

Reconstruction of the Evaluation of Christian Early Childhood Education Based on the CIPP Model in the Digital Ecosystem

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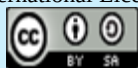
Dates:

Submitted: 31/07/2026
Revised: 23/09/2026
Accepted: 02/10/2026

DOI :

<https://doi.org/10.53547/8d45eg60>

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Abstract

Assessment in Christian Early Childhood Education (CECE) still tends to adopt the logic of formal schooling, emphasizing cognitive outcomes and therefore failing to fully capture children's spiritual, moral, and character development within the digital ecosystem. This study aims to reconstruct CECE assessment using the CIPP model (Context, Input, Process, Product) in ways that are developmentally appropriate and responsive to digital dynamics. The study employs a qualitative approach with a descriptive-analytical literature review of educational evaluation, Christian education theology, early childhood education, and early childhood assessment policy. The findings indicate that CECE assessment should address four interrelated dimensions: the context of family, church, and children's digital exposure; the readiness of teachers, parents, curriculum, and documentation resources; play-based, dialogical, and reflective learning processes; and products understood as evidence of children's spiritual, moral, and character growth rather than merely learning outcomes. Digital technology should primarily function as a documentation tool managed ethically through parental consent and child data protection. This study offers a developmentally appropriate CIPP assessment framework for CECE and supports stronger partnerships among schools, families, and churches in Indonesia.

Kata Kunci: authentic assessment; Christian early childhood education; CIPP model; digital documentation; faith formation

Abstrak

Evaluasi Pendidikan Agama Kristen Anak Usia Dini masih cenderung mengadopsi logika penilaian sekolah formal yang berorientasi pada hasil kognitif, sehingga belum sepenuhnya menangkap pertumbuhan iman, moral, dan karakter anak dalam ekosistem digital. Penelitian ini bertujuan merekonstruksi evaluasi Pendidikan Kristen Anak Usia Dini berbasis model CIPP (Context, Input, Process, Product) yang sesuai dengan tahap perkembangan anak dan relevan dengan dinamika digital. Penelitian menggunakan pendekatan kualitatif dengan desain studi pustaka deskriptif-analitis terhadap literatur evaluasi pendidikan, teologi pendidikan Kristen, pendidikan anak usia dini, dan kebijakan asesmen PAUD. Hasil kajian menunjukkan bahwa evaluasi perlu mencakup empat dimensi: konteks keluarga, gereja, dan paparan digital; kesiapan guru, orang tua, kurikulum, dan dokumentasi; proses belajar berbasis bermain yang dialogis dan reflektif; serta produk sebagai jejak pertumbuhan spiritual, moral, dan karakter, bukan sekadar hasil belajar. Teknologi digital terutama berfungsi sebagai sarana dokumentasi yang dikelola secara etis melalui persetujuan orang tua dan perlindungan data anak. Kajian ini menawarkan kerangka evaluasi CIPP yang sesuai perkembangan bagi Pendidikan Kristen Anak Usia Dini dan mendukung kemitraan sekolah, keluarga, dan gereja di Indonesia.

Kata Kunci: asesmen autentik; dokumentasi digital; model CIPP; pembentukan iman; pendidikan anak usia dini Kristen

INTRODUCTION

The development of the digital ecosystem has fundamentally transformed education, including Christian religious education for young children. This transformation requires an evaluation system that moves beyond cognitive learning outcomes to consider learning processes, contexts, and impacts holistically. In Christian religious education, evaluation should integrate faith values, spiritual

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development, and digital technology in reflective and constructive ways. Recent studies indicate that evaluation practices remain dominated by cognitive measurement and limited authentic assessment. Through a review of 25 scientific sources, Sooru et al. found that Christian religious education assessment continues to emphasize cognitive measurement, while affective, spiritual, and authentic dimensions remain underdeveloped, revealing a gap between evaluation theory and school practice (Sooru et al., 2026). Similarly, Harefa et al. note that evaluation still relies heavily on written tests and academic mastery, giving insufficient attention to spirituality and character formation (Harefa et al., 2026). These findings indicate the need to reconstruct evaluation practices that are more comprehensive and responsive to the digital age.

