Needs Analysis for the Development of E-Aishi: An Interactive Module on Professional Quality and Character Building for Preschool Teachers

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ABSTRACT

This study evaluates the necessity of developing an interactive professional quality module, e-AISHI, for character building among preschool teachers. Utilizing the Design and Development Research (DDR) approach, this article focuses on Phase 1 (Needs Analysis) involving 350 preschool teachers. Data were collected using a questionnaire developed based on the Malaysian Teacher Standard 2.0 (SGM 2.0) and analyzed descriptively using SPSS Version 27. The findings indicate an overwhelmingly high demand for the module, with mean scores exceeding 4.50 across personal, professional, and social domains. Notably, the highest necessity was recorded for professional communication (mean=4.76), followed by strategies to reduce burnout and anxiety in managing students with special needs (OKU). The results reflect the practical challenges and competency gaps faced by the current generation of teachers (Gen-X and Millennials), who possess high digital literacy but require structured emotional and professional support. This study acknowledges the limitations of self-reported data and suggests future performance-based assessments. Ultimately, the e-AISHI module is justified as an urgent digital intervention to bridge the gap between professional demands and teachers' emotional well-being, aligning with national aspirations for teacher excellence.

INTRODUCTION

The emphasis on enhancing teacher competency is a continuous effort by the Malaysian government to ensure the sustainable quality of the teaching workforce. This initiative aims to produce human capital that fulfills national aspirations, consistent with the country's development agenda. According to Siti Fardaniah (2023), the implementation of systematic digital training effectively strengthens teacher competencies, particularly in leveraging instructional technology. This is further supported by Jung (2024), who emphasizes that continuous professional development including postgraduate education is a primary driver of the national education system's success. Consequently, these studies reinforce the argument that dynamic training is critical for maintaining the quality of educators in Malaysia.

In line with this, Malaysia aspires to position its national education system within the top one-third of global rankings. To realize this challenge, the Malaysia Education Blueprint (MEB) 2013-2025 was formulated to drive inclusive educational transformation. A key initiative within this blueprint is Shift 4 which focuses on transforming teaching into a profession of choice by enhancing educational quality. The government places high priority on teacher quality as international studies demonstrate a significant correlation between teacher quality and student outcomes (Ali & Rahman, 2023; Abdullah, 2024). Furthermore, Idris (2023) asserts that professional development not only refines teaching skills but also delivers a consistent positive impact on overall student academic achievement.

Within the context of this research, specific focus is given to enhancing the professional quality of preschool teachers. Preschool education serves as the fundamental bedrock of the education system as it is where the

process of character building and personality development begins. Therefore, preschool teachers bear a profound responsibility serving not only as conveyors of knowledge but also as molders of values and character. Despite the crucial nature of this role, contemporary educators face various practical challenges that necessitate structured support to reinforce both their character and professionalism.

In response to these challenges, the development of technology based interactive modules has become an increasingly urgent necessity. Interactive modules such as e-AISHI an acronym for Electronic, Attitude, In Love, Secure, Harmony and Intelligent were serve as effective support tools in empowering the personal, social and professional dimensions of teachers. The strength of this module lies in its function as a flexible self-paced learning guide that is responsive to the specific needs of the teachers' work environment.

As a proactive measure, this study is conducted guided by the Malaysian Teacher Standard 2.0 (SGM 2.0) to analyze the necessity of developing the e-AISHI Professional Quality Interactive Module. This research not only aims to provide an empirical overview of field requirements but also contributes to the construction of a relevant and systematic module. Through a quantitative approach and rigorous statistical analysis, the findings of this study are expected to serve as a fundamental basis for developing excellent and competitive preschool teachers.

Problem Statement

In the early childhood education system, teachers are the cornerstone in realizing the aspirations of the National Preschool Standard Curriculum (KSPK) to develop students' potential holistically. As individuals within a child's micro-environment, teachers serve not only as conveyors of knowledge but also as role models who significantly influence students' social, emotional and moral development (Hasan et al., 2023). Therefore, establishing a strong professional identity and character is critical to ensuring instructional quality and learning outcomes (Smith, 2022; Zamri et al., 2023).

