Validity and Reliability of Evaluation Instrument on Islamic Education Teachers' Training Based on I-Cvi and Efa

Kesahan Dan Kebolehpercayaan Instrumen Penilaian Latihan Guru Pendidikan Islam Berasaskan (I-Cvi) Dan (Efa)

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ABSTRACT

This research aims to obtain validity and reliability of several research items in the teachers' training evaluation intstrument for teachers in Sekolah Rendah Agama (SRA) JAIS, trained under the Intergrated Holistic Education System program (IHES).This instrument had been tested for validity and reliability using the Content Validity Index (I-CVI) and Exploratory Factor Analysis (EFA). A total of 122 JAIS Islamic Education teachers from Hulu Langat and Sepang district were selected as respondents in the pilot study.The face validity and content instrument were evaluated by ten field experts and I-CVI was used to determine the reliability score. The result of the value of item Content Validity Index (S-CVI) showed a high score for both constructs with 0.99 and 0.98 value. Four factors for teachers'attitude construct and three factors for teachers'performance construct were developed through the use of EFA. Meanwhile an anti image showed the value of coefficient correlation exceeded 0.5 value ,which was between 0.77 to 0.92. Furthermore, the Eigen value was bigger than 1. While the item correlation value of the overall score (item-to-total correlation) exceeded 0.30 in between 0.38 to 0.77. Both constructs showed internal consistency values (Cronbach's Alpha) of 0.90 and 0.94 , which values fell under acceptable range. All items showed load factor values exceeding 0.5.The overall items for this research consisted of 38 items for two research constructs. The conclusion from the EFA result showed that the teachers' training evaluation instrument for JAIS Islamic Education teachers on the aspects of attitude and teachers' performance has fulfilled the validity and reliability criteria.

Keywords: Validity, Reliability, I-CVI, EFA, IHES

ABSTRAK

Kajian ini bertujuan mendapatkan kesahan dan kebolehpercayaan pada sebahagian item kaji selidik dalam instrumen penilaian latihan guru untuk guru-guru Sekolah Rendah Agama (SRA) JAIS yang mengikuti program Intergrated Holistic Education System (IHES). Pengkaji telah menguji kesahan dan kebolehpercayaan instrumen melalui Indeks Kesahan Kandungan Setiap Item I-CVI dan Exploratory Factor Analysis (EFA). Seramai 122 orang guru pendidikan Islam JAIS di daerah Hulu Langat dan Sepang menjadi responden bagi kajian rintis. Penilaian kesahan muka dan kandungan instrumen melibatkan sepuluh orang pakar. I-CVI digunakan bagi menentukan kebolehpercayaan antara pakar dicapai. Keputusan nilai Purata Indeks Kesahan Kandungan Setiap Item (S-CVI) menunjukkan nilai bagi kedua-dua konstruk adalah tinggi iaitu 0.99 dan 0.98. Menerusi EFA pula telah membentuk empat faktor bagi konstruk tingkahlaku guru dan tiga faktor bagi konstruk prestasi guru. Sementara itu anti imej menunjukkan nilai pekali korelasi melebihi nilai 0.5 iaitu antara 0.77 hingga 0.92. Seterusnya nilai Eigen adalah lebih besar dari 1. Manakala nilai korelasi item kepada skor keseluruhan (item-to-total correlation) adalah melebihi 0.30 iaitu antara antara 0.38 hingga 0.77. Kedua-dua konstruk ini mempunyai nilai ketekalan dalaman (Cronbach's Alpha) masing-masing iaitu 0.90 dan 0.94 dan nilai-nilai ini berada dalam julat yang boleh diterima. Kesemua item mempunyai nilai muatan faktor melebihi 0.5. Jumlah keseluruhan item dalam kajian ini adalah sebanyak 38 item bagi dua konstruk kajian. Kesimpulan daripada EFA yang dijalankan, dapat dirumuskan bahawa instrumen penilaian latihan guru pendidikan Islam JAIS dari aspek tinglaku dan prestasi guru memenuhi kriteria kesahan dan kebolehpercayaan instrumen.