The problem is particularly significant in Christian early childhood education. Young children learn primarily through play, concrete experiences, relationships, and imitation; therefore, faith formation is expressed through wonder, prayer, kindness, and relationships rather than written-test performance (F. M. Boiliu, 2025; Sanjaya et al., 2026). Accordingly, the national assessment standard for early childhood education defines assessment as an ongoing process of gathering information about children's development to support learning rather than rank or label children (Kemendikbudristek, 2022). Children also develop within a digital ecosystem in which gadgets are increasingly part of family life, making parental mediation essential (Angkur & Wati, 2023). Christian early childhood education therefore requires evaluation that is developmentally appropriate (NAEYC, 2020), recognizes school-family-church partnerships in faith and moral formation (Harefa et al., 2023), and uses digital technology primarily as a tool for adults to document and interpret children's development rather than as a medium for testing them (NAEYC & Fred Rogers Center, 2012).

Several theoretical perspectives provide important foundations for such reconstruction. Stufflebeam's CIPP model offers a systematic framework for evaluating and improving educational programs (Stufflebeam & Coryn, 2014), while Anderson and Krathwohl emphasize taxonomy-based evaluation of higher-order thinking (Anderson & Krathwohl, 2001). In digital education, evaluation also needs to be data-based, adaptive, and integrated with digital learning technologies (Redecker,

2017). Despite their different emphases, these perspectives support comprehensive evaluation. In Christian religious education, however, evaluation must address holistic faith transformation rather than cognitive achievement alone (Groome, 2012). Hull further emphasizes evaluation that reflects students' spiritual development and religious experience (Hull, 2018), while Astley argues for contextual integration of theological and pedagogical dimensions (Astley, 1994). Thus, Christian religious education evaluation should integrate faith, experience, and critical reflection.

The digital ecosystem further requires evaluation to respond to networked and dynamic learning environments (Goldie, 2016). The integration of face-to-face and digital learning through *blended learning* requires sustainable evaluation that supports lifelong learning (Castro, 2019; Gamage et al., 2022). Nevertheless, the integration of these perspectives within CIPP-based evaluation of Christian religious education remains limited. Zhang et al. demonstrate the effectiveness of CIPP in educational program evaluation but do not substantially integrate digital technology (Zhang et al., 2011). Simon and Maarende provide a biblical foundation for Christian religious education evaluation in the digital era, but remain primarily at the normative-theological level without developing a comprehensive framework such as CIPP (Simon & Maarende, 2026). Boiliu and Lauterboom develop an ontological framework for educational management within Kurikulum Merdeka but do not address comprehensive learning evaluation in Christian education (N. I. Boiliu & Lauterboom, 2026). Redecker and Punie emphasize digital competence in evaluation but do not specifically address religious education (Redecker & Punie, 2017). Moreover, existing studies of Christian religious education assessment have focused largely on school-age learners rather than early childhood (Sooru et al., 2026).

This gap indicates the need to integrate the CIPP model, Christian religious education evaluation, early childhood assessment principles, and the digital ecosystem within a holistic framework. Therefore, this study aims to reconstruct the evaluation of Christian early childhood education based on the CIPP model in the digital ecosystem. The reconstruction seeks to develop a holistic, integrative, and developmentally appropriate framework that does not measure young children's learning outcomes primarily through cognitive indicators, but documents and interprets their faith, moral, and character formation through the partnership of

school, family, and church. Accordingly, the study addresses three research questions: (1) What are the characteristics and problems of evaluation practices in Christian early childhood education within a digital ecosystem? (2) How can the CIPP model be reconstructed into a developmentally appropriate framework that evaluates children's context, teacher-parent-church readiness, play-based learning processes, and formative products? and (3) How can CIPP-based evaluation document and interpret children's spiritual, moral, and character growth through authentic, observation-based, and ethically governed digital practices rather than outcome-based measurement?

METHODS

This study uses a qualitative approach with a descriptive-analytical literature study design that focuses on the conceptual reconstruction of Christian early childhood education evaluation based on the CIPP model in the digital ecosystem. Research data consist of scientific books, indexed journal articles, proceedings, and policy documents drawn from four bodies of literature: educational evaluation (particularly the CIPP model), the theology of Christian education, early childhood education and assessment, and digital education. Policy documents on early childhood assessment in Indonesia and international position statements on developmentally appropriate practice and technology use in early childhood programs were included so that the reconstruction remains appropriate for children aged 0 to 6 years. The research procedure includes problem identification, literature search through Google Scholar, Garuda, and DOAJ, source selection based on relevance, credibility, and currency, and data grouping and synthesis. The instrument used is a document analysis sheet organized according to the four CIPP components and the characteristics of the digital ecosystem in early childhood settings. Data collection is carried out through documentation and recording, while data analysis uses content and thematic analysis through the stages of data reduction, data display, and conclusion drawing. The trustworthiness of the analysis is maintained through source triangulation across the four bodies of literature and an audit trail of the selection and coding process so that the results remain traceable.