However, reality on the ground reveals a concerning gap between professional demands and teachers' emotional well-being. Statistics by Ezgi (2020) disclose high levels of anxiety among preschool teachers including issues regarding the work environment (59.1%), student orientation management (61%) and concerns over the enrollment of children with disabilities (59.9%). This issue is further compounded by teachers' fear of communicating with parents and administrators as well as anxieties regarding lesson planning (PdP). Ahmad (2023) and Lee (2023) confirm that such prolonged anxiety not only impairs mental well-being but also causes significant emotional distress throughout their service.

If these challenges remain unaddressed, they lead to burnout an escalating issue among early childhood educators (Kim, 2024). This physical and mental exhaustion results in diminished motivation and deteriorating instructional quality which ultimately impacts student development (Rahman, 2024; Relleve, 2023). A teacher's character, which should be an inspiration can transform into a negative persona marked by anger and irritability if this emotional stress is not managed through proper support (Atiqah, 2020).

Despite these evident challenges, structured and interactive support to assist teachers in strengthening their professional character remains limited. Most teachers require self-paced guidance to build the e-AISHI elements (*Attitude, In Love, Secure, Harmony, Intelligent*). Consequently, this needs analysis is essential to identify the extent to which the development of the e-AISHI Interactive Module can serve as a digital intervention to help teachers manage emotional stress and systematically empower their professional character.

Research Objective

3.1 To identify the level of necessity for the development of the e-AISHI Professional Quality Interactive Module among preschool teachers.

3.2 To identify the demographic profile of preschool teachers that contributes to the necessity of this module development.

3.3 To identify the professional quality dimensions (Attitude, In Love, Secure, Harmony, Intelligent) that are most critical to be developed based on the teachers' perspectives.

Research Questions

4.1 What is the level of necessity among preschool teachers for the development of the e-AISHI Professional Quality Interactive Module?

4.2 How does the demographic profile (such as teaching experience and digital skills) influence the need for this module?

4.3 Which primary dimensions within the AISHI elements show the highest mean scores of necessity among the respondents?

METHODOLOGY

The data collected via questionnaires were quantitatively analyzed using the Statistical Package for the Social Sciences (SPSS) Version 27. Two types of statistical analyses were performed:

5.1 Descriptive Analysis: This was employed to analyze the demographic profile of the respondents and the level of necessity for the module development using frequency, percentage, mean and standard deviation. The mean score interpretation was categorized based on a predetermined scale to determine the necessity level of the e-AISHI module development.

5.2 Reliability Analysis: Cronbach's Alpha test was conducted to determine the internal consistency of the research instrument. Based on the analysis, the obtained Cronbach's Alpha value was 0.946 indicating that the instrument has an exceptionally high level of reliability and is highly suitable for this study.

While the use of self-reported questionnaires was effective in gathering input from a large sample of 350 respondents, the researchers acknowledge the potential for bias, such as social desirability bias. To mitigate this effect, the instrument was developed based on the Malaysian Teacher Standard 2.0 (SGM 2.0) , which possesses high validity to ensure that teacher responses align with actual professional standards.

Data Analysis Technique: Statistical Package For The Social Sciences (Spss 27)

The Statistical Package for the Social Sciences (SPSS) was originally developed by Norman H. Nie, C. Hadlai Hull and Dale H. Bent in 1968. Currently owned by IBM, this software is extensively utilized across various fields including social sciences, business, education and health for comprehensive statistical analysis. In this study, SPSS Version 27 was employed to analyze research data specifically to determine the Mean, Frequency, Percentage and Standard Deviation in assessing the necessity level for the development of the Professional Quality Module. According to Idris (2023), the use of SPSS is proven effective in analyzing quantitative data for module development purposes and provides a valuable guide for educational researchers. Furthermore, Chong (2024) asserts that employing SPSS in research enables researchers to analyze data with higher precision.

Data Collection And Analysis Procedures

This study fundamentally adopts a *Design and Development Research* (DDR) approach to develop the e-AISHI

Professional Quality Interactive Module utilizing a multimethod design. The research is structured into three phases with Phase 1 focusing on the needs analysis for the development of the e-AISHI Professional Quality Interactive Module. To achieve this objective, the researcher administered a Needs Analysis Questionnaire to 350 preschool teachers from daily schools throughout the state of Sabah. The sample size was determined based on the sampling tables proposed by Krejcie and Morgan (1970) and Cohen et al. (2001). No specific gender quotas were established for the selection of participants.