Kata kunci : Kesahan, Kebolehpercayaan, I-CVI, EFA, IHES

INTRODUCTION

A training is provided by an employer or an organisation for the employees to upgrade their level of knowledge, skills and competency in a profession. A training is also considered as an organised as well as a continuous process involving teaching and learning aspects in acquiring skills, knowledge, experience and attitude development for workplace benefits (Ibrahim Mamat 2006; Rahmah Ismail, Rosnita Hamzah & Liew Chei Siang 2015). Furthermore, a training program aims to expose the workers to the field of work, responsibility, skills and knowledge in fulfilling individual task. A good management will always encourage, support and provide ample trainings for the workers to develop their full potentials (Lilis Suryani Octavia & Siti Ina Savira 2016). Currently, training programs have become more crucial since knowledge, manpower , and skills have become a more competitive source with the existence of the globalised market, a rise in variability of manpower and the emergence of foreign investors in the country (Kementerian Sumber Manusia, 2008).The rapid development of the world without borders in the country has also impacted the environment in the workplace, which requires each worker to elevate performance by adapting oneself to a changing modernized workplace (Mimi Mohaffyza Mohamad & Che Munira Che Razali n.d.; Saedah Siraj & Norhayati Sulaiman 2006).

Training programs include short term and long term scheduled trainings, which purpose is to upgrade employees' skills and knowledge (Siti Nur Aisya Sugumarie Abdullah & Ahmad Zabidi Abdul Razak 2016). According to Ibrahim Mamat (2006), a training in an organisation or service is a planned learning program which aim is to increase knowledge, skills and performance of the staff. Thus, Selangor Islamic Religious Department (JAIS) has put an effort to upgrade teachers' quality in the aspects of knowledge, skills and attitude through IHES system, which is in line with JAIS Islamic Education philosophy and aims (Ahmad Munawar Ismail et al. 2014; Mohammad Amir Danuri, 2017; Mohd Kamal Radiman 2012). Training evaluation used in this research is referring to the education process based on IHES system and all teachers under JAIS Religious Primary Schools (SRA) as the main target group.

BACKGROUND OF THE STUDY

JAIS is fully responsible in providing teachers' training programs to all SRA teachers. The trainings are provided to ensure ongoing improvements on the level of knowledge, skills, attitude and professionalism among SRA teachers in fulfilling their duties. Selangor International Murabbi Institute or IMANS is responsible in coordinating and managing teachers' training programs through Selangor Training & Da'wah Institute (ILDAS). The Islamic education system used by JAIS is IHES, which is an innovation on JAIS existing education system for a more effective impact on students in the primary and secondary level. This system initiated in the year 2007 through the establishment of MITIB (Maahad Integrasi Tahfiz Sains and Teknologi Istana Bandar) and approved by Selangor Islamic Religious Council (MAIS) as well as the Selangor State Government.This system is also closely related to an UPSI research in 2006 on knowledge integration issue under JAIS curriculum unit (Othman Lebar et al. 2006). With the approval of education policy and JAIS Islamic Education Roadmap under Education Committee, IHES is adapted as educational practice for JAIS Islamic Education Unit (BPI) and documented in JAIS Strategic Plan 2009 to 2014 and JAIS Strategic Plan 2015 and 2019 (JAIS Islamic Education Unit 2013, 2017).

First application of IHES after being officiated by Selangor Chief Minister was implemented through different stages among teachers in religious schools throughout Selangor state. Teachers are considered as agents for the effectiveness of education. Although JAIS has structured a good system of education, the goal of any system could not be achieved if the teachers were not competent and effective. Furthermore, two Maahad Integrasi Tahfiz Sains and Teknologi (MITS) and ten Primary Integrated Religious Schools (SRAI) under JAIS were established in each district in Selangor. This education system has also been introduced to Integrated KAFA schools and all other types of schools under JAIS administration in Selangor. IHES implementation is strengthened through teachers' understanding on their role as information delivery agents with the assistance of tools development and system facilities. Two important education tools which enable success for the system are teachers' teaching guide (BPMG) and daily lesson plan (RPH) (Kamarulnizam Sani & Zetty Nurzuliana Rashed

2018; Zetty Nurzuliana Rashed, Siti Rashidah Abd. Razak, Norshilawani Shahidan, Ahmad Syafiq Mat Razali & Zanaton Iksan 2017).