RESULTS AND DISCUSSION

Disorientation of Christian religious education evaluation in early childhood learning practice

The disorientation of Christian religious education evaluation emerges when assessment prioritizes easily measurable indicators rather than the holistic growth of learners as believers. Tyler's goal-oriented model links objectives, learning experiences, their organization, and evaluation in a rational sequence (Denham, 2002).. However, when narrowly applied, evaluation may become focused on verifying final outcomes rather than interpreting learning quality. Evaluation should instead involve the valid interpretation of learning processes and outcomes (Mardapi, 2012), while classroom assessment should contribute to improving learning rather than merely classifying students (Black & Wiliam, 2010). McTighe et al. similarly argue that assessment should improve student performance rather than function primarily as an auditing mechanism (McTighe et al., 2021). Thus, the central problem is not the absence of assessment instruments but the narrowing of evaluation from understanding formation to verifying results.

This disorientation becomes more evident in the digital ecosystem when conventional assessment is simply transferred to digital platforms. The CIPP model positions evaluation as information for decision-making and continuous improvement rather than merely judging final products (Zhang et al., 2011). Formative assessment is valuable because it operates during learning and provides feedback for improvement (Black & Wiliam, 2010), while authentic assessment emphasizes understanding, feedback, and real performance (Wiggins, 2011). Spiritual formation likewise requires deliberately designed assessment because spiritual attitudes involve personal, moral, and ethical identity (Hudha & Mardapi, 2018).

Within Christian education, evaluation should therefore attend to changes in belief, interpretation of experience, vocation, and lived faith (Groome, 2012), since true-false responses cannot capture the existential consequences of religious learning (Seymour, 2004). Such evaluation must remain faithful to the theological and pedagogical essence of Christian education (Pazmiño, 2010). In early childhood, this requires particular attention to developmental appropriateness. Assessment focused on memorized Bible verses, songs, or biblical figures may overlook children's trust,

wonder, gratitude, and care for others. Early childhood spirituality is characterized by receptivity and relationality rather than cognitive mastery (Sanjaya et al., 2026), while spiritual formation develops through consistent relationships with teachers and parents as models of faith (F. M. Boiliu, 2026). Therefore, evaluation becomes disoriented when it is simultaneously overly cognitive and developmentally inappropriate.

The relevance of the CIPP model in reconstructing the evaluation of Christian early childhood education

The relevance of the CIPP model in reconstructing Christian religious education evaluation lies in its ability to move evaluation beyond conclusions based solely on final learning outcomes. Tyler established the important principle that evaluation should examine the achievement of educational goals (Tyler, 2013). However, Daniel L. Stufflebeam shifted the focus from goal attainment toward providing information for decision-making and continuous improvement (Stufflebeam, 2000). Fitzpatrick et al. likewise identify decision-making as an important orientation in program evaluation (Fitzpatrick et al., 2012). Zhang et al. demonstrate that CIPP can effectively evaluate complex programs because it examines context, inputs, processes, and outcomes rather than focusing only on products (Zhang et al., 2011). This makes CIPP relevant to Christian religious education, where evaluation must consider learner needs, teacher readiness, learning experiences, and the impact of faith formation as an interconnected system.

The relevance of CIPP is strengthened by the holistic and formative character of Christian education. Christian religious education connects faith traditions with life experiences through critical reflection and shared praxis (Groome, 2012). Its historical and educational practice is directed toward forming Christian life rather than merely transferring knowledge (Seymour, 2004). Christian formation therefore requires integration of theology, human development, and ecclesiastical educational practice (Estep & Kim, 2010). CIPP is relevant not simply because it is a systematic evaluation model, but because its structure can accommodate the complexity of Christian education: learner context, teacher and facility readiness, learning processes, and outcomes involving faith, morality, and character. It consequently

provides an evaluative language capable of bridging academic requirements with the formative purposes of Christian education.