The questionnaire is divided into four main sections: Section A (Preschool Teacher Information), Section B (Domain S1.1: Personal), Section C (Domain S1.2: Professional), Section D (Domain S1.1: Social) and Section E (Level of Module Development Necessity). The construction of this questionnaire was guided by the Malaysian Teacher Standard 2.0 (SGM 2.0) and consists of 33 closed-ended items in total. Items in Sections B through D utilize a 5-point Likert scale (1. Weak, 2. Fair, 3. Good, 4. Very Good, and 5. Excellent). This

instrument is an adaptation of the official SGM 2.0 questionnaire. All collected data were processed using SPSS Version 27 to obtain findings that address the research questions for Phase 1.

TABLE 1. Procedures and Methods for Data Collection and Analysis

PHASE	RESEARCH QUESTION	DATA COLLECTION METHOD	DATA ANALYSIS METHOD
PHASE 1 Need Analysis Phase	4.1 What is the level of necessity among preschool teachers for the development of the e-AISHI Professional Quality Interactive Module?	Quantitative approach using a survey questionnaire via Google Forms.	SPSS Version 27

This section discusses the data analysis findings for the first phase of the DDR model which is the Needs Analysis Phase. The analysis was conducted to determine the level of necessity for the development of the e-AISHI Professional Quality Interactive Module among preschool teachers. The data obtained were processed using the Statistical Package for the Social Sciences (SPSS) Version 27 to calculate mean scores, percentages and standard deviations. These findings aim to answer the following research question:

Research Question 1: What is the level of necessity among preschool teachers for the development of the eAISHI Professional Quality Interactive Module?

To address this question, the findings are categorized into five key components: (i) Teacher Demographic Information, (ii) Personal Domain, (iii) Professional Domain, (iv) Social Domain and (v) Overall Level of Module Necessity. A total of 350 preschool teachers in Sabah participated as respondents. Descriptive analysis was utilized to detail each component providing a clear representation of the actual needs in the field

Table 2. Scale and Interpretation of Mean and Standard Deviation

Scale	Mean Range	Interpretation
5	4.21 – 5.00	**Strongly Agree (SA)**
4	3.41 – 4.20	**Agree (A)**
3	2.60 – 3.40	**Uncertain (U)**
2	1.79 – 2.59	**Disagree (D)**
1	1.00 – 1.78	**Strongly Disagree (SD)**

Adapted from Jamil (2002)

Table 2 displays the Likert scale, mean ranges, and their respective interpretations. As noted by BIF (2023), Rensis Likert introduced the Likert scale in 1932 as one of the most common measurement methods in survey research to evaluate attitudes, perceptions and levels of agreement or disagreement. The scale from 1 to 5 represents the intensity of the respondents' agreement with the questionnaire items. A higher score indicates a higher level of agreement toward the statement and vice versa (Incecay & Dollar, 2012; Mellor & Moore, 2013; Sheau et al., 2012). Furthermore, Ismail (2022) explains that the Mean value is used to determine the average trend or tendency within the data while the Standard Deviation (SD) is utilized to understand the dispersion of data around the mean, providing an overview of data homogeneity or variation.

Table 3. Interpretation Of Standard Deviation And Respondent Consensus

Standard Deviation (SD)	Level of Variance	Interpretation of Consensus
0.00 – 0.25	Very Low	Very High Consensus: Respondents have nearly identical views or very high agreement.
0.26 – 0.50	Low	High Consensus: Slight variation in views, but the majority tend to agree or share similar perspectives.
0.51 – 0.75	Moderate	Moderate Consensus: Moderate variation in views. Differences in opinion exist, yet a general agreement remains.
0.76 – 1.00	High	Low Consensus: Large variation in views. Respondents show diverse opinions with less agreement.
> 1.01	Very High	No Consensus: Significant variation in views; respondents lack a clear or common consensus.

