Transformation of islamic religious education learning through religious literacy assessment instruments

Nur Anisyah Rachmaningtyas [a,1,*], Eko Wahyunanto Prihono [b,2], Fajar Naqsyahbandi [c,3]

[a] Department of Islamic Education, Ahmad Dahlan University, Indonesia
[b] Faculty of Islamic Education and Teacher Training, Abdul Muthalib Sangadji State Islamic University, Indonesia
[c] National Taipei University of Technology, Taipei, Taiwan

[1] nur.ar@pai.uad.ac.id; [2] ekoprihono@iainambon.ac.id; [3] t113518401@ntut.org.tw
*Correspondent Author

ABSTRACT

This study aims to assess the quality of the religious literacy assessment instrument and describe the religious literacy of elementary school students in IRE. This type of research is quantitative research with an instrument development approach using the Mardapi development model. The instrument is in the form of 25 multilevel multiple-choice questions, validated by three experts, and piloted on 233 students from nine elementary schools in the Special Region of Yogyakarta selected through a stratified random sampling technique. These schools represent high, medium, and low categories, so the results reflect the diversity of student ability levels. The analysis shows that the instrument is categorized as suitable for use, with high validity (0.85) and high reliability (0.80). The instrument is also assessed to meet scientific standards through Confirmatory Factor Analysis (CFA), so it is able to measure religious literacy objectively and comprehensively. The measurement results show that the level of religious literacy of students is still low, namely 33.00%. This finding provides important insights for IRE teachers to develop more meaningful and transformative learning evaluations. In addition, the instruments developed can be a reference for other schools in developing comprehensive evaluations, while also building a religious, tolerant, and critical generation in facing the challenges of the times.

1. Introduction

In the 21st century, the learning process should emphasize not only the transfer of knowledge but also the development of skills and values relevant to the challenges of the times. 21st-century learning reiterates the four key skills essential for students: communication, collaboration, critical thinking and problem-solving, and creative thinking (Ismail, 2024). Furthermore, in the context of IRE, these skills are crucial for developing individuals who are not only textually religious but also contextually literate in dealing with social realities and digital technology (Yachina, 2015a). Furthermore, 21st-century skills help students think critically and creatively in understanding religious values and connecting them to real-life practices. Religious literacy is an essential dimension of meaningful Islamic Religious Education (IRE) learning. Religious literacy encompasses not only knowledge of religious teachings but also reflective understanding, an open attitude, and the ability to use digital media to explore and actualize Islamic values in everyday life (Sholihah & Khoiriyah, 2024). As an integrative competency, religious literacy encompasses interrelated cognitive, affective, and

psychomotor aspects. Religious literacy encourages students to understand Islamic teachings comprehensively, adopt a tolerant attitude, think critically about religious information, and behave ethically in both the real and digital worlds (Azizah et al., 2025).

However, in Indonesia, students' religious literacy levels still face challenges. Various studies show that students often simply memorize IRE material without being able to relate the teachings to contemporary life contexts. The lack of a student-centered learning approach and the lack of integration of digital literacy in IRE hinder the optimal development of religious literacy (Aji Sofanudin, 2020). Furthermore, students' potential to develop a deep understanding of religious teachings has not been matched by supportive learning and assessment strategies (Yachina, 2015b). Furthermore, religious education in the global era emphasizes not only memorizing verses and hadith but also demands critical and reflective religious reasoning. Unfortunately, elementary school students' religious literacy skills in IRE remain relatively low. Another factor that exacerbates students' low levels of religious literacy is teachers' limited ability to design holistic and meaningful assessment instruments. Most teachers still rely on multiple-choice or short answer questions that only measure declarative knowledge, without addressing deeper dimensions such as understanding, application, and reflection on religious values (Moslimany et al., 2024). As a result, students are not encouraged to connect religious teachings to everyday life situations, both in social and digital contexts. Effective religious education should foster critical thinking and ground spiritual values in action (Hastuty et al., 2025). When assessment instruments focus solely on memorization and reproduction of information, students will struggle to fully internalize religious values. This also hinders the development of adaptive and contextual religious character in line with the challenges of the times. Furthermore, teachers often struggle to develop indicators that measure the integration of religious values with contemporary issues, such as digital tolerance, social media ethics, or empathy for differences (Levkov et al., 2024).

