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## Validity and Reliability of the Teacher's Emotional Intelligence Instrument Based on Surah Yusuf through the Application of Rasch Measurement Model

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### Abstract

Since Mayer and Salovey introduced the concept of the teacher's emotional intelligence in the 1990's, studies on it have gained traction among researchers. Instruments and questionnaires assessing emotional intelligence have been developed as part of survey studies based on Western and modern theories of emotional intelligence and have received widespread attention in research and treatment, including for the purpose of resolving emotional problems among Muslim teachers. The aim of this pilot study was to generate empirical evidence regarding the validity and reliability of a teacher-created Emotional Intelligence item based on Surah Yusuf. The study enrolled 70 Muslim teachers at a national secondary school in Kota Tinggi, Johor, using simple random sampling methods. Validity and reliability of the Teacher's Emotional Intelligence instrument in Surah Yusuf are determined using the Model Rasch app in conjunction with Winstep version 3.73 software. Cronbach's Alpha for the item was 0.98, according to the analysis. The item has an individual reliability index of 0.96 and an item reliability index of 0.91. The PTMEA-CORR value for the item polarity test was positive, indicating that items for each construct can move parallel to one another. Despite the fact, item matching test (fit item) revealed that nine items had to be dropped due to an out-of-range MNSQ. The study discovered that 101 out of 110 items could be used to assess the four constructs of the teacher's emotional intelligence in Surah Yusuf. Overall, it is critical to ensure that the Teacher's Emotional Intelligence instrument based on Surah Yusuf

is legal and reliable before it can be used to assess the emotional intelligence of Muslim teachers.

**Keywords:** Emotional Intelligence, Teacher, Surah Yusuf, Validity, Reliability, Rasch Model

## Introduction

The emotional intelligence aspect of teachers has been gaining attention in today's field of study due to mental health problems that have shown increasingly serious improvements year after year.

The teaching career carries significant and complex responsibilities in educational institutions (Ng, 2017). Teachers are also regarded as one of the most stressful professions due to the fact that their entire working hours are spent interacting with others, which requires the ability to manage one's own emotions, as well as those of students, parents, and colleagues (Gkonou & Mercer, 2017). The ongoing challenges and reforms in the world of education have a detrimental effect on the occurrence of emotional triggers, which can jeopardise the teacher's professionalism (Khairuddin et al., 2017).

A career as a teacher has traditionally been a fun job, but over the past two decades, the situation has become increasingly contradictory. Over the past few years, studies have proven that the teaching profession is one of the many stressful careers (Tsvigiouras et al., 2019).

If not addressed, the teacher's emotional problems will affect their psychology, making them irritable, and prone to aggressive behaviours (Norainil, 2017), resulting in emotional disorders and stress problems. It is concerning when the World Bank predicts that 340 million people worldwide will suffer from depression by 2020 (10<sup>th</sup> April, 2017). Meanwhile, in Malaysia, according to statistics released by the Ministry of Education Malaysia's Psychology and Counselling Division, 4.4 percent of the 2,123 out of 48,258 teachers in the country experienced moderate-high stress, with the percentage of cases increasing daily (Utusan Online, 2019).

Teachers' inability of dealing with conflicts and challenges in the field of employment also contributed to a decrease in motivation, rudeness, cynicism, and other unethical behaviours among them (Ertürk, 2022). Even incidents of teachers slapping students, giving excessive penalties, molesting and ragging, as reported in local newspapers, are examples of misconduct stemming from teachers' emotional spark due to their inability to control their emotions (Syed, 2011)

Each teacher must develop emotional intelligence in order to produce a balanced human being physically, spiritually, emotionally, and intellectually, as well as contribute to the well-being of the self, society, and nation (Mazni, 2013). Previous studies have suggested the importance of emotional intelligence training given to teachers to improve their performance (See Hen and Sharabi-Nov, 2014; Dolev, 2016; Ayash Ezzi, 2019; Soanes and Sungoh, 2019).