In terms of consensus, Norazman (2024) provides an interpretation for the standard deviation values where a value between 0.00–0.25 indicates very high consensus while a value between 0.26–0.50 indicates a high level of consensus among respondents in Table 3.

Table 4 details the demographic profile

Bil.	Perkara	Item	Kekerapan (f)	Peratus (%)	Min	Sisihan Piawai (SD)
1	District Education Office (PPD)	24 Daerah (Sabah)	350	100%	12.25	6.85
2	Gender	Lelaki	94	26.9%	1.73	0.44
		Perempuan	256	73.1%		
3	Year of Birth	1977 – 1999	350	100%	2.00	0.00
4	Academic Qualification	Sarjana Muda	313	89.4%	2.11	0.31
		Sarjana	37	10.6%		
5	Teaching Experience	5 Tahun ke bawah	24	6.9%	2.29	0.59
		6 – 10 Tahun	199	56.9%		
		11 – 35 Tahun	127	36.3%		

Table 4 is the details of the demographic profile of the 350 respondents involved in the Needs Analysis Phase. The distribution of respondents spans 24 District Education Offices (PPD) across Sabah with an average of 12 respondents per district (Mean=12.25). The relatively large standard deviation (SD=6.85) reflects the variation in teacher participation based on the specific density of each district.

The demographic analysis of the 350 respondents involved in this Needs Analysis phase provides a comprehensive foundation for the study. The distribution and profiles of the participants are detailed as follows:

Distribution by District (PPD): Table 4 illustrates that the participants represent 24 District Education Offices (PPD) across Sabah. The data shows a mean distribution of approximately 12.25 respondents per district. However, the Standard Deviation (SD) of 6.85 reflects a significant variation in participation levels with some districts contributing a substantially higher number of respondents compared to others likely due to the varying density of preschools in each area.

Gender and Generational: Profile Regarding gender, the sample is predominantly female totaling 256 respondents (73.1%), while males account for 26.9% (n=94). This distribution accurately reflects the common gender landscape within the Malaysian preschool education sector. Interestingly, the birth year data indicates a highly homogeneous profile (SD=0.00) as all respondents (100%) were born between 1977 and 1999. This uniformity is advantageous as it signifies that the group belongs to a productive age bracket with the necessary digital literacy to engage effectively with an interactive digital module.

Academic Qualifications: The academic background of the respondents is remarkably robust with 89.4% (n=313) holding a Bachelor's Degree and 10.6% (n=37) possessing a Master's Degree. The mean score of 2.11 (SD=0.31) confirms a relatively uniform and high level of professional qualification. Such a high academic standing among respondents ensures that the feedback obtained regarding the e-AISHI module is informed and grounded in professional pedagogical knowledge.

Teaching Experience: The analysis of teaching experience reveals a balanced representation across different career stages. The largest group consists of mid-career teachers with 6 to 10 years of experience (56.9%), followed by veteran teachers with 11 to 35 years of experience (36.3%). Novice teachers with less than 5 years of experience comprise 6.9% of the sample. With a mean of 2.29 (SD=0.59), the data demonstrates that the study captures a wide spectrum of perspectives from the fresh insights of new teachers to the deep experiential knowledge of veterans which is critical for determining the multi-level developmental needs of the e-AISHI module.

Overall, these demographic findings validate that the sample is both representative and qualified to provide a reliable basis for the subsequent phases of the study. The analysis will now proceed to evaluate the Professional Quality Module Needs Level by examining the Mean, Frequency, Percentage and Standard Deviation of the specific AISHI domains to answer the primary research questions. The findings indicate that 100% of the respondents belong to a productive age group born between 1977 and 1999. This demographic factor is a critical driver for the high demand for the e-AISHI module, as this group possesses the digital literacy required to engage effectively with technology-based self-paced learning. Furthermore, the diversity in teaching experience with the majority (56.9%) having between 6 to 10 years of experience demonstrates that the module must be adaptive to meet the needs of mid-career teachers who face different professional pressures compared to novice educators.