Teachers' inability to develop assessment instruments poses a serious obstacle to comprehensively measuring religious literacy achievement. Instruments that only measure low-level cognitive aspects fail to capture students' abilities to interpret, reflect on, and integrate religious values into real-life situations (Ardila et al., 2010; Pardo & Calvo, 2004). This often leads to Islamic religious learning being stuck solely on theoretical aspects, without equipping students with critical thinking skills and contextual spiritual attitudes. Therefore, intensive training is needed for teachers to understand and apply HOTS principles in evaluating IRE learning. Furthermore, teachers need ongoing mentoring and practical instrument models that align with the characteristics of the elementary school level (Zullig et al., 2010). A meaningful learning process will have a greater impact on shaping students' spiritual character from an early age. Elementary school was chosen as the focus for developing religious literacy assessment instruments because elementary school is a crucial phase in children's cognitive and moral development, where basic religious values begin to form and take root within students. According to Piaget's developmental theory, elementary school children are in the concrete operational stage, enabling them to begin to understand simple yet profound moral and religious concepts (Al Otaiba et al., 2019). Developing religious literacy from an early age not only helps students understand religious teachings comprehensively but also fosters the development of tolerant, ethical, and responsible character (Muryati & Hariyanti, 2024). Unfortunately, the availability of valid, reliable, and appropriate religious literacy assessment instruments for elementary school students remains limited.

Currently, religious literacy assessments are primarily developed for junior high and high school students, even though elementary school students require an assessment approach that aligns with their developmental characteristics. Teachers also experience difficulties integrating religious literacy assessments into contextual, real-life learning. Existing instruments often fail to reflect important dimensions of religious literacy, such as reflective thinking skills, tolerance, ethical use of technology, and orientation toward the greater good (Hariyanto, 2025). Of the various assessment instruments developed, only a small proportion

of IRE exam questions contain stimuli that support students' reflective and critical thinking skills regarding religious values (Mukmin & Nuraini, 2024)Therefore, developing valid and relevant religious literacy assessment instruments for elementary school students is crucial as a foundation for meaningful Islamic Religious Education learning and as a preventative measure against the development of narrow religious understandings in the future.

This study occupies a strategic position in the field of Islamic Religious Education research because it shifts the focus of religious literacy assessment from secondary education to the elementary school level, which has so far received limited attention. The novelty of this research lies not only in the development of valid and reliable assessment instruments tailored to the developmental characteristics of younger learners, but also in its integration of key dimensions of religious literacy such as reflective thinking, tolerance, and the ethical use of technology. The expected impact of this research is significant: by providing educators with systematic and contextual tools, it contributes to the prevention of narrow or rigid religious understandings and promotes the cultivation of students who are religiously literate, tolerant, and capable of engaging critically with contemporary issues. Thus, the study offers both theoretical advancement in literacy assessment and practical benefits for fostering transformative learning practices in Islamic Religious Education.

In today's digital era, IRE learning should open up discussion on contemporary religious issues and stimulate students to develop ethical solutions based on Islamic values. This demands assessment instruments that can fully capture the dynamics of religious literacy. In the context of IRE, religious literacy assessment should encompass the dimensions of knowledge, understanding, attitudes, and application of religious values. Assessment can also include observations of spiritual attitudes, project-based assignments, written reflections, and responses to current religious issues. Appropriate instruments will help students think more critically and reflectively about religious values. Based on these challenges, this study emphasizes the importance of developing systematic and contextual religious literacy assessment instruments at the elementary school level. The objectives of this study are to determine: 1) the quality of the developed religious literacy assessment instruments; 2) the description of elementary school students' religious literacy in IRE based on these instruments. The results of this study are expected to serve as a reference for educators in designing more meaningful and transformative IRE learning evaluations.