Nonetheless, the majority of contemporary solutions to the need for emotional intelligence place a greater emphasis on western and modern theoretical approaches. According to the literature, researchers discovered that numerous studies have been conducted focusing on the management of emotional intelligence, but with a greater emphasis on modern psychological methods. There are also numerous measuring tools developed by scholars to assess an individual's emotional intelligence. Among them are the *Emotional Competency Inventory* (Boyatzis & Sala, 2004), *Bar-On Emotional Quotient Inventory* (EQ-i), and *Trait Emotional Intelligence Questionnaire* (Tel Que) (Petrides &

Furnham, 2003). Unfortunately, the use of Islamic-inspired emotional intelligence inventory and management is still limited and has not been developed by professionals. Islamic counsellors continue to yearn for an inventory of problem-solving techniques, particularly those relating to the emotions and psyche of Muslims in terms of spirituality that are based on the Quran and al-Sunnah.

According to al-Ghazālī (1967), human self-structure formed from the elements of *al-ruh*, *al-nafs*, *al-aql*, and *al-qalb* can always change and be formed to make changes in life. These four elements, when combined with divinity, purge the vile and cleanse the admirable. This education has to go through a process of purification of the heart, introduced as "*tazkiyah al-nafs*".

Salleh & Haridi (2016) stressed that emotional intelligence from an Islamic perspective is to manifest in one's success in achieving happiness and peace of mind based on tawhid and faith in Allah SWT. A heart overseen by the value of faith will lead to morals that are the manifestation of emotional clarity and psyche (Hamidah et al., 2013). Emotional intelligence without the guidance of the heart based on the value of this faith will make a person prone to glorifying the emotions experienced to the detriment of oneself and others (Zain, 2015).

Thus, to form a commendable personality and achieve a high level of emotional intelligence requires the efforts of purification of the heart (Johar, 2009; Johar et al., 2011; Salleh & Haridi, 2016). To gain peace, the hearts of all these people need to be handled to the best of their ability, as they tend to dominate thinking and behaviour (al-Ghazali, 1980). The ability to manage and control the functioning of the heart will produce noble and guided thinking, behaviour, and morals.

Strengthening of the value of faith founded on a relationship with Allah (*hablum min Allah*) will foster harmony, thereby enhancing *muamalah* among people who adhere to the concept of *hablum min al nas* (Zain, 2015). Thus, changes in thought patterns and attitudes are necessary to alter the behaviour and personality of Muslims (Najati, 2005), particularly when confronted with various life challenges. Faith, worship, *muamalah* (good interpersonal relations), and morals should serve as the primary foundation for developing emotionally intelligent believers and noble personalities.

Studies on aspects of emotional intelligence that are viewed through the lens of character and behaviour are also very appropriate, as each character's behaviour in the face of life conflict reveals their level of emotional intelligence (Zain, 2015). The story's method, the events and conflicts that the character encounters, will leave an impression on the reader who lives and takes the *ibrah* of the stories read, while also being able to effect change in their own lives (Al-Khalidi, 2004).

The journey of the prophet Yusuf is fraught with psychological conflicts and challenges (Maimunah, 2016), which, combined with the surah's emotional and mental elements (Rida, 2004), as well as the reason for its decline as a motivator and stimulant (Zulkifli, 2017), is deemed significant to be used as a solution mechanism for the problem of Muslims' emotional intelligence. Thus, a teacher's emotional intelligence instrument based on Surah Yusuf was developed by researchers focusing on four primary aspects, namely faith, worship, morals, and *muamalah*, in order to fill a void in Islamic research on emotional intelligence. This step should be directed toward altering the thinking patterns and attitudes of Muslims (Najati, 2005), particularly Muslim teachers, when confronted with various life challenges.

Based on the importance of validity and reliability for obtaining consistent data without a doubt (Ghazali & Sufean, 2018), the Rasch Measurement Model approach focuses on the reliability value of items and individuals (Bond & Fox, 2007; Linarce, 2010). It was used in this study to determine the degree of validity and reliability of the Teacher's Emotional Intelligence instrument based on Surah Yusuf.

### **Objective**

The objective of this study is to specifically analyse the validity and reliability of the Teacher's Emotional Intelligence instrument based on Surah Yusuf.

### **Methodology**

This is a pilot study using the survey method and a quantitative approach. To ascertain the study instruments' validity and reliability, questionnaires were distributed to Muslim teachers teaching in secondary schools in the district of Kota Tinggi, Johor. The data for the study was analysed using the *Winstep 3.73* app, by way of the Rasch Measurement Model approach.