IHES concept is an education system which integrates all units and elements of education thoroughly. This system is practiced by all SRA, SRAI and MITS in Selangor and has become an important value added component in the existing national education system (Zetty Nurzuliana Rashed & Ab Halim Tamuri 2017). The aims of the system implementation are: (a) to purify aqidah (iman), (b) to elevate sincerity and ibadah (ihsan), (c) to complement akhlak (Islam) and (d) to prepare for the day of judgement (Kamarulnizam Sani & Zetty Nurzuliana Rashed 2018). The objective of this system in purifying aqidah is to give awareness to ummah on the existence of one God that is Allah S.W.T through the field of knowledge. This source of knowledge requires two propositions or dalil through *naqli* from al Quran dan al Sunnah and the second evidence is through *aqli* that is related to researches on Allah's creations. These sources of dalil aqli and *naqli* are interdependent so that students' level of intellect in education can be holistically developed and not only focus on mind ability. While IHES implementation involves six main components: (i) education characteristics (ii) education development levels (iii) education process (iv) approaches (v) monitoring and (vi) assessment and evaluation. In this research, the researcher only focused on one component related to the education process in evaluating teaching effectiveness among teachers in SRA from the aspects of *ta'lim*, *ta'dib*, *tadrib*, *taujih* and *irsyad* (Bahagian Arkib JAIS 2019; Hasni Mohamed 2019). The evaluation method used is Kirkpatrick Evaluation Method (1959), which consists of four levels: reaction evaluation, learning evaluation, behavioral change evaluation and training/performance effect evaluation (Kirkpatrick 2000).

PURPOSE OF THE STUDY

This research aimed to explore the process of testing validity and reliability of a questionnaire instrument using I-CVI and EFA. The constructs were related to SRA JAIS teachers' behaviour and performance constructs as the outcome of teachers' training based on IHES.

METODOLOGY

This descriptive survey research was using a set of questionnaire as a data collection method. A questionnaire is a method which is frequently used by researchers for its flexibility (Mohd Najib Abdul Ghafar, 2003). The questionnaire can be administered quickly, easily and able to cover broad areas, as well as very effective in terms of cost and time (Lokman Mohd Tahir & Kalsom Saleh 2011; Mohamad Fuad Ishak et al. 2012). A total of 122 respondents among JAIS SRA teachers were selected as the samples in this pilot study. According to Creswell (2009) and Marohaini Mohd Yusoff (2013), the number of samples for a pilot test should involve a total of at least 30 respondents. This total is ample for a research under social sciences field. However, for this research the total number of respondents selected was more than 100, due to the requirement for the validity and reliability test using I-CVI and EFA. This perspective is suitable based on MacCallumet.al (2001) and Winter et al. (2009) who stated that the sampling size for a study must be greater than 60 respondents (MacCallum, Widaman, Preacher, & Hong 2001; Winter, Dodou & Wieringa 2009). While Boomsma & Hoogland, (2001standard errors and model fit, under conditions of (non) stated that a sample size should be more than 100 respondents for a research.

This pilot study focused on permanent, contract and temporary teachers in selected SRA: SRA Taman Tun Perak, SRAI Bandar Baru Bangi and SRA Bandar Seri Putra. According to Creswell (2009), a pilot study is done to assist researchers in determining the ability of the respondents to understand and solve questions given in the questionnaire. The outcome of the pilot study would give indicators on the time allocation, accuracy, clarity, validity and reliability of the instrument. Therefore, the questionnaire distributed for the pilot study is to test the reliability of the developed instrument before being distributed in an actual research. The instrument used was a set of questionnaire which was divided into eight parts: A) respondents' demography, B) integrated education concept, C) education proces, D) reaction evaluation (i) E) reaction evaluation (ii) F) learning evaluation (knowledege, skills and attitude, G) behavior H) outcome/performance. This questionnaire was developed based on *Likert* scale 1 to 5 and categorized for interpretation based on four levels as in Table 1.