2. Method

This research uses a developmental approach complemented by competency measurement through religious literacy assessment. This approach begins with a preliminary study and theoretical review, culminating in the development of a prototype religious literacy assessment instrument, designed based on relevant theories and supported by empirical data. The development procedure used refers to the nine steps of test development according to Mardapi (Mardapi, 2017), namely: (1) developing test specifications; (2) writing test items; (3) reviewing and revising test items; (4) conducting a pilot test; (5) analyzing test items; (6) revising the test; (7) constructing the test; (8) administering the test; and (9) interpreting test results. The instrument, which had been content validated by three experts, was then piloted on 233 elementary school students selected through a stratified random sampling technique. The study subjects came from nine schools representing high, medium, and low categories in the Special Region of Yogyakarta, to ensure that the instrument was able to comprehensively measure religious literacy at various levels of student ability. The instrument was developed in the form of multilevel multiple-choice questions consisting of 25 questions, which contain four indicators of religious literacy adapted from several references, namely: (1) religious knowledge, (2) utilization of digital literacy, (3) digital skills in religious learning, (4) religious attitudes and values, (5) orientation towards welfare and religious ethics. The selection of multilevel multiple-choice questions is intended to enable students to express their understanding and attitudes in more depth, as well as to explore the dimensions of religious

literacy which are not only cognitive, but also affective and applicable according to real situations found in students' daily lives both at school, at home, and in the community.

Table 1. Religious Literacy Assessment Indicators

Aspect	Description	Indicator	Item Number
Religious Knowledge	Refers to understanding the teachings, values and basic principles of religion which form the basis for thinking and acting.	Understanding the basic teachings of religion (belief, worship, morals)	1, 2, 3
		Distinguishing authentic religious teachings from deviant ones	4
		Understanding contemporary religious issues developing in society	5
Utilization of Digital Literacy	The ability to access, understand, and critically evaluate religious information through digital media.	Finding reliable sources of religious literature online	6, 7
		Verifying the accuracy of religious news or information	8, 9
		Using digital platforms to deepen religious understanding	10
Digital Skills in Religious Learning	The ability to use digital technology to support the learning process and deliver religious material effectively.	Creating educational religious content on social media	11
		Using technology to teach religious material creatively	12, 13
		Using a Learning Management System (LMS) and interactive media for religious learning	14, 15
Attitudes and Values	Reflection of the internalization of religious teachings in the form of positive, ethical, and responsible behavior in daily life.	Do not spread religious information whose veracity is unclear	16
		Be tolerant of differences in religious understanding, both in real-life and digital environments	17, 18
		Using social media to spread messages of goodness and avoid hate speech	19, 20
Orientation of Welfare and Digital Ethics	Commitment to use digital media wisely by considering ethical values and the benefit of the people.	Utilizing technology for preaching and positive education	21
		Maintaining data privacy and security in digital activities	22
		Being selective in choosing sources or religious figures to follow on social media	23
		Prioritizing religious values in digital activities.	24, 25

The religious literacy assessment instrument developed in this study underwent content validity testing by three experts in the field of religious education and learning evaluation, who assessed each item based on its relevance to religious literacy indicators, clarity of formulation, and representation of the construct being measured. The expert assessment results were then analyzed using Aiken's V-index to measure the level of inter-expert agreement on item quality (Retnawati, 2016). Furthermore, construct validity was confirmed through Confirmatory Factor Analysis (CFA) to test model fit and factor loadings, ensuring that the instrument empirically measures the dimensions of religious literacy as designed. Model fit in CFA was evaluated based on several indicators, namely Tucker-Lewis Index (TLI) and Comparative Fit Index (CFI) values ≥ 0.90, indicating good model fit, and Standardized Root Mean Square Residual (SRMR) values ≤ 0.08 and Root Mean Square Error of Approximation (RMSEA) ≤ 0.08, indicating overall model fit with the data (Raudhah Zulkifli et al., 2024). To measure the internal consistency of the instrument, reliability was calculated using Cronbach's Alpha, with a coefficient value ≥ 0.70 as the minimum acceptable limit (Cai et al., 2023). All statistical analyses were performed using JASP 18.0.0 software, to ensure calculation accuracy and objectivity in evaluating the overall performance of the instrument's items and constructs