In the digital ecosystem, CIPP can also prevent Christian religious education evaluation from becoming technocentric. Although digital technology offers opportunities for Christian education, its unreflective integration may hinder evangelization (Díaz, 2021). Digital faith formation should remain relational, participatory, and grounded in the incarnational model of Christ (Maranatha & Tandana, 2025). Educational technology also depends on access, governance, and teacher readiness (Antoninis et al., 2023), while formative assessment should function as a means of identifying learning needs rather than merely administering assessment (Mulvenon, 2021). Accordingly, *context* can examine children's digital-

Table 1. Reconstructed CIPP framework for evaluating Christian early childhood education in the digital ecosystem

CIPP component	Evaluative focus in Christian early childhood education	Evidence and digital practice
Context	The child's developmental stage, family faith practices, involvement in church life, and patterns of gadget use at home	Parent interviews or questionnaires, home-school communication records, simple profiles of children's digital exposure
Input	Teachers' competence in observation and faith nurture, parents' readiness as partners, translation of faith and character goals into developmental indicators, documentation tools, and data protection policy	Teacher self-assessment, review of curriculum and lesson plans, inventory of documentation devices and platforms, parental consent procedures
Process	Quality of play-based, story-based, and worship activities; adult-child dialogue; opportunities for wonder, prayer, and sharing	Digital anecdotal records, photo and video series, teacher reflective journals, short notes from parents
Product	Observable traces of trust, gratitude, love for others, honesty, and participation in community life, interpreted as growth over time	Digital portfolios, narrative developmental reports shared with parents, joint reflection among teachers, parents, and the church

Source: Synthesis by the author based on the reviewed literature.

cultural readiness: *input* can assess teacher competence, devices, and assessment design; *process* can examine interaction, feedback, and reflection; and *product* can determine whether technology contributes to Christian understanding, spirituality, and practice. CIPP therefore functions not only as a program evaluation model but also as a framework for ensuring that digitalization remains subordinate to the theological and pedagogical purposes of Christian education.

For Christian early childhood education, the four CIPP components must be translated into developmentally appropriate evaluative questions. Context examines the child's family, church, and digital environment; input considers teacher, parent, curriculum, and documentation readiness; process observes play-based learning and adult-child interaction; and product interprets spiritual, moral, and character growth through narrative evidence rather than numerical scores.

The digital context as the basis for reading young children's evaluative needs

In contemporary Christian religious education, the digital context should be understood not merely as an additional setting but as part of children's learning environment. Digital technology has transformed how knowledge is accessed, shared, and produced, making digital competence increasingly important for participation in learning and social life (Vrabec & Furtáková, 2024). Educators therefore need not only technical but also pedagogical digital competencies, including the ability to identify changing learning needs (Redecker, 2017). Siemens argues that learning in the digital era occurs through networks and rapidly changing information, requiring learners to navigate, select, and interpret information rather than simply master content (Siemens, 2004). At the same time, educational technology should not be viewed as automatically progressive because digital environments also involve inequality, controversy, and datafication (Selwyn, 2021). Thus, evaluation should begin not with the question of which digital tools are used, but with who the learners are, what spiritual challenges they encounter, and whether the digital environment supports or obscures faith formation.

From an evaluation perspective, digital contexts influence both what should be assessed and how assessment should occur. Tyler's goal-oriented approach becomes limited when objectives are interpreted narrowly and learning contexts are ignored (Tyler, 2013). Stufflebeam's CIPP model responds by placing *context* at the

beginning of evaluation to identify needs, problems, and opportunities before examining inputs, processes, and products (Stufflebeam, 2000). Black and Wiliam further emphasize formative feedback during learning rather than assessment only at its conclusion (Black & Wiliam, 2010). Therefore, when children participate in a fast-paced, visual, interactive, and potentially superficial digital culture, evaluation should extend beyond cognitive testing to include reflection, meaning-making, digital integrity, and developing spiritual attitudes visible in processes and everyday habits.