Descriptive Analysis Of Character And Module Necessity

This analysis aims to evaluate the respondents' perspectives on the character traits that every preschool teacher should possess. The assessment utilizes Mean, Frequency, Percentage and Standard Deviation (SD) to provide a clear overview of the necessity and perceptions regarding the module. This section elucidates the analysis's purpose, the specific components involved and the methodology used to assess the required character traits and module development needs among preschool teachers.

Personal Domain

The Personal Domain constitutes Section B of the Needs Analysis Questionnaire. The findings describe the Mean, Frequency, Percentage and Standard Deviation for items in this domain which were evaluated using a five-point Likert scale (Strongly Disagree to Strongly Agree).

Table 5 presents the items within the Personal Domain categorized into 14 primary constructs: (1) Belief in God, (2) Trustworthiness, (3) Sincerity, (4) Knowledgeability, (5) Compassion, (6) Patience, (7) Politeness, (8) Consideration, (9) Fairness, (10) Resilience, (11) Vitality (Active/Healthy), (12) Intrapersonal Skills, (13) Volunteerism and (14) Efficiency.

TABLE 5. Descriptive Analysis of the Personal Domain (N=350)

No.	Personal Domain Constructs & Items	Mean	Frequency (f)	Percentage (%)	SD
			4	5	4
1.	Belief in God				
	A. Performing worship based on religious guidance.	4.83	60	290	17.1%
	B. Applying religious values in performing duties.	4.91	33	317	9.4%
2.	Trustworthiness (Amanah)				
	A. Carrying out duties with responsibility and accountability.	4.81	68	282	19.4%
	B. Being punctual in performing duties.	4.73	96	254	27.4%
3.	Sincerity (Ikhlas)				
	A. Contributing willingly and voluntarily.	4.87	46	304	13.1%
	B. Prioritizing work perfection/excellence.	4.90	35	315	10.0%
4.	Knowledgeable				
	A. Optimizing resources to enhance knowledge and skills.	4.69	110	240	31.4%
	B. Applying ICT in teaching and learning (PdP).	4.74	92	258*	26.3%
5.	Compassion (Kasih Sayang)				
	A. Possessing empathy, friendliness, and accessibility.	4.68	113	237	32.3%
	B. Willing to sacrifice time and energy for student welfare.	4.76	85	265	24.3%
6.	Patience (Kesabaran)				
	A. Controlling emotions and remaining resilient against challenges.	4.60	140	210	40.0%
	B. Striving to find systematic solutions.	4.60	140	210	40.0%
7.	Courtesy (Budi Bahasa)				
	A. Using appropriate greetings and language.	4.65	124	226	35.4%
	B. Respecting diverse cultures and national heritage.	4.73	93	257	26.6%

8.	Consideration				
	A. Being compromising and selfless.	4.68	101	244*	28.9%
	B. Caring deeply about others.	4.67	116	234	33.1%
9.	Fairness (Adil)				
	A. Taking appropriate and reasonable actions.	4.72	99	251	28.3%
	B. Considering the interests of all parties.	4.52	169	181	48.3%
10.	Resilience and Competitiveness				
	A. Contributing toward organizational excellence.	4.62	134	216	38.3%
	B. Implementing various strategies to achieve success.	4.52	167	183	47.7%
11.	Vitality (Active and Healthy)				
	A. Practicing recreation and physical exercise.	4.63	129	211	36.9%
	B. Consistently energetic and cheerful.	4.65	123	227	35.1%
12.	Intrapersonal Skills				
	A. Awareness of personal strengths and weaknesses.	4.67	116	234	33.1%
	B. Consistent self-reflection for improvement.	4.53	234*	187*	46.6%
13.	Volunteerism				
	A. Involvement in welfare and community activities.	4.58	144	205*	41.1%
	B. Prioritizing well-being and welfare.	4.67	116	234	33.1%
14.	Efficiency				
	A. Delivering high-quality work within set timelines.	4.57	150	200	42.9%
	B. Systematic record-keeping for easy access.	4.60	141	209	40.3%

The analysis of the Personal Domain indicates that respondents overwhelmingly value all 14 constructs as evidenced by the consistently high mean scores across all items (Mean > 4.50). The highest mean score was recorded for the construct of Sincerity (Prioritizing work perfection) at 4.90 and Belief in God (Applying religious values) at 4.91. This suggests that preschool teachers in Sabah view spiritual and internal values as the primary foundation of their professional character.