3. Results and Discussion

The development of an assessment instrument for religious literacy in IRE learning at the elementary school level focuses on even-semester teaching content relevant to the Independent Curriculum. Based on preliminary studies conducted in elementary schools, it was found that although several cross-subject themes have been integrated in the Independent Curriculum, in practice IRE is still taught as an independent subject, especially in the even semester. This provides room to develop an assessment instrument that focuses on religious literacy competencies taught in one semester. The instrument blueprint is compiled based on a competency map and indicators of student religious literacy achievement, which include aspects of 1) religious knowledge, (2) utilization of digital literacy, (3) digital skills in religious learning, (4) religious attitudes and values, (5) orientation to the welfare and religious ethics. The stimulus in the test items is intended to encourage students to think reflectively and creatively in responding to religious issues according to the context of their lives (Muryati & Hariyanti, 2024). For example, one test item raises a story of social interaction in a pluralistic society to measure students' tolerance attitudes based on Islamic principles. This type of stimulus has been proven effective in eliciting authentic student responses to the religious values taught (Hastuty et al., 2025). A stimulus-based approach to teaching and assessment is effective in enhancing conceptual understanding and higher-order thinking skills.

During the instrument development process, test items were assessed using a categorical approach through a systematically developed scoring rubric. Each test item was given clear scoring criteria to reduce subjectivity and increase assessor consistency. Content validation was conducted by three experts, consisting of a lecturer specializing in IRE, a lecturer specializing in psychometrics, and an elementary school IRE teacher. They examined the correspondence between religious literacy indicators and the test content. Content validity analysis using Aiken's V formula yielded an average index of 0.85, indicating high validity. According to Aiken's classification (Mardapi, 2017), a score above 0.80 indicates a strong correspondence between the test items and the constructs being measured. Based on these results, the 25 multilevel multiple-choice test items were declared valid and ready for pilot testing. To demonstrate construct validity, a confirmatory factor analysis (CFA) was conducted, beginning with a data adequacy test using the Kaiser-Meyer-Olkin (KMO) analysis. The analysis showed a KMO value of 0.87, which Kaiser considered very good. The MSA coefficient for all items was also above 0.50, indicating sufficient correlation between items to form a latent factor (Cai et al., 2023). Therefore, this religious literacy assessment instrument met the requirements for content and construct validity and is suitable for use in evaluating Islamic Religious Education learning at the elementary school level (Table 2).

Furthermore, the suitability of the CFA model for the religious literacy instrument was analyzed using several statistical indicators commonly used to test the fit of measurement models, namely the Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR). The analysis results showed a CFI value of 0.902 and a TLI of 0.940, both above the threshold of 0.90, indicating a very good fit for the collected data. These values indicate that the developed model is able to explain the empirical data very well compared to the null model. In the context of developing educational instruments, this demonstrates that the theoretically formulated religious literacy indicators do indeed reflect a real latent structure in elementary school students' responses to the instrument items. Furthermore, the RMSEA value of 0.072 and SRMR of 0.069, both below the threshold of 0.08, indicate that the model's approximation error to the population is quite low, thus indicating adequate absolute fit. In other words, the difference between the covariance structure of the developed model and the actual data is relatively small. This finding further strengthens the constructive quality of the developed instrument, as it not only possesses good content validity from expert validation but is also supported by structural validity based on CFA analysis. In the context of IRE learning at the

elementary school level, an accurate model is crucial for evaluating students' religious literacy to truly reflect their true abilities.

