analyze the determinants of digital learning acceptance by positioning technology acceptance as a process influenced by cognitive evaluation and usage experience that shapes the user's subjective response. Thus, the research question is formulated as follows: *"What are the determinants influencing the acceptance of a microlearning-based e-learning platform in child protection training among cross-sector stakeholders in Indonesia?"*

Development and Determinants of Child Protection Microlearning

Child Protection Microlearning Development using a Community-based Approach with Kern's Six-Step Framework

The development of this educational innovation was designed by adapting Kern's Six-Step Model as the curriculum design framework. Based on initial identification (Step 1), private sector commitment to children's rights has not been fully followed by adequate policy implementation. This limitation is exacerbated by the characteristics of child protection training, which are generally long in duration, paid, exclusive, and rarely fully available in Indonesian. To overcome these barriers, the microlearning strategy was chosen as a solution. This approach breaks down complex human rights materials into short segments that support just-in-time learning and spaced learning, so adult professionals can manage their study time independently and flexibly.

In line with the principles of community involvement and empowerment, needs assessment and curriculum development were conducted through Focus Group Discussions (FGDs) involving children, youth, government, and the private sector (Step 2). The material was then curated through an expert consultation and validation process involving UNICEF, IGCN, Save The Children, JARAK Indonesia, and ECPAT Indonesia. As a result, the curriculum was formulated into four main modules (Step 3): (1) Business and Social and Environmental Responsibility, (2) Business and Children's Rights, (3) Child Protection Violations (including child labor and sexual exploitation), and (4) Involvement of Children and Youth in Policy. To optimize acceptance and learning outcomes, the material was delivered by academics and expert practitioners through multimodal formats, including educational videos, case-based narratives, and illustrated stories (Step 4).

In the final stage, all materials were integrated into the PKPA e-learning platform (Step 5). The program was then comprehensively evaluated to measure learning effectiveness. Cognitive aspect evaluation was conducted through pre-tests, post-tests, and periodic quizzes on each material. Meanwhile, participants' responses, reactions, and satisfaction toward the learning system were evaluated using a 1 to 5 Likert scale questionnaire, the results of which served as the empirical basis for analyzing the determinants of digital learning technology acceptance (Step 6).