For Christian religious education, reading evaluative needs from the actual context corresponds to its purpose of shaping and transforming lives (Groome, 2012). Christian education must therefore read cultural reality, pedagogy, and faith together through an interdisciplinary approach (Pazmiño, 2010), helping believers live faithfully in concrete practice rather than merely understand teachings conceptually (Seymour, 2004). The digital ecosystem is consequently an important context for evaluation because children's faith is increasingly formed, tested, and negotiated within it. Context-sensitive evaluation can assess whether Christian education enables children to live their faith reflectively, ethically, and responsibly in digital spaces.

For young children aged 0–6, however, digital exposure is largely mediated by parents and caregivers, whose practices influence whether gadgets support or hinder development (Angkur & Wati, 2023). Context evaluation must therefore consider the family as the primary setting of faith and moral formation (Harefa et al., 2023), including screen-use patterns, shared prayer or Bible-story practices, and participation in church life. In this way, digital context becomes the basis for identifying each child's actual evaluative needs rather than applying a uniform set of indicators (Prasetya et al., 2025).

Input readiness: teachers, parents, curriculum, and digital documentation infrastructure

Within the CIPP reconstruction of Christian religious education evaluation, input readiness is decisive because it determines the quality of evaluation before implementation. Teacher readiness involves more than operating digital tools; teachers must integrate technological competence, pedagogical sensitivity, and the

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ability to assess faith and character growth. Digital competence supports teaching, assessment, student empowerment, and digital competency development (Mtebe, 2020; Redecker, 2017), while quality assessment requires appropriate objectives, valid instruments, and accurate interpretation (Mardapi, 2012). Thus, CIPP input evaluation requires adequate human resources, strategies, and resources to achieve program objectives (Stufflebeam & Coryn, 2014).

Curriculum readiness concerns the translation of Christian educational goals into observable, reflective, and authentic assessment indicators. When objectives are formulated too formally, evaluation tends to privilege easily measurable outcomes rather than deeper formation (Tyler, 2013). Christian education therefore needs a curriculum attentive not only to theological content but also to students' developmental, cultural, and pedagogical realities (Groome, 2012; Pazmiño, 2010). Digitalization cannot overcome a curriculum that remains cognitively oriented.

Infrastructure readiness extends beyond devices and internet access to assessment platforms, data management, technical support, interoperability, and equitable and secure governance (Bo, 2025). Coherent policies and supportive environments are necessary for sustainable and inclusive digital transformation (Espejo Villar et al., 2022), while concerns about inequality, data control, and technological solutionism must be recognized (Selwyn, 2021). In early childhood settings, parents and the church also function as co-educators. Teachers need competence in systematic observation and narrative documentation, while parents contribute home-based observations and receive actionable developmental reports (Harefa et al., 2023). Digital tools should intentionally strengthen relationships and remain governed by responsible adults (NAEYC & Fred Rogers Center, 2012). Therefore, input readiness emerges when teachers, parents, curriculum, and infrastructure operate as an integrated ecology for observing and supporting children's faith formation.

Transforming the evaluation process toward dialogical, play-based, and reflective assessment

In Christian religious education, transforming the evaluation process requires repositioning feedback from a unilateral judgment into a dialogical process that helps

learners understand their progress and determine appropriate responses. Feedback occurs when learners interpret information from various sources and use it to improve their learning strategies (Carless & Boud, 2018). Learners therefore need to become active “architects” of feedback by comparing, evaluating, and developing *inner feedback*, rather than merely receiving teacher comments (Nicol, 2021). Quality dialogue promotes engagement, reasoning, idea development, and evaluation of arguments (Alexander, 2020). Evaluation should consequently create space for discussion, interpretation, clarification, and follow-up rather than merely assigning labels to achievement.

This dialogical process must be complemented by reflection. Dewey views education as the development of habits of thoughtful inquiry rather than the accumulation of information (Dewey, 2018). Schön emphasizes *reflection-in-action*, through which learners reinterpret situations and consciously adjust their responses (Schon, 2024), while Mezirow highlights *critical reflection* as a means of transforming existing frames of meaning (Mezirow, 2015). Brookfield further emphasizes examining assumptions through personal experience, others’ perspectives, and relevant theory (Brookfield, 2017). In Christian education, Freire’s dialogical pedagogy, Westerhoff’s emphasis on lived faith, and Smith’s account of formation through repeated practices suggest that evaluation should attend to faith, relationships, desires, and habits, not merely doctrinal knowledge (Freire, 2020; Smith, 2016; Westerhoff, 2012). Dean likewise warns that positive attitudes toward Christianity do not necessarily indicate deep faith practice (Dean, 2010), while digital learning environments increase the need for deliberate spaces of dialogue and reflection (Agustin et al., 2026).