The Standard Deviation (SD) values, which mostly range between 0.29 and 0.50 indicate a very high consensus among the 350 respondents. This low variation proves that there is a unified agreement among teachers regarding the necessity of these traits. Furthermore, even technical constructs like Efficiency (Record keeping) and ICT application received very high scores (Mean 4.59 and 4.74, respectively), highlighting that teachers are not only focused on soft character traits but also recognize the importance of systematic and modern work processes.

In conclusion, the data serves as a strong indicator that these 14 constructs are critical components that must be integrated into the development of the e-AISHI Interactive Module. These findings reinforce the necessity of building a module that balances spiritual values, emotional intelligence and professional efficiency to produce competitive and high-quality preschool teachers.

Professional Domain

The Professional Domain is addressed in Section C of the Needs Analysis Questionnaire. The findings in this section detail the Mean, Frequency, Percentage and Standard Deviation for the items within the Professional Domain. As illustrated in Table 6, the Professional Domain for preschool teachers is categorized into seven primary constructs: (1) Passion for the Profession, (2) Personal Appearance, (3) Integrity, (4) Role Modeling, (5) Teamwork, (6) Proactivity and (7) Creativity and Innovation. These constructs aim to survey the respondents' perspectives on the essential professional qualities required for every preschool teacher.

TABLE 6. Descriptive Analysis of the Professional Domain (N=350)

No.	Professional Domain Constructs & Items	Mean	Frequency (f)	Percentage (%)	SD
			4	5	4
1.	Passion for the Profession				
	A. Upholding the good reputation of the teaching profession.	4.70	104	246	29.7%
	B. Willingness to sacrifice time and energy.	4.46	180	165	51.4%
2.	Personal Appearance				
	A. Consistently displaying neatness appropriate to the profession.	4.58	148	202	42.3%
	B. Possessing knowledge and skill in performing tasks.	4.40	211	139	60.3%
3.	Integrity				
	A. Adaptability to various circumstances.	4.59	143	207	40.9%
	B. Executing tasks according to procedures without taking shortcuts.	4.54	160	190	45.7%
4.	Role Modeling (Teladan)				
	A. Practicing civilized and exemplary behavior.	4.51	172	178	49.1%
	B. Projecting an exemplary self-image.	4.43	198	152	56.6%
5.	Teamwork				

	A. Leveraging teamwork strength to achieve organizational objectives.	4.43	201	149	57.4%
	B. Commitment to the success of organizational activities.	4.50	174	176	49.7%
6.	Proactivity				
	A. Identifying opportunities to enhance organizational achievement.	4.44	196	154	56.0%
	B. Courage to take positive risks and full accountability for actions.	4.37	219	131	62.6%
7.	Creativity and Innovation				
	A. Consistently generating new ideas for the preschool's interest.	4.55	159	191	45.4%
	B. Utilizing and practicing new strategies and techniques in PdP.	4.51	173	177	49.4%

Table 6 details the data analysis for items under the Professional Domain. This analysis encompasses mean scores, frequencies, percentages and standard deviations to provide a comprehensive understanding of how respondents evaluate each dimension of professionalism.

The overall findings indicate that the preschool teachers in this study possess a profound commitment to teaching professionalism. Despite minor variations in the levels of agreement for certain items, the vast majority of respondents demonstrated exceptionally high confidence in aspects such as integrity, teamwork and innovation. This reflects a collective desire to maintain high standards within the teaching profession, thereby validating the necessity of developing the e-AISHI module as a primary professional resource.

Social Domain

The Social Domain constitutes Section D of the Needs Analysis Questionnaire. The findings in this section describe the Mean, Percentage and Standard Deviation for the items within the Social Domain. As shown in Table 7, the Social Domain for preschool teachers is categorized into five primary constructs: (1) Harmony, (2) Social Skills, (3) Community Spirit, (4) Patriotism and (5) Love for the Environment.