Table 2. Recap of expert assessment of religious literacy test items

Item	Raters			S1	S2	S3	$\sum s$	V	Description
	I	*II*	*III*						
Item_1	3	4	4	2	3	3	8	0.89	High
Item_2	3	4	4	2	3	3	8	0.89	High
Item_3	4	3	3	3	2	2	7	0.78	Medium
Item_4	3	3	4	2	2	3	7	0.78	Medium
Item_5	4	4	4	3	3	3	9	1	High
Item_6	4	3	3	3	2	2	7	0.78	Medium
Item_7	4	4	4	3	3	3	9	1	High
Item_8	4	4	4	3	3	3	9	1	High
Item_9	3	4	4	2	3	3	8	0.89	High
Item_10	4	4	3	3	3	2	8	0.89	High
Item_11	4	3	3	3	2	2	7	0.78	Medium
Item_12	4	3	4	3	2	3	8	0.89	High
Item_13	3	4	3	2	3	2	7	0.78	Medium
Item_14	3	4	3	2	3	2	7	0.78	Medium
Item_15	3	4	4	2	3	3	8	0.89	High
Item_16	3	4	3	2	3	2	7	0.78	Medium
Item_17	4	3	3	3	2	2	7	0.78	Medium
Item_18	4	4	3	3	3	2	8	0.89	High
Item_19	3	4	3	2	3	2	7	0.78	Medium
Item_20	3	3	4	2	2	3	7	0.78	Medium
Item_21	4	3	4	3	2	3	8	0.89	High
Item_22	4	3	3	3	2	2	7	0.78	Medium
Item_23	4	3	4	3	2	3	8	0.89	High
Item_24	4	3	3	3	2	2	7	0.78	Medium
Item_25	3	4	4	2	3	3	8	0.89	High

The combined CFI and TLI values above 0.90, along with the RMSEA and SRMR below 0.08, indicate that the measurement model is not only statistically fit but also substantively relevant. This means that the model is not only sound from an analytical perspective but also makes sense within the context of religious literacy theory and its application in Islamic elementary education. With this high model fit, it can be concluded that the structure of religious literacy indicators, consisting of knowledge, skills, attitudes, and values, indeed forms a coherent construct. This validity provides a strong foundation for educators and researchers to use this instrument as a reliable measurement tool for mapping and developing elementary school students' religious literacy, in line with the needs of 21st-century learning that prioritizes understanding religious values in a contextual and digital manner. Based on the results of the CFA visualized in Fig. 1, the religious literacy model developed in the context of IRE learning in elementary schools consists of five main aspects: (1) conceptual understanding of religious teachings, (2) reflective ability to relate to religious values, (3) application of religious values in real-life contexts, and (4) orientation toward the welfare and awareness of digital ethics in religious practice in the technological era. Each indicator is elaborated into systematically arranged statement items. This model is designed to capture the complexity of religious literacy relevant to 21st-century needs, particularly for elementary-age students who are beginning to learn about religious aspects through digital media as a learning resource.

The Cronbach's Alpha value was estimated at 0.801, indicating that the instrument's internal reliability is in the very good category. An Alpha value of ≥ 0.80 is a strong indicator that the items in the scale consistently measure the same construct, making it highly adequate for research and measurement purposes in the context of elementary education (Cai et al., 2023). This internal consistency confirms that students' responses to various statement items demonstrate a strong and stable correlation, and there is no deviation in meaning between indicators. This is reinforced by (Mardapi, 2017) opinion, which states that an Alpha value