For young children, such assessment should be embedded in play, stories, songs, prayer, and everyday interactions. Open-ended questions and observation allow teachers to assess children’s responses authentically and over time (NAEYC, 2020). Digital tools can support anecdotal notes, photographs, and video documentation that inform reflection with colleagues and parents. Thus, the CIPP process dimension becomes a space for interpreting and supporting children’s spiritual growth rather than testing them.

Redefining the products of Christian early childhood education in a transformative perspective

The products of Christian religious education should no longer be understood merely as cognitive achievement or final test results, but as integrative outcomes that reflect changes in learners' understanding, identity, faith, and praxis. Mezirow defines transformative learning through changes in frames of reference generated by critical reflection, while Freire views education as a practice that enables learners to act reflectively within their social reality (Freire, 2021; Mezirow, 2018). Groome similarly argues that Christian education integrates faith experience, critical reflection, and praxis as responses to God's work in life (Groome, 2012). Nevertheless, measurable cognitive, affective, and psychomotor dimensions remain necessary for academic accountability and faith-character formation (Tuegeh & Majesty, 2025). Thus, transformation requires systematic evaluative indicators rather than abandoning measurement.

Within CIPP, "product" should therefore encompass long-term impact, including the effectiveness, sustainability, and contextual relevance of outcomes (Stufflebeam & Zhang, 2017). Christian education evaluation should support faith and spiritual growth rather than merely judge achievement (Situmeang, 2025), while learning products should be evident in the internalization of values in everyday life (F. M. Boiliu, 2024, 2026). Tilaar further emphasizes that value-based education loses transformative power when disconnected from contemporary contexts (Tilaar, 2003). The product of Christian education thus involves spiritual growth, social relevance, and adaptive capacity.

From an educational-theological perspective, Fowler understands faith development as dynamic and lifelong (Fowler, 1981), while Seymour and Miller emphasize transformation of the community, and Ng, Manuhutu, and Gunawan highlight the soteriological horizon of Trinitarian work in spiritual transformation (Ng et al., 2026; Seymour & Miller, 1982). In the digital ecosystem, this suggests understanding learning products as *digital faith formation*, integrating faith, Christian character, digital literacy, and ethical praxis.

For young children, products are better understood as traces of growth observed over time. Their faith develops through imagination, stories, and trusted

adults, appearing in trust, gratitude, love, and participation (Fowler, 1981). Portfolios and narrative reports are therefore more appropriate than scores or rankings (Kemendikbudristek, 2022), while spiritual growth should be interpreted alongside emotional and social development (F. M. Boiliu, 2025).

Opportunities and ethical problems of evaluating Christian early childhood education in the digital ecosystem

The transformation of Christian religious education evaluation in the digital ecosystem requires a shift from outcome measurement toward reflective, contextual, and faith-formation-oriented evaluation. The CIPP model provides a systemic framework by examining context, inputs, processes, and products continuously, positioning evaluation as a means of program improvement rather than merely proving success (Stufflebeam & Zhang, 2017). This aligns with the view of evaluation as supporting educational quality through learning processes and outcomes (Nazilah & Navlia, 2026) and as systematic data collection for decision-making (Abdullah et al., 2025). Unlike objective-based evaluation, CIPP supports reflection throughout the learning cycle, which becomes increasingly important as technology changes how learners produce and demonstrate learning (Perkins et al., 2024).

Digital technology also creates opportunities for flexible and personalized assessment while introducing academic dishonesty and algorithmic bias (Perkins et al., 2024; Sidabutar & Prasetya, 2024). Because evaluation is never value-free but reflects particular ethical perspectives (Tuegeh & Majesty, 2025), excessive reliance on quantitative data may reduce Christian education to measurable outcomes and neglect spiritual and moral formation. Stakeholder participation is therefore important for maintaining evaluation integrity and contextual relevance.

CIPP offers flexibility and sustainability compared with narrowly outcome-oriented approaches, but its data-driven character can become technocratic if subjective experience and personal meaning are overlooked (Ebtesam & Foster, 2019; Kui, 2022; Mahmudi, 2011). Biesta (2015) warns that excessive measurement can marginalize dimensions of education that cannot be fully quantified. Christian education consequently requires a balanced integration of quantitative and qualitative evidence grounded in Christian ethics.