TABLE 7. Items and Descriptive Analysis of the Social Domain (N=350)

No.	Social Domain Constructs & Items	Mean	Frequency (f)	Percentage (%)	SD
			4	5	4
1.	Harmony				
	A. Maintaining harmony and practicing tolerance with all parties.	4.55	159	191	45.4%
	B. Participating in activities involving multiculturalism.	4.60	139	211	39.7%
2.	Social Skills				
	A. Demonstrating appropriate behavior in various situations.	4.53	163	187	46.6%
	B. Utilizing polite language and appropriate greetings in various situations.	4.55	156	194	44.6%
3.	Community Spirit				
	A. Actively engaging in community activities.	4.62	133	217	38.0%
	B. Making decisions based on mutual consensus.	4.65	124	226	35.4%

4.	Patriotism				
	A. Upholding the nation's good reputation.	4.63	128	222	36.6%
	B. Celebrating national significant days/events.	4.69	110	240	31.4%
5.	Love for the Environment				
	A. Prioritizing "3K" (Cleanliness, Health, and Safety).	4.58	148	202	42.3%
	B. Remaining concerned with current environmental issues.	4.59	145	205	41.4%

Table 7 illustrates the data analysis for the items within the Social Domain. This analysis utilizes the Mean score, Percentage and Standard Deviation to evaluate how respondents perceive the social responsibilities inherent in their profession.

The overall results indicate that preschool teachers in Sabah possess a high degree of awareness regarding their role as social agents. High levels of agreement in constructs such as Harmony and Patriotism suggest that teachers view the cultivation of national unity and civic values as a core part of their identity. Furthermore, the inclusion of Love for the Environment shows a modern professional outlook that values sustainability. The low standard deviation values across these items confirm a strong consensus among the 350 respondents, validating that social competence is a critical requirement that must be integrated into the development of the e-AISHI Interactive Module.

Necessity Level of the Professional Quality Interactive Module

This section evaluates the necessity of developing the Professional Quality Interactive Module from the respondents' perspective. Table 8 presents the descriptive analysis of 11 items regarding the module's necessity based on Mean and Standard Deviation (SD).

TABLE 8. Necessity Level of the Professional Quality Interactive Module (N=350)

No.	Item Description	Mean	SD	Interpretation
1	Necessity in building preschool teacher character.	4.60	0.49	Very High
2	Necessity in enhancing existing positive character.	4.69	0.46	Very High
3	Necessity to enhance the Personal Domain.	4.60	0.49	Very High
4	Necessity to enhance the Professional Domain.	4.68	0.47	Very High
5	Necessity to enhance the Social Domain.	4.67	0.47	Very High
6	Reducing anxiety regarding the enrollment of Children with Disabilities (OKU).	4.67	0.47	Very High
7	Reducing anxiety when facing/handling OKU children in class.	4.70	0.46	Very High
8	Reducing 'Burnout' or fatigue due to children's behavior.	4.70	0.46	Very High
9	Reducing fear/worry regarding classroom management and PdP.	4.67	0.47	Very High

10	Reducing anxiety in communicating with parents, administrators, and peers.	4.76	0.43	Very High
11	Enhancing passion and love for the preschool profession.	4.68	0.47	Very High

The data from Table 8 indicates an overwhelmingly high level of necessity for the development of the Professional Quality Interactive Module. Notably, Item 10, which addresses the need for the module to assist teachers in communicating with parents, administrators and colleagues recorded the highest mean score of 4.76 (SD=0.43). This signifies that effective professional communication is a critical competency gap that preschool teachers urgently need to address. From a distribution perspective, 76.0% of respondents strongly agreed with Item 10, reinforcing the view that external stakeholder engagement is a major concern.

Furthermore, Item 7 (reducing anxiety regarding OKU children) and Item 8 (reducing burnout) recorded identical high mean scores of 4.70 with strong agreement percentages of 70.0% and 69.7% respectively. These high necessity scores reflect the 'practical challenges' that preschool teachers currently encounter in the field and provide a strong empirical justification for why an interactive digital intervention such as e-AISHI is urgently needed to bridge these competency gaps.

The Standard Deviation (SD) values across all items range between 0.43 and 0.49, indicating a very high consensus among the 350 respondents. The particularly low SD for Item 10 confirms a nearly unanimous agreement across the state of Sabah regarding the importance of communication support. In conclusion, the findings highlight that the respondents demand a module that not only builds professional character (Items 1-5) but also prioritizes psychological support and inclusive education strategies to address high-stress areas in their teaching career.