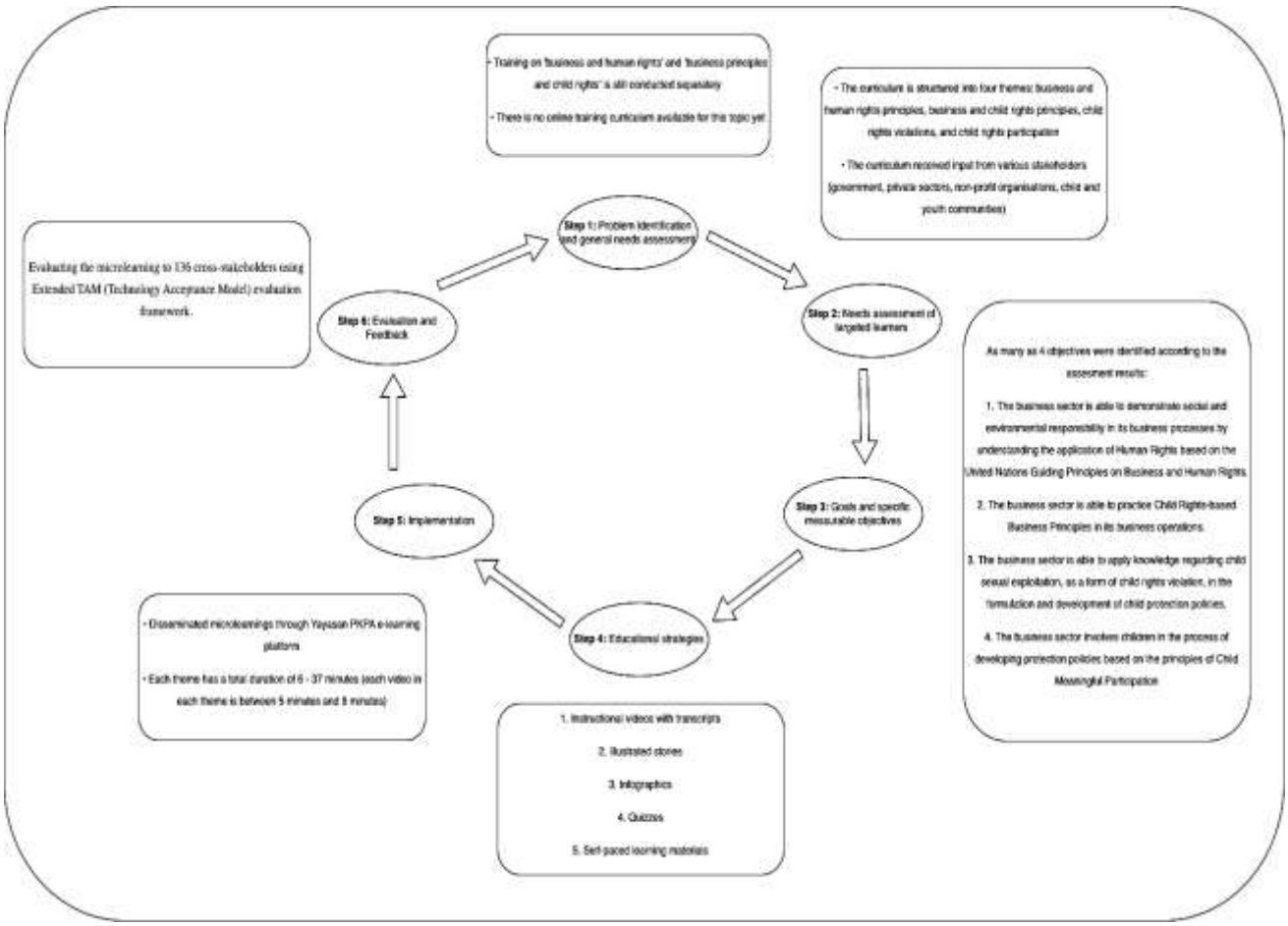

Figure 4. Development of Business Microlearning for the Protection of Children's Rights Based on Kern's Six-Step Framework

Figure 5. Disseminated Microlearning "Business Protecting Children Rights"

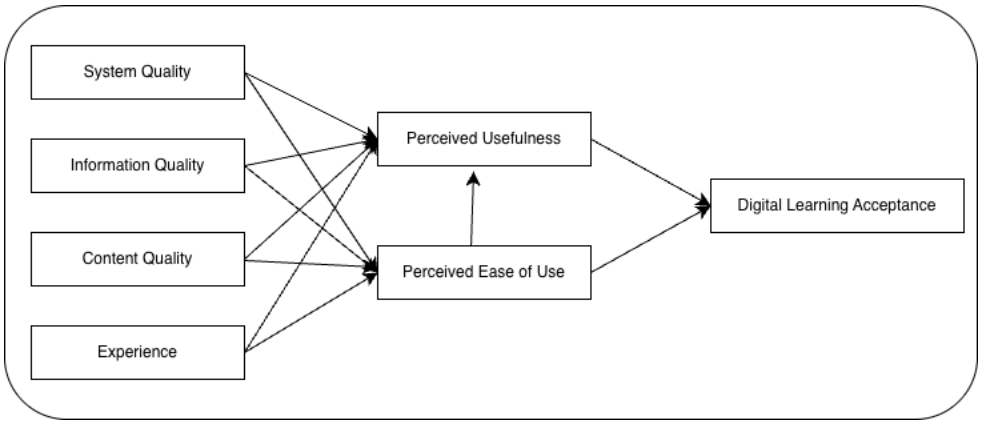

Figure 6. Research Framework

System Quality (SQ) in Microlearning-LMS

Zulherman et al. (2025) state that SQ has been proven to have a positive effect on LMS user satisfaction; a stable, responsive, and easy-to-operate system will enhance the user experience and perception of the LMS. Previous studies found that SQ has a positive impact on the Perceived Ease of Use (PEOU) of e-learning systems (Calisir et al., 2014; Govender & Rootman-le Grange, 2015; Jaber, 2016; Yang et al., 2017). Furthermore, SQ was also found to positively affect the Perceived Usefulness (PU) of e-learning systems. Thus: H1: SQ has a significant relationship with PU (Damnjanovic et al., 2013; Fathema et al., 2015; Jaber, 2016). Thus:

H1: SQ has a significant relationship with PU
H2: SQ has a significant relationship with PEOU

Information Quality (IQ) in Microlearning-LMS

Information Quality (IQ) refers to "the use of e-learning to seek information that is important for the learning process and is constantly updated to facilitate learners in understanding it". (Cho et al., 2009; Wongvilaisakul & Lekcharoen, 2015). Information quality is also defined as "the user's belief in the quality of information presented on a website" (McKinney et al., 2002) or "the degree to which users receive complete, accurate, and timely information through the electronic service interface" (I. F. Liu et al., 2010). Previous research on e-learning found that information quality has a significant effect on Perceived Ease of Use (PEOU) (Jaber, 2016; Motaghian et al., 2013; Wongvilaisakul & Lekcharoen, 2015). In addition, prior studies also indicate a positive relationship between IQ and e-learning Perceived Usefulness (PU). (Jaber, 2016; Motaghian et al., 2013; Rym et al., 2013)**.** Thus:

H3: IQ has a significant relationship with PU
H4: IQ has a significant relationship with PEOU.

Content Quality (CQ) in Microlearning-LMS

Several studies show that CQ acts as a strategic factor influencing perceived usefulness, satisfaction, and e-learning adoption intentions, making content quality a key element in the success of digital learning systems (Alsubaie et al., 2025; Lyu, 2025). Content Quality (CQ) has a significant influence on perceived usefulness (Almaiah et al., 2016; Calisir et al., 2014; Cheng, 2011; Govender & Rootman-le Grange, 2015; Rym et al., 2013; Teng, 2014). Previous studies also found a positive correlation between CQ and PEOU of e-learning systems (Almaiah et al., 2016; Teng, 2014). Thus:

H5: CQ has a significant relationship with PU
H6: CQ has a significant relationship with PEOU.

Experience (X) in Microlearning-LMS

R. Knight, 2015 and Puah et al., 2021b highlight the importance of integrating and introducing new technology tailored to the workers' level of familiarity and interest in technology. In the context of e-learning, prior experience allows users to grasp the system flow more quickly and reduces cognitive

effort, thereby significantly increasing PEOU (Abdullah & Ward, 2016; N. Liu & Pu, 2023; Park, 2009). Furthermore, participants who have prior positive learning experiences that contribute to improved learning performance can shape PU (N. Liu & Pu, 2023; Song et al., 2004). Arbaugh & Duray (2002) found that participants with previous online learning experience tend to feel more satisfied with similar online learning activities and have the intention to reuse them.
H7: X has a significant relationship with PU
H8: X has a significant relationship with PEOU

Perceived Usefulness in Microlearning-LMS

Perceived Ease of Use (PEOU) is defined as an individual's belief that using a particular system requires minimal effort (Davis, 1989). In the context of this study, PEOU refers to the perception that using microlearning does not require much effort. This is also supported by the statement of (Rof et al., 2024) that microlearning is considered an attractive learning approach due to several factors, some of which are ease of access to knowledge and time flexibility. Many studies have acknowledged a positive correlation between PEOU and PU (Venkatesh et al., 2003).
H9: PEOU has a significant relationship with PU.

Digital Learning Acceptance

The success of microlearning largely depends on the motivation for self-directed learning. Lack of motivation from learners can lead to poor acceptance of microlearning lessons (Ogange & Mishra, 2021). Without acceptance, voluntary users will seek other alternatives. Acceptance is understood as an outcome variable in a psychological process users go through in making decisions to use or not use a particular technology (Isibika et al., 2023). In research on microlearning acceptance, Isibika et al (2023) found a positive relationship between variables (PU and PEOU) and microlearning acceptance, reinforcing the relevance of adopting the technology.
H10: PEOU has a significant relationship with Digital Learning Acceptance.
H11: PU has a significant relationship with Digital Learning Acceptance.

Methods

Population and dan Research Sample

This study uses a quantitative approach with primary data sources collected through a 1-5 Likert scale survey. The target population in this study is adults (over 18 years old) across sectors in Indonesia who have an interest or involvement in child protection and Human Rights issues. The determination of this population's characteristics is based on Lohman (2024) findings, which emphasize that evaluating microlearning must be tailored to learners' preferences and their workplace contexts. Initial interest in child protection is assumed to be a source of support that can motivate and increase user intentions to access microlearning.