These concerns are particularly significant in early childhood. Photographs, videos, and anecdotal records constitute personal data requiring parental consent, restricted access, secure storage, and responsible use. Digital tools and generative AI should protect privacy and human agency rather than label or predict children's spiritual or developmental status (Miao & Holmes, 2023). Such safeguards affirm children as bearers of the image of God whose growth should be accompanied rather than surveilled.

The novelty of a CIPP-based reconstruction of Christian early childhood education evaluation

The main novelty of reconstructing Christian religious education evaluation through the CIPP model lies in shifting evaluation from result verification toward a decision-making instrument for improving the meaning, quality, and sustainability of learning. CIPP evaluates context, inputs, processes, and products continuously, enabling educational decisions to be assessed beyond final scores (Stufflebeam & Zhang, 2017). Whereas Tyler emphasizes learning objectives and their achievement (Tyler, 2013), Scriven advocates independent assessment of program value through approaches such as *goal-free evaluation* (Scriven, 2010), and Biesta warns that excessive outcome measurement can obscure fundamental questions about educational purposes (Biesta, 2015). Thus, CIPP-based reconstruction is not simply the transfer of conventional instruments to digital platforms, but an effort to assess whether Christian education fosters knowledge of God, moral maturity, and social responsibility.

The reconstruction also expands the object of evaluation from doctrinal knowledge to faith formation, reflective praxis, and personal-communal growth. Groome understands Christian education as *shared praxis*, while Westerhoff emphasizes the relational formation of faith through family, church, and community (Groome, 2012; Westerhoff, 2012). This requires integrating theology, human development, and educational practice (Estep & Kim, 2010), while sustainable assessment develops learners' capacity for self-assessment and future learning decisions (Boud & Falchikov, 2007). Evaluation consequently becomes a pedagogical mechanism for reflection and character formation rather than merely

judgment.

In the digital ecosystem, the reconstruction integrates systemic evaluation, theological sensitivity, and ethical digital literacy. Digitalization raises questions concerning personalization, datafication, privacy, and human agency (Miao & Holmes, 2023; Selwyn, 2021; Williamson, 2019), while effective assessment should make learning visible for instructional adjustment and learner awareness (Brookhart, 2023). For early childhood, the novelty has three specific dimensions: interpreting products through narrative evidence of spiritual, moral, and character growth; including parents and churches as co-educators (Harefa et al., 2023; Westerhoff, 2012); and using digital technology primarily for documentation and adult communication rather than testing children. These features distinguish the reconstruction from CIPP applications in higher education and service learning (Zhang et al., 2011) and school-level Christian religious education assessment (Sooru et al., 2026).

CONCLUSION

Based on this study, it can be concluded that the reconstruction of Christian early childhood education evaluation based on the CIPP model in the digital ecosystem is not merely a technical adaptation to technological developments, but a paradigmatic shift that places evaluation as a holistic, developmentally appropriate, and formative process. In response to the first research question, the study shows that evaluation practice in Christian early childhood education is often disoriented by the downward transfer of school testing logic, so that young children's faith formation is reduced to memorized content while their trust, wonder, gratitude, and care for others remain unread, even as their daily lives are increasingly shaped by gadgets mediated by parents. In response to the second question, the CIPP model can be reconstructed by reading the child's family, church, and digital context; examining the readiness of teachers, parents, curriculum, and documentation tools; observing play-based and dialogical learning processes; and interpreting products as growth over time. In response to the third question, CIPP-based evaluation can document and interpret young children's spiritual, moral, and character growth through observation, digital anecdotal records, portfolios, and narrative reports shared with parents,

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governed by parental consent and the protection of children's data, rather than through the measurement of learning outcomes. This reconstruction contributes a contextual and transformative evaluation framework for Christian early childhood education institutions in Indonesia and strengthens the partnership between school, family, and church. Since this study is conceptual, further research is needed to develop concrete instruments from this framework and to test them empirically in Christian early childhood education settings.

USE OF AI

This article uses Artificial Intelligence (AI) to a limited extent, about 15%, mainly to assist with language editing, grammar checking, and refinement of writing structures. All substance, analysis, interpretation, and conclusions of the research are compiled and verified by the author.

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