above 0.80 indicates the reliability of an instrument ready for application in field assessments. In this case, the developed instrument is not only content-relevant but also statistically robust in differentiating elementary school students' religious literacy abilities in the context of IRE learning.
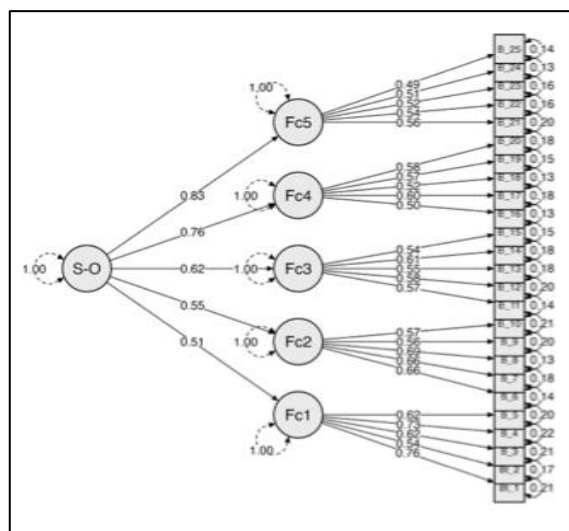

Fig. 1. CFA fit model

Furthermore, the use of structured indicators such as knowledge, skills, attitudes, and values is crucial in measuring literacy in the digital age. In the context of Islamic Religious Education, this becomes even more significant given that religious learning emphasizes not only cognitive aspects but also affective and practical skills. The developed CFA model provides a comprehensive picture of the interrelationships between indicators and the strength of each item in explaining students' religious literacy constructs (Hajaroh et al., 2023) The visualization of fifth-grade student data by literacy achievement category in Fig. 2 demonstrates that this instrument is capable of mapping student abilities proportionally. Thus, this instrument is not only theoretically and empirically feasible, but also applicable for use by elementary school Islamic Religious Education teachers in conducting formative and summative evaluations of students' religious literacy development in the context of 21st-century learning. The results of preliminary data analysis indicate that the level of religious literacy among elementary school students is still relatively low (33.00%), with the majority of students in the very low category (17.75%). This indicates the need for serious efforts to improve religious understanding from an early age, in accordance with children's developmental stages. Religious literacy encompasses not only cognitive aspects but also the ability to understand religious values, relate them to daily life, and demonstrate and implement appropriate religious attitudes. IRE learning in elementary schools currently focuses heavily on memorization and has not yet addressed the critical and reflective thinking skills needed to understand religion contextually (Adi Kistoro et al., 2023). Therefore, an instrument is needed that can comprehensively measure aspects of religious literacy and is appropriate to the characteristics of elementary school students. This instrument should include indicators such as religious knowledge, understanding of values, application of religious teachings, and student responses to religious issues in everyday contexts. Furthermore, it is important to consider active, dialogic, and experience-based learning approaches to increase student engagement in the learning process ((Achadah et al., 2025)). Thus, the development of this instrument provides a crucial foundation for supporting efforts to transform IRE learning into a more meaningful and relevant one.
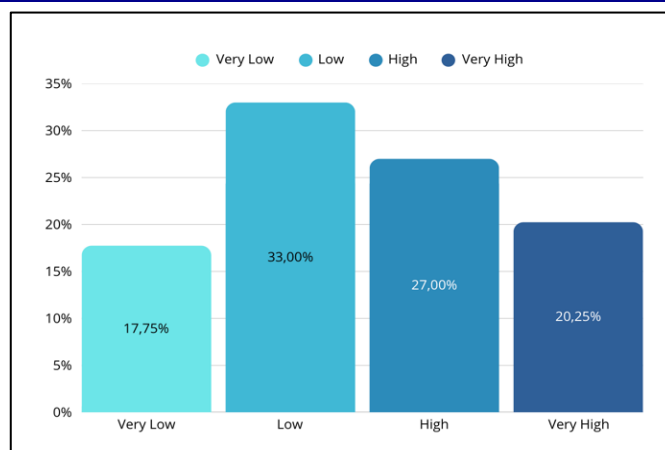
Fig. 2. Profile of elementary school students' religious literacy competency achievements