As the main representation of the private sector committed to human rights and child issues, this study uses members of the Association of Child-Friendly Companies Indonesia (APSAI), totaling 30 entities (APSAI (Asosiasi Perusahaan Sahabat Anak Indonesia), 2025) and the Indonesia Global Compact Network (IGCN), totaling 149 entities (UN Global Compact Network Indonesia, n.d.) , as the basic population reference. However, to capture a more comprehensive ecosystem landscape, this population also embraces participants from the non-profit sector and relevant grassroots communities. The determination of the minimum sample size was calculated using the Slovin formula. By setting a Confidence Interval of 95% and a margin of error of 10% from the total basic population reference, the minimum sample size required in this study was set at 64 respondents.

Analysis dan Data Technique

Sampling was conducted using a non-probability sampling technique, namely a method that does not base sample selection on probability, but rather on common sense, experience, intention, and the specific expertise of the participants (Rai N & Thapa B, 2015). Specifically, purposive sampling was applied to respondents who met at least one of the following inclusion criteria: (1) have participated in learning via e-learning platforms related to child protection, human rights, gender, or similar issues;

(2) work in the private sector (profit or non-profit) that intersects directly or indirectly with child protection; (3) have responsibilities, interest, or experience in child protection issues at the workplace, for example through corporate social responsibility (CSR/ESG) programs; (4) belong to communities promoting human rights and/or child protection due diligence; or (5) have attended/are attending training (offline or online) related to these issues.

This research will be analyzed using Structural Equation Modeling (SEM) with a Partial Least Squares SEM (PLS-SEM) approach. PLS-SEM is a causal modeling method aiming to maximize explained variance. PLS-SEM is more flexible for use on data with dependent latent constructs. To specify the relationship between latent variables and their indicators (validity), an outer model evaluation (measurement model) will be conducted. The outer model evaluation will look at indicators AVE > 0.5 and Loading Factor > 0.7. Meanwhile, for reliability, it will be identified from Cronbach's Alpha/CR $\ge$ 0.700. Furthermore, an inner model evaluation will be conducted to predict causal relationships between latent variables or variables that cannot be directly measured with > R Square of 0.67 (strong), 0.33 (moderate), and 0.19 (weak); Path Coefficient with positive/negative values; T-Statistics $\ge$ 1.96 ($p < 0.05$); p-value < 0.05. The PLS-SEM analysis will use the SmartPLS application. The SmartPLS application was chosen due to its robust capability in analyzing complex structural models, it does not require normally distributed data, and is highly effective for prediction-oriented research (Hair et al., 2022).

Results and Discussions

Respondent Profile

This study successfully captured 136 respondents representing a comprehensive child protection ecosystem. Demographic data show that the majority of respondents came from the non-profit sector (NGOs/civil society organizations) or "Sektor non profit" with 57 individuals (42%), followed by profit sector practitioners or "Sektor profit" (business/private) with 40 individuals (29%). This study also reached groups not in the workforce or "Bukan Angkatan Pekerja", specifically representing youth as university students with an interest in child protection issues, interns in companies related to child protection, or as youth community members, totaling 31 individuals (23%), as well as public/government sector representatives or "Sektor publik" with 8 individuals (6%). This profile empirically confirms that the developed microlearning intervention has successfully reached diverse cross-sector stakeholders relevant to the child protection ecosystem.

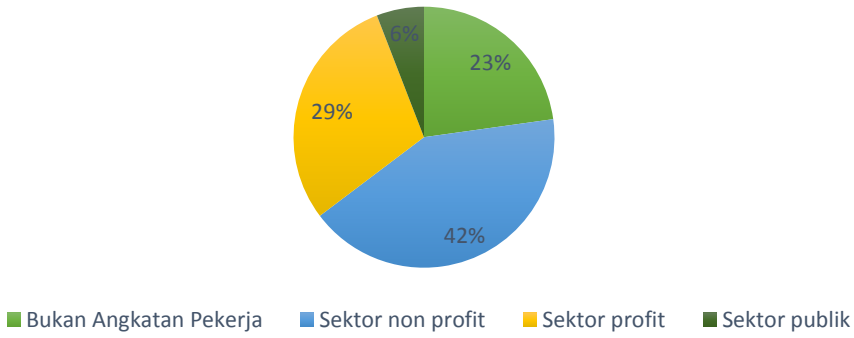

Figure 7. Respondent Profile

Measurement Model Evaluation (Outer Model)