TABLE 1. Average Interpretaion Score (*Likert* Scale 5)

Average Score	Interpretation
1.0 until 2.00	Low
2.01 until 3.00	Medium low
3.01 until 4.00	Medium high
4.01 until 5.00	High

Source: Azhar Ahmad (2006) and Ahmad Munawwar Ismail (2009)

BEHAVIOUR AND PERFORMANCE EVALUATION INSTRUMENT

The construction of the instrument for this research had gone through four phases: planning, constructing, evaluating and validating (Benson & Clark 1982; Zulkifley Mohamed, Othman Lebar & Shahrizal Shamsuddin 2017). i) In the first phase, the researcher focused on planning and developing literature review for the construction of suitable constructs based on teachers' training programs using Kirkpatrick Evaluation Model. From the findings of related review of literature, a definition of construct and subconstructs were made and used in the questionnaire. Item Specification Table (JSI) was developed to determine the accuracy, direction, detailing, recurrency, and the variability of the questions level and a thorough coverage of the itemized content for all constructs and subconstructs (Bhasah Abu Bakar 2009). ii) In the second phase, the researcher developed the reaction, learning, attitude and outcome or performance items based on the basic component items in teachers' training adapted from Ab Halim (2012), which focused on pedagogical knowledge, content and variety of skills (Ab Halim Tamuri, Muhamad Faiz Ismail, & Kamarul Azmi Jasmi 2012). These items were also referring to JAIS IHES Model on education process component (Bahagian Pendidikan Islam JAIS, 2016). All developed items were referred to academic advisors for verification purpose to avoid unsuitability, overlapping, and vagueness in the item construction. The process of draft checking was done repeatedly until an agreement was achieved by the academic advisors and the researcher. iii) In the third phase, an evaluation was done by referring to ten field experts: four content experts, tree evaluation experts, one language experts and two respresentative from institution or department. This process was done to determine the content validity on each item in the questionnaire. Corrections and improvements were made based on comments and suggestions from the experts. After the final draft was developed, the researcher would submit to the academic advisor for the final verification before the instrument was distributed for a pilot study. iv) The fourth phase would require an implementation of the pilot study and validation of the questionnaire by analyzing and testing the findings for validity and reliability criteria.

Teachers' training evaluation instrument related to JAIS SRA teachers' behaviour and performance based on IHES and adapted from an instrument developed by Mohd Azmi Mat Yusoff (2016) regarding an evaluation on Inservice Training Program on Standard Based Assessment (PBS). The Instrument consisted of 19 items for the construct on behaviour and 19 items for the construct on performance. The item distribution based on constructs can be viewed in Table 2.

TABLE 2. Items for Teachers' Behaviour and Performance Construct

Construct	Item no.
1. Teachers' Behavior	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19
2. Teachers' Performance	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19

VALIDITY AND RELIABILITY OF INSTRUMENT

Validity of an instrument refers to the ability to measure in measuring what needs to be measured (Creswell 2002; Pallant 2010; Tuckman 1999). While an instrument reliability refers to the consistency value of a measurement tool in measuring (Gay, Mills & Airasian 2011). Therefore, an instrument can be considered as having high validity if the item reliability score is high. According to Pallant (2010), an Alpha Cronbach reliability value should be greater than 0.7. While Majid Konting (2005)

stated that a minimum of 0.6 reliability score would indicate that the instrument has a good consistency. This means if a reliability value does not reach 0.6 score would mean that the instrument has a weak consistency and needs adjustments.

In order to obtain item consistency in the developed instrument, the alpha value should be based on the efficiency of the Cronbach used (Kamarul Azmi Jasmi, 2010). This a common reliability measurement method in measuring a set of questionnaire. In this research, reliability index classification was adapted from KamarulAzmi (2010) as shown in Table 3.

FACE AND CONTENT VALIDITY

In order to obtain face and content validity empirically, Item Content Validity Index (I-CVI) is used as the quantitative measurement procedure of content validity (Lyn 1986; Ramlan Mustapha 2017). This method assists in determining the needs and suitability in maintaining each item in the instrument. After the I-CVI is obtained for each item through experts' evaluation, the Average Content Item Validity Index (S-CVI) is determine for the whole items of the instrument. (Polit, Beck & Owen 2007).