Recommendations For Future Research And Practice

Based on the empirical findings of the Needs Analysis phase, several strategic recommendations are proposed to ensure that the subsequent development and implementation of the e-AISHI Interactive Module are both impactful and relevant. First, future research should integrate performance-based assessments or direct classroom observations to complement the perceived data which is crucial for identifying gaps in teachers' character competence and professionalism more objectively. Second, the module's content specifically the 'Intelligent' and 'Secure' elements must be prioritized to address critical issues such as burnout and anxiety in managing students with special needs (OKU), both of which recorded significantly high necessity scores. Ultimately, these strategic enhancements aim to bridge the gap between identified teacher anxieties and practical pedagogical solutions. First and foremost, the upcoming Design and Development Phase (Phase 2) must be strategically aligned with the highest-rated needs identified in this study. Specifically, the module should prioritize the cultivation of effective professional communication skills. As the data suggests a significant demand for guidance in interacting with parents and administrators providing structured communication frameworks will empower teachers to manage stakeholder expectations more confidently.

Furthermore, a critical component of the module's content must involve Psychological Support Integration. It is recommended that content designers embed practical stress-management tools within the 'Secure' element of the module. By providing teachers with actionable techniques to mitigate burnout and emotional fatigue, the module serves as a proactive intervention for mental well-being, which is essential for maintaining long-term professional quality.

In tandem with psychological resilience, there is a pressing need for Inclusive Education Training. Given the high levels of anxiety recorded regarding the enrollment of Children with Disabilities (OKU), the 'Intelligent' element of the module should be equipped with specific, evidence-based strategies. This will transform theoretical knowledge into actionable classroom practices, allowing teachers to navigate the complexities of inclusive education with greater efficacy.

From a technical perspective, Digital Accessibility must be at the forefront of the module's interface design. Since the demographic data reveals that 100% of the respondents belong to the 1977–1999 birth year bracket (Millennials and late Gen-X), the module should leverage high-quality the interactive digital features. Utilizing

advanced multimedia and user-friendly interfaces will match the high digital literacy levels of this productive age group, thereby increasing engagement and retention of the module's content.

Finally, the high level of consensus observed across 24 districts in Sabah provides a strong mandate for Statewide Implementation. It is recommended that educational policymakers consider scaling the e-AISHI module as a standardized professional development tool. Such a move would ensure that all preschool teachers in the region have access to a unified framework for character building and professional excellence, ultimately elevating the standard of early childhood education across the state.

CONCLUSION AND RESEARCH IMPLICATIONS

In conclusion, the needs analysis phase has empirically established that the development of the e-AISHI Interactive Module is an urgent necessity within the early childhood education ecosystem. The data analysis which reveals mean scores exceeding 4.50 across the Personal, Professional and Social domains clearly indicates that preschool teachers require a guide that transcends theory, offering highly practical solutions to navigate the increasingly complex realities of their careers.

This study holds significant implications for the enhancement of teacher professional quality. By integrating the 'Secure' and 'Intelligent' elements, the module enables teachers to effectively balance personal emotional wellbeing with professional demands. Furthermore, the identification of burnout risks and the challenges in managing students with disabilities (OKU) signals to stakeholders that interactive digital support is the most effective medium for engaging the current generation of educators (Gen-X and Millennials).

From a policy perspective, these findings align with the aspirations of the Malaysian Teacher Standard 2.0 (SGM 2.0) to produce teachers who are not only academically competent but also grounded in strong character and integrity. Consequently, the primary implication for the subsequent design phase is the need for a module that is accessible, user-friendly and capable of addressing critical gaps in communication and inclusive classroom management.

Ultimately, e-AISHI is envisioned as a catalyst for transforming self-led professional development. It serves as a dynamic support instrument capable of bridging the gap between professional demands and teachers' emotional resilience. Through systematic implementation in the upcoming phases, e-AISHI has the potential to become a primary reference model for sustainably developing the character and professional quality of preschool teachers in Malaysia, particularly in the state of Sabah.

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