The model test results show that all indicators have an outer loading value above 0.70 (Table 2), indicating good convergent validity (Hair et al., 2022). . In addition, the measurement model evaluation was conducted by testing internal reliability and convergent validity by assessing Cronbach's alpha, Composite Reliability (CR), and Average Variance Extracted (AVE) (Table 3). All constructs show Cronbach's alpha values above 0.70, indicating adequate internal reliability. Composite reliability values are also above the recommended threshold (≥ 0.70), confirming indicator consistency in reflecting latent constructs. Furthermore, the AVE values for all constructs are above 0.50, indicating that the indicator variance can be adequately explained by the measured constructs. The Perceived

Usefulness construct showed the highest reliability and convergent validity values (α = 0.921; CR = 0.928; AVE = 0.761),, followed by Digital Learning Acceptance Acceptance (α = 0.907; CR = 0.907; AVE = 0.729). The system, information, and content quality constructs also showed good reliability values, with AVE ranging between 0.650–0.727. Although the Experience construct has relatively lower reliability values compared to other constructs (α = 0.774; CR = 0.779), its value remains within an acceptable range. The AVE value of 0.594 indicates adequate convergent validity. Overall, these results confirm that the measurement model meets the criteria for internal reliability and convergent validity, making it suitable for structural model analysis.

Table 2. Outerloading Result

Construct	**Code**	**Outer loadings**	**Status**
System Quality	SQ1	0.796	Valid
	SQ2	0.805	Valid
	SQ3	0.733	Valid
	SQ4	0.865	Valid
	SQ5	0.829	Valid
Information Quality	IQ1	0.858	Valid
	IQ2	0.792	Valid
	IQ3	0.837	Valid
	IQ4	0.813	Valid
	IQ5	0.880	Valid
Content Quality	CQ1	0.857	Valid
	CQ2	0.850	Valid
	CQ3	0.876	Valid
	CQ4	0.868	Valid
	CQ5	0.809	Valid
Experience	X1	0.733	Valid
	X2	0.801	Valid
	X3	0.746	Valid
	X4	0.802	Valid
Perceived Ease of Use	PEOU1	0.844	Valid
	PEOU2	0.746	Valid
	PEOU3	0.760	Valid
	PEOU4	0.837	Valid
	PEOU5	0.894	Valid
Perceived Usefulness	PU1	0.898	Valid
	PU2	0.923	Valid
	PU3	0.886	Valid
	PU4	0.867	Valid
	PU5	0.782	Valid
Digital Learning Acceptance	MA1	0.845	Valid
	MA2	0.869	Valid
	MA3	0.855	Valid
	MA4	0.837	Valid
	MA5	0.861	Valid

Structural Model Evaluation (Inner Model) and Hypothesis Testing

Structural model evaluation was carried out by assessing the coefficient of determination (R^2) to measure the predictive capability of exogenous constructs against endogenous constructs. The analysis results show that the Digital Learning Acceptance construct has an R^2 value = 0.788 (Adjusted R^2 = 0.785), indicating that the model can explain 78.8% of the variance in digital learning acceptance. This value demonstrates substantial model explanatory power. The Perceived Ease of Use (PEOU)

construct shows an R^2 value = 0.596 (Adjusted R^2 = 0.583), meaning the predictor variables in the model explain 59.6% of the variance in perceived ease of use. Meanwhile, the Perceived Usefulness (PU) construct has an R^2 value = 0.648 (Adjusted R^2 = 0.637), indicating that the model explains 64.8% of the variance in perceived usefulness. Overall, the R^2 values across all endogenous constructs indicate that the model has good predictive capability, especially in explaining digital learning acceptance.