In the 21st-century context, IRE learning in elementary schools must integrate digital literacy skills as part of religious literacy. Digital literacy enables students to access, evaluate, and use religious information wisely and responsibly ((Sugiarto & Farid, 2023) However, the reality on the ground shows that the use of digital media in IRE learning in elementary schools remains minimal and is not directed at improving holistic religious understanding and attitudes. Yet, various digital religious resources, such as children's Islamic preaching videos, animated stories of the Prophet, or Quran recitation apps, can be utilized to strengthen students' affective and cognitive aspects in learning. Therefore, the developed religious literacy instrument also needs to assess how students interact with digital religious content critically and ethically. The utilization of digital literacy is crucial to ensure that students' understanding of religious teachings is not distorted by misinformation. Islamic Religious Education teachers need to be equipped with the skills to guide students in sorting and evaluating religious information online, as well as creating engaging media-based learning (Adi Kistoro et al., 2023; Hajaroh et al., 2023) Therefore, this instrument measures not only religious knowledge and attitudes but also students' digital religious awareness in the modern context.

In addition to digital knowledge and skills, religious attitudes and values are key pillars in developing elementary school students' religious literacy. IRE learning needs to be directed toward developing a moderate, tolerant religious character that is appropriate to children's psychosocial development (Levkov et al., 2024) Therefore, the instrument developed also measures the extent to which students demonstrate respect for differences, concern for others, and an orientation toward the common good. In the digital era, these attitudes and values need to be complemented by digital ethics, namely an awareness of the responsible use of social media and online platforms to express religious beliefs. Learning that integrates religious and digital ethical values will produce students who are not only religiously literate but also able to actualize these values in a complex digital space. This instrument is expected to be a valid and reliable measurement tool for mapping the development of students' religious literacy comprehensively (Moslimany et al., 2024) The measurement results can serve as a basis for teachers and schools in developing targeted pedagogical interventions. With this approach, IRE learning at the elementary school level will be more meaningful, contextual, and able to respond to the challenges of the times.

To ensure that this religious literacy assessment instrument is truly valid and reliable, a comprehensive validation process was conducted. Content validity was tested through assessments by three experts with various competencies, taking into account aspects of relevance, language clarity, and the suitability of the indicators to elementary school student competencies. The assessment results were analyzed using the Aiken V-index to determine the level of expert agreement on each item. Next, construct validity was tested through CFA using

JASP software to ensure that each indicator was grouped appropriately within the established dimensions of religious literacy. Model feasibility criteria were assessed through values such as TLI and CFI (≥ 0.90), as well as SRMR and RMSEA (≤ 0.08), which indicated good model fit. The internal reliability of the instrument was also calculated using the Cronbach's Alpha coefficient, with values above 0.7 being an indicator of acceptable consistency. This entire process ensured that the developed instrument was not only theoretically and empirically valid but also practically usable by Islamic Religious Education teachers in elementary schools. With this instrument, teachers can more accurately identify students' levels of religious literacy and design adaptive, relevant, and contextual learning according to the needs and challenges of the times.

4. Conclusion

The quality of the developed religious literacy assessment instrument is considered suitable for use, with validity (0.85; high) and reliability (0.80; high) criteria. The developed instrument must also meet validity and reliability standards through a scientific approach such as Confirmatory Factor Analysis (CFA) to ensure objective and comprehensive measurement. Furthermore, the instrument's depiction of elementary school students' religious literacy in IRE is low (33.00%). Developing a religious literacy assessment instrument in IRE learning at the elementary school level is a strategic step to address the challenges of religious character education in the digital era. Religious literacy is not simply measured through memorization of concepts; it must encompass understanding, reflection, and application of religious values in real life and digital environments. With the right instrument, IRE learning in elementary schools can be more contextual, meaningful, and impactful in shaping students' spiritual character. Furthermore, this instrument also supports the evaluation of the overall learning process and serves as a reference for good practices in other educational units. Therefore, developing a religious literacy instrument is not only a pedagogical necessity but also a foundation for developing a young generation that is religious, tolerant, and critical in the midst of the dynamics of the times.

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Declarations

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