TABLE 3. Alpha Cronbach Reliability Index Classification

Indicator	Alpha Cronbach Value
Very high	> 0.90
High	0.70-0.89
Average	0.30-0.69
Low	< 0.30

Source : Kamarul Azmi Jasmi (2010)

The procedure in determining face and content validity starts from selecting a group of experts who are knowledgeable on the focused concept. In this study, ten experts including four content experts, three evaluation experts, one language expert and two experts from an institution or department were selected to assist in revising and evaluating. This selection was made based on Polit, Beck, & Owen, (2007) and Lyn (1986), in which they stated that the most reliable number of experts are between three to ten panels. Face and content validity were determined based on the experts' evaluation of the instrument, research objectives, suitability of content, level of discourse, font size, item presentation and level of

difficulty. Four ordinal scale was used for each item : (1) not suitable (2) moderately suitable (3) suitable (4) highly suitable as the Questionnaire Validity Rubric (RPSS) for I-CVI (Ramlan Mustapha, 2017).

In determining I-CVI value, the average point scale should be obtained by dividing the total score given by experts with the number of experts. The value used for I-CVI is ≥ 0.80 (Davis, 1992; Polit et al. 2007). While the calculation for S-CVI is by dividing the total of I-CVI with the total of item in the questionnaire based on construct. In this study, I-CVI and S-CVI were analysed using the formula in Table 4.

TABLE 4. I-CVI and S-CVI Formula

Item Content Validity Index (I-CVI)	$= \dfrac{\text{total score of each expert}}{\text{Number of expert}}$
Average Score for Item Content Validity Index (S-CVI)	$= \dfrac{\text{I-CVI total}}{\text{Item total}}$

Source: (Lyn 1986; Ramlan Mustapha 2017)

CONSTRUCT VALIDITY

Exploratory Factor Analysis (EFA) is used in identifying and organizing items into constructs under a particular variable from the samples of the research (Sharifah Hasima Syed Daud, Jamal@ Nordin Yunus, & Hamidah Yusof, 2017; Tabachnick

& Fidell 2007). Among the important objectives of implementing EFA is to decrease the number of variables, determine structure or relationship between variables, identify and measure the dimension of construct and evaluate construct validity of a particular scale, test or instrument (Williams, Brown & Onsman, 2012). EFA is also

used to obtain new constructs from the research samples (Sharifah Hasima Syed Daud et al. 2017).

The report from EFA result should consider the following criteria: (a) only items with anti-image correlation of ≥ 0.5 are accepted; (b) Bartlett's Test of Sphericity significance should be at p < 0.05 to show adequate existence of correlation between item or variable and is suitable to be analysed with EFA; (c) Kaiser-Meyer-Olkin (KMO) Sample Adequacy test result is high with value ≥ 0.5 to determine the sample size for EFA analysis; (d) Eigen value is greater than 1 (> 1); (e) items with load factors greater or similar as 0.5 are maintained; (f) Change of variance percentage is bigger than 8%; and (g) the number of factors based on item suitability, theories and previous researches (Hair, J. F., Anderson, R. E., Tatham, R. L. & Black 2009; Salina Mokhtar & Rahimi Che Aman 2017).

DISCUSSION ON FINDINGS

VALIDITY AND RELIABILITY OF RESEARCH INSTRUMENT

The pilot test involved 122 teachers from SRA and SRAI under JAIS. The alpha values for validity and reliability of the 19 questionnaire items were very high with 0.90 for teachers' behavior construct and 0.94 for teachers' performance construct as shown in Table 5. This value could be considered as high based on Pallant (2010) and Kamarul Azmi Jasmi (2010) which stated that the alpha value should be greater than 0.7. Therefore, the questionaire items for the related constructs can be accepted and can be considered as having high consistency value to be applied in an actual research.

TABLE 5. Reliability Value

No	Construct	Item	Alpha Cronbach
1.	Teachers' Behavior	19	0.90
2.	Teachers' Performance	19	0.94

FACE AND CONTENT VALIDITY

The research findings in Table 6 and 7 for face and content validity through I-CVI and S-CVI showed a very high value. I-CVI value for teachers' behavior and performance construct evaluation was between 0.90 -1.00 and S-CVI value was between 0.985 and 0.995. This value is suitable according to Davis (1992) and Polit et al. (2007)in which the most applicable I-CVI value is ≥ 0.80. Based on this data, the agreement among experts on each structured item was very high and this shows that it has the ability to be administered and implemented in an actual research. At this level, no item in the questionnaire would be eliminated.