Table 3. The Results of Cronbach's alpha, Composite reliability dan Average variance extracted (AVE)

	Cronbach's alpha	Composite reliability	Average variance extracted (AVE)
System Quality	0.865	0.873	0.650
Information Quality	0.893	0.898	0.700
Content Quality	0.906	0.907	0.727
Experience	0.774	0.779	0.594
Perceived Ease of Use	0.876	0.887	0.670
Perceived Usefulness	0.921	0.928	0.761
Digital Learning Acceptance	0.907	0.907	0.729

Table 4. R-Square Result

	R-square	R-square adjusted
Digital Learning Acceptance	0.788	0.785
Perceived Ease of Use	0.596	0.583
Perceived Usefulness	0.648	0.637

Structural model testing was performed by analyzing path coefficients, t-statistics, and p-values (Table 5). The results show that System Quality and Experience significantly affect Perceived Ease of Use, but not Perceived Usefulness. Conversely, Information Quality and Content Quality significantly affect Perceived Usefulness, but not Perceived Ease of Use. For the outcome constructs, Perceived Ease of Use and Perceived Usefulness are proven to significantly affect Digital Learning Acceptance. Overall, these findings confirm that perceived ease of use and usefulness are the primary determinants of digital learning acceptance, while the influence of system, information, content quality, and experience is selective according to the user's evaluation dimensions.

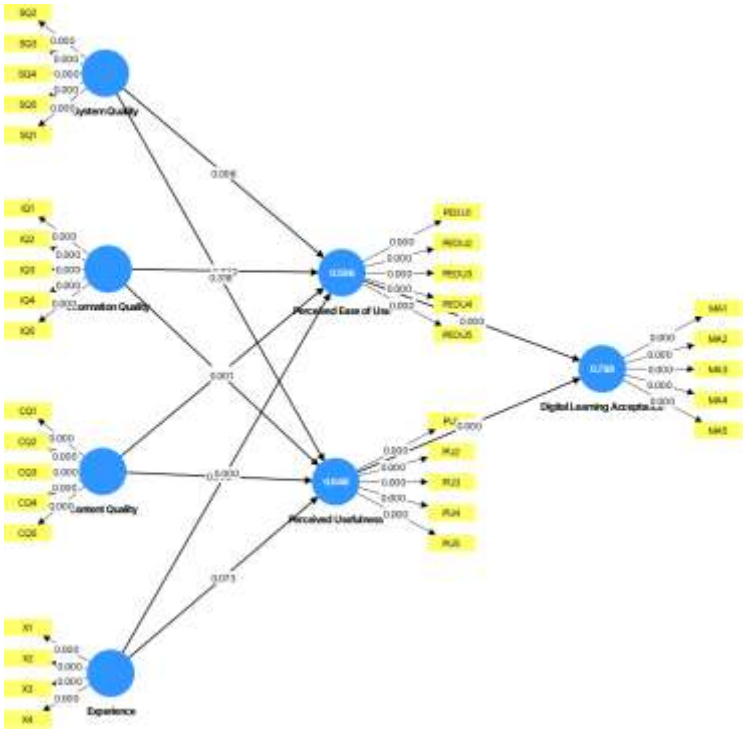

Figure 8. Inner Model

Table 4. Hypothese Testing

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Result
System Quality -> Perceived Usefulness	0.080	0.083	0.080	0.999	0.318	Rejected
System Quality -> Perceived Ease of Use	0.268	0.268	0.102	2.644	0.008	Accepted
Information Quality -> Perceived Ease of Use	0.031	0.027	0.143	0.215	0.830	Rejected
Information Quality -> Perceived Usefulness	0.344	0.339	0.107	3.211	0.001	Accepted
Content Quality -> Perceived Ease of Use	0.183	0.186	0.133	1.375	0.169	Rejected
Content Quality -> Perceived Usefulness	0.333	0.335	0.108	3.085	0.002	Accepted
Experience -> Perceived Ease of Use	0.436	0.439	0.091	4.778	0.000	Accepted
Experience -> Perceived Usefulness	0.151	0.155	0.084	1.795	0.073	Rejected
Perceived Usefulness -> Digital Learning Acceptance	0.422	0.424	0.062	6.774	0.000	Accepted
Perceived Ease of Use -> Digital Learning Acceptance	0.527	0.528	0.061	8.602	0.000	Accepted

Discussions

Cognitive Determinants in Digital Learning

The research findings show that Perceived Ease of Use (PEOU) and Perceived Usefulness (PU) are the main determinants of Digital Learning Acceptance. PEOU has the strongest influence, followed by PU. These results align with the Technology Acceptance Model (TAM) framework, which posits perceived ease of use and usefulness as direct predictors of technology acceptance (Dwivedi et al., 2020; Venkatesh et al., 2003).

These findings are also in line with the study by Isibika et al. (2023), which shows that PEOU positively affects microlearning acceptance. Simplicity of interaction and ease of navigation are key factors in adopting micro-module-based learning technologies. Furthermore, PU is also proven to significantly contribute to microlearning acceptance, particularly when users perceive that the system provides tangible benefits, such as study time efficiency and material relevance to professional practice needs.

The crucial role of PEOU is also highlighted in Tarhini et al. (2013) study in the context of e-learning use in developing countries with users having heterogeneous technological abilities and online experiences. A similar pattern is found in this study, where micro e-learning participants come from diverse professional backgrounds, ages, and digital literacy levels. Under these conditions, PEOU serves as a cognitive prerequisite influencing the formation of perceived system usefulness (PU).

The dominant influence of PEOU indicates that in a professional context, ease of interaction with the system is a crucial factor. Professionals generally work in organizational contexts with time constraints and high productivity demands (Lohman, 2024). Under these conditions, technology perceived as requiring significant effort or feeling complex can potentially trigger (Ragu-Nathan et al., 2008) which ultimately can decrease adoption tendencies (Dwivedi et al., 2020; Venkatesh & Davis, 2000). Thus, before system benefits are evaluated, users first consider the effort expectancy required to use the technology.

Nevertheless, PU continues to play a significant role. Perceptions of the instrumental value of digital learning—such as efficiency, competency enhancement, and support for work performance—

contribute to system acceptance. Overall, the combined influence of PEOU and PU confirms that digital learning acceptance is the result of cognitive evaluation that simultaneously considers effort and benefit aspects.

The Differentiating Roles of System Quality, Information Quality and Content Quality

Structural model analysis reveals different influence patterns from quality constructs. System Quality (SQ) significantly affects PEOU, but not PU. Conversely, Information Quality (IQ) and Content Quality (CQ) significantly affect PU, but not PEOU. The effect of SQ on PEOU shows that technical system qualities, such as reliability, availability, and navigation display, shape the perceived ease of use. This pattern is consistent with the information systems success model, which positions system quality as the main determinant of usability and interaction efficiency (Al-Fraihat et al., 2020; DeLone & McLean, 2003). A responsive and stable system helps lower cognitive barriers during use.

Conversely, the significant contribution of IQ and CQ to PU confirms that learning material quality is highly essential in determining users' evaluation of benefits. The clarity, relevance, and meaningfulness of information are proven to support effective material processing and reinforce perceived usefulness (Almaiah et al., 2016; Li & Zhu, 2022). Furthermore, in the context of this study, high content quality is not merely an instructional design achievement but empirical evidence of successful multi-sector collaboration (community engagement). This concise, structured, and applicable material is the result of participatory curation involving experts, government institutions, Non-Governmental Organizations (NGOs), and youth groups. This proves that direct community involvement in formulating the curriculum successfully gave rise to an intervention with highly instrumental value and professional relevance for the private sector.

The non-significant relationship between SQ and PU indicates that technical system quality does not directly shape perceived usefulness. Technical disruptions experienced by some users have the potential to reduce perceived functional benefits. This finding aligns with Nawanda & Tambotoh (2024) study, which integrates Evaluating E-learning System Success (EESS) with Expectation and Confirmation Theory (ECT), finding that expectation confirmation and user satisfaction play significant roles in explaining e-learning system success, while the influence of technical system quality may become less dominant when psychological and learning variables play a stronger role.

On the other hand, the non-significant relationship between IQ and CQ with Perceived Ease of Use (PEOU) indicates that no matter how good the material quality is, it does not always affect the perceived ease of system navigation. This phenomenon can be explained through the concept of cognitive load. Unlike conventional corporate training (such as marketing or finance), the topic of child protection—especially sensitive issues like child labor and sexual exploitation in the business landscape—demands fundamental changes in the corporate operational paradigm. The complexity of these human rights issues inherently increases the users' mental load when processing information, especially considering participants come from highly heterogeneous literacy and professional backgrounds. As indicated in the literature, high cognitive load has the potential to reduce perceived technology ease (Maričić et al. 2025; Nur Morat et al., 2024). This finding further strengthens the justification that breaking down these heavy issues into microlearning modules is a crucial strategy to prevent cognitive overload in adult learners.