TABLE 6. Each Item Score for I-CVI and S-CVI value on Teachers' Behaviour Evaluation Construct

	Experts										I-CVI
	1	2	3	4	5	6	7	8	9	10	
F1	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90
F2	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
F3	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
F4	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
F5	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
F6	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
F7	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
F8	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
F9	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
F10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
F11	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
F12	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
F13	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

	1	2	3	4	5	6	7	8	9	10	
F14	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
F15	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
F16	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
F17	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
F18	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
F19	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
F20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Average	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	19.90
									S-CVI		0.995

TABLE 7. Each Item Score for I-CVI and S-CVI value on Teachers' Performance Evaluation Construct

	Experts										I-CVI
	1	2	3	4	5	6	7	8	9	10	
G1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
G2	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
G3	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90
G4	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
G5	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
G6	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
G7	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
G8	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
G9	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
G10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
G11	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
G12	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
G13	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
G14	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
G15	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
G16	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
G17	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.80
G18	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
G19	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
G20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Average	1.00	0.90	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	19.70
									S-CVI		0.985

CONSTRUCT VALIDITY

The procedure to obtain construct validity on teachers' behavior and performance through EFA used varimax rotation to measure each 19 item as usable or vice versa. The findings in Table 8 show that the outcome of Bartlett's Test of Sphericity was significant with P value smaller than 0.05 ($P < 0.05$). While the measurement of sampling adequacy value from Kaiser-Meyer-Olkin (KMO) test was 0.83. This value shows that the data are suitable based on EFA procedure and the total of sampling in the factor analysis and can be categorised as a good selection (Hair et al. 2010). While the anti image correlation analysis showed a greater value than 0.5. Therefore, the values indicate that the factor analysis can be used and apllied.

Orthogonal rotation using the varimax method has produced four factors on teachers' behavior contruct, where Eigen value was greater than 1. The items in factor 1, had load factor in the scale of 0.69 to 0.78, factor 2 in between 0.73 hingga 0.83, factor 3 within range of 0.52 to 0.73 and factor 4 in between 0.58 to 0.76. The load factor fulfilled the value as recommended by Hair et al. (2010) in which it should be greater than the value

of .5 (> .5) to be considered as suitable to be used for the following factor analysis. For each factor component, the value of the item correlation to the overall score (item-to-total correlation) was greater than 0.30 in between 0.38 to 0.69 and this value can be considered as giving contribution towards factor development.

The factors were labelled based on the value of each item in developing each factor in the variable of teachers' behavior. Factor 1 was labelled as teaching plan, factor 2 as teaching strategies, factor 3 and 4 as teaching implementation. All of the 19 items in the construct were maintained. Table 8 summarises the result of teachers' behavior variable factor analysis.

TABLE 8. Exploratory Factor Analysis on Teachers' Behavior Variable

Factor	Item	Item Description	Load Factor	Anti Image Correlation Value
Factor 1 Teaching Plan	G3	I make improvements on teaching quality based on integration concept.	0.78	0.90
	G4	I monitor students' learning progress during teaching and learning activities.	0.73	0.91
	G5	I stress on integration based teaching quality.	0.77	0.88
	G11	I make teaching and learing reflection notes at the end of t&l.	0.70	0.89
	G19	I do assessment after teaching and learning session.	0.69	0.90
Factor 2 Teaching Strategies	G7	I use various teaching materials.	0.83	0.81
	G9	I choose teaching strategy based on teaching objectives.	0.73	0.84
	G12	I use recent sources in t&l.	0.80	0.84
	G14	I teach according to time allocated in the teaching steps as planned.	0.81	0.88
	G18	I do reinforcement on students in t&l sessions	0.76	0.79
Factor 3 Teaching Implementation (method)	G1	I use BPMG provided by JAIS in teaching.	0.73	0.86
	G2	I do activities based on integration concept in teaching.	0.52	0.85
	G6	I teach according to the time/ teaching slot based on timetable.	0.60	0.87
	G16	I express my gratitude at the end of t&l.	0.66	0.81
	G17	I combine strategies, approaches, methods and techniques in t&l.	0.52	0.91
Factor 4 Teaching Implementation (technique)	G8	I choose teaching method according to topics.	0.76	0.84
	G10	I choose suitable teaching technique based on teaching method.	0.60	0.85
	G13	I modify teaching materials according to suitability.	0.58	0.83
	G15	I begin t&l session with the recitation of basmalah.	0.73	0.77
% Variance After				
Kaiser-Meyer-Olkin Measure of Sampling Adequacy				0.83
Bartlett's Test of Sphericity		Approx. Chi-Square		1365.840
		df		171
		Sig.		.000