User Experience and Affective Dynamics

Experience significantly affects PEOU, but not PU. This indicates that prior experience increases familiarity, navigation efficiency, and system adaptability (Liaw et al., 2007; Sun, 2021). Experience plays a role in reducing perceived complexity, thereby reinforcing perceived ease of use. Conversely, perceived benefits appear to be more determined by information and content quality compared to sheer experience levels. This pattern indicates that system familiarity does not automatically result in higher usefulness evaluations, especially when the instrumental value of learning depends on material relevance.

The non-significant relationship of Experience with PU is likely influenced by sample characteristics, which are relatively experienced in e-learning. For highly experienced users, the use of digital learning has become a common practice, so perceived benefits tend to be stable and heavily reliant on expectation confirmation. When the system or material does not fully meet or exceed these expectations, the increase in perceived usefulness is limited. This phenomenon can be explained by the

expertise reversal effect, where effective instructional strategies for novice learners are not always optimal for experienced learners due to differences in cognitive load (Rey & Fischer, 2013; Zheng et al., 2022).

In addition to cognitive dimensions, these findings also emphasize the importance of affective dynamics in digital learning. In the context of training containing sensitive issues like child protection, users' emotional experiences during interaction with the system have strong potential to influence cognitive evaluation. Thus, the high level of Digital Learning Acceptance toward this microlearning intervention reflects a blend of cognitive processes and users' affective responses. Moreover, from a community empowerment perspective, this high technology adoption is not merely a metric of information system success. This acceptance is an initial representation of the private sector ecosystem's readiness to start integrating child rights principles into their business practices realistically. Cross-sector willingness to accept this education becomes essential social capital in efforts to protect children at the grassroots level, foster inclusive development, and directly support the achievement of the Sustainable Development Goals (SDGs).

Conclusion

This study concludes that the acceptance of child protection microlearning platforms among cross-sector professionals is primarily determined by cognitive evaluations that clearly distinguish technical and substantive aspects. Perceived Ease of Use (PEOU) is directly influenced by System Quality and User Experience, while Perceived Usefulness (PU) is determined by Content Quality and Information Quality. The novelty of this study lies in the integration of the technology acceptance model within the context of educating sensitive social issues, namely human rights and child protection in a corporate environment. These findings indicate that adult learners evaluate effort-related beliefs separately from the performance-related beliefs of the digital learning system, aligning with studies by studi Davis (1989) dan Venkatesh & Davis (2000).

Theoretically, this study contributes to the community engagement discourse by asserting that technology serves as a medium, while intervention success is heavily determined by material relevance and quality. The significant influence of Content Quality and Information Quality on PU reinforces the importance of participatory instructional design based on multi-sector collaboration. This study also expands the technology acceptance framework by highlighting that social issue complexity can increase cognitive load and trigger affective dynamics that influence user evaluations.

Practically, the impact of this research on society and the social ecosystem is highly substantial. The high level of Digital Learning Acceptance in this microlearning intervention is not just a metric of information system adoption success. Moreover, this acceptance is an early indicator of the private sector's readiness to integrate child protection principles into their operational business practices. By empowering corporate professionals to recognize and prevent child rights violations—such as child labor and sexual exploitation—this initiative creates a ripple effect that directly protects communities at the grassroots level. This collaborative intervention serves as a strategic pillar in supporting the achievement of the Sustainable Development Goals (SDGs), specifically the fulfillment of decent work (SDG 8) and the establishment of peaceful and inclusive communities and institutions (SDG 16).

Nevertheless, this study has limitations. The dominance of respondents with e-learning experience potentially gives rise to the expertise reversal effect and limits generalizations for novice users. Furthermore, this research focuses on the early stages of technology acceptance. Future studies are suggested to explore longitudinal impacts, especially to assess the transformation of digital learning acceptance into tangible child protection policy changes at the organizational level.

Conflicts of interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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