The research findings in Table 9 show a significant value from the Bartlett's Test of Sphericity with P value lower than 0.05 (P < 0.05). While the value for the measurement of sampling adequacy using Kaiser-Meyer-Olkin (KMO) scored 0.90 value. These values indicate that the data used in this research are suitable according to EFA procedure and prove that the number of samples used in the factor analysis can be considered as ample and efficient (Hair et al. 2010). While the anti image value correlation analysis showed a greater value

than 0.5. Therefore, the values indicate that the factor analysis can be contuinued and applied.

The orthogonal rotation using the varimax method has produced three factors for teachers' performance construct with greater than 1 Eigen value. The items in factor 1 consisted of load factor value within the range of 0.57 to 0.73, factor 2 within 0.58 to 0.8 and factor 3 between the range of 0.54 to 0.78. The load factor fulfilled the recommended value based on Hair et al. (2010) in which the value should be greater than .5 (> .5) for each factor to be effective for the next factor analysis. For each factor

component, the item to total correlation value was greater than 0.30 and within the range of 0.57 to 0.77 and this value shows that each item has meaningful contribution in factor development

The factors were labelled based on the value of each item in the factor development of teachers' performance variable. Factor 1 was labelled as teaching plan factor 2 as teaching strategies, and factor 3 as teaching implementation. The total of 19 items are maintained for the constrcut. Table 9 sumarises the result for factor analysis of teachers' performance variable.

TABLE 9. Exploratory Factor Analysis on Teachers' Performance Variable

Factor	Item	Item Description	Load Factor	Anti Image Correlation Value
		I am able to....		
Factor 1 Teaching Plan	H2	implement teaching activities based on integration concept.	0.71	0.87
	H3	make improvements on teaching quality based on integration.	0.73	0.91
	H4	monitor students' learning development during teaching and learning.	0.64	0.95
	H5	determine teaching quality through integration.	0.61	0.87
	H7	manage various teaching and learning materials.	0.57	0.91
	H12	use current sources in teaching and learning process.	0.73	0.90
	H13	modify teaching and learning materials according to needs.	0.68	0.85
Factor 2 Teaching Strategies	H8	select suitable teaching methods according to topics.	0.59	0.91
	H9	choose suitable teaching strategies according to t eaching objectives.	0.68	0.90
	H11	write teaching reflection notes at the end of teaching and learning session.	0.67	0.88
	H16	end teaching session by repeating content of learning.	0.67	0.92
	H17	incorporate strategy, approach, method and technique in teaching and learning session.	0.58	0.93
	H19	implement assessment activities after teaching and learning.	0.61	0.92
Factor 3 Teaching Implementation	H1	use BPMG provided by JAIS in planning teaching.	0.59	0.89
	H6	start teaching and learning session based on provided timetable.	0.54	0.93
	H10	apply teaching technique which is suitable with teaching method used.	0.50	0.90
	H14	teach within the given time.	0.71	0.93
	H15	start learning session by grabbing students' attention.	0.78	0.89
	H18	give reinforcement to students during teaching and learning session.	0.62	0.92

% Variance after		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.90
Bartlett's Test of Sphericity	Approx. Chi-Square	1426.169
	df	171
	Sig.	.000

CONCLUSION

In accordance to the overall result of I-CVI and EFA for JAIS teachers' attitude and teachers' performance constructs in the Islamic Education teaching, it can be concluded that the developed items are suitable to be implemented in a real research setting. Through I-CVI test, high level agreement is achieved among the related experts. While EFA result has led to the formation of four factors on teachers' attitude constructs. The factors include teaching plan, teaching strategies, teaching implementation (method) and teaching implementation (technique). While the outcome of the test on teachers' performance construct has formed three factors: teaching plan, teaching strategy and teaching implementation. Thus a total of 19 items for each tested construct are maintained. The findings from this research also showed that the validity and reliability values for the evaluation instrument for SRA JAIS teachers' training were high. Therefore, the items in the instrument can be considered as suitable and can be applied in a future research.

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