### **Rasch's Measurement Model**

Rasch's measurement model is a mathematical formula that looks at an individual's ability to answer a specific question and the difficulty level of an item to determine the probability of an individual answering an item correctly (Bond & Fox, 2015; Rasch, 1980). Rasch's feeder model produces linear measurements, determining the validity of a study instrument based on its main analysis such as polarity of items, individual item maps, individual item uncertainty, isolation of individual items, equidimensionality, and ranking scales (Linarce, 2005; Bond & Fox, 2007).

According to Bond and Fox (2007), in addition to the use of appropriate measuring instruments or instruments, the selection of a good measurement model is also important to get the results of the measurements that are puzzled. Rasch's measurement model showed that the level of item difficulty and individual abilities in classical measurement theory, often used by previous researchers, were found to be overly dependent on the population (Rasch, 1960), while statistically, the level of difficulty and discrimination of items were dependent on sample items.

Classical measurement theory assumes that the measurement error is the same for each candidate, whereas in Rasch's measurement theory, respondents with high abilities are considered to have a higher probability of answering questions more accurately than respondents with low abilities (Bond & Fox, 2007; Rasch, 1980). Rasch's measurement model was also found to be easier for users to apply besides being able to produce more efficient, valid, and reliable measurements (Aziz, 2010).

### ***Study Instruments***

The instruments for this study were developed by researchers based on a deductive and thematic analysis of surah Yusuf's content. This study makes use of scholars' interpretations of commentary from various periods, including classic, intermediate, and contemporary, to expand on the debate over verses relating to emotional intelligence elements found in the Surah Yusuf studied. Supporting data is gathered through an in-depth examination of reference books, journals, and articles with the authority to assemble accurate information on various aspects of the study debate. Through the identification of four major constructs, a total of 23 sub-constructs were discovered based on research into



the emotional intelligence elements found in Surah Yusuf. Meanwhile, 110 items representing the teacher's emotional intelligence were constructed using Surah Yusuf. The constructs and sub-constructs formed as a result of the content analysis of Surah Yusuf are listed in Table 1.

**Table 1:** Constructs and sub-constructs of Teacher Emotional Intelligence based on Surah Yusuf

No	Construct	Sub Construct	Item	Reference
1	Faith	Strong Faith	4	Qutb (1980), Hamka (1965), Al-Naysaburi (1996), al-Ghazali (1970)
		Prioritising the Value of Faith in Every Action	3	Hamka (1965), Qutb (1980) Ibn-Kathir (1970)
		Believing in God's Help	4	Qutb (1980), Ibn Kathir (1970)
		Be Good to God	3	Al-Maraghi (1974), Umar Muhammad (1997), Ibn Kathir (1970)
		Wise Planning while Putting Reliance on God	3	Hamka(1965), al-Zuhaily(1998), al-Sabuniy (1979), al-Maraghi (1974)
		Do Not Give Up on God's Grace	3	al-Sabuniy (1979). Ibn Kathir (1970), al-Shawkani (1996), al-Zuhaily(1998)
2	Worship	Mujahadah Against Lust	4	Qutb (2009), al-Mubarakfuri (2000), Mahmud Tahmaz (1990) al-Maraghi (1974)
		Making Prayer a Practise	5	Al-Tabari (2009), ibn Ishaq (1994)
		Istiqamah in Doing Good	4	Qutb (2009), Soapiy (1979), al-Ghazali(1980).
		Discharging Trust with Honesty	4	Hamka (1965), al-Sha'rawi (2013), Quraish Shihab (2009), Ibn Ishaq (1994)
		Put your trust in God	5	Quraish Shihab (2009), Qutb (1980), al-Razi (1979), al-Saadi (2000)
3	<i>Muamalah</i>	Effective Communication	5	Al-Sha'rawi (2013), Sayid Ridha (1999), al-Saadi (2000), al-Jazairi (1998)
		Maintaining Good Name and Honour	3	Al-Sha'rawi (2013), Quraish Shihab (2009) Khalid (2007), Hashbi (2000)
		Repaying Evil with Goodness	4	al-Maraghi (1974) ), al-Soapiy (1979), Hamka (1965), Ibn Athiyah (2006)
		Resisting Anger	3	al-Tantawi (t.th),al-Sabuniy (1979), al-Qarni (2006) al-Maraghi (1974)
		Firm Stand	5	Al-Sya'rawi (2013), al-Khalidi (1998), al-Ghazali (1980)
		Not Bringing Up Past Mistakes	5	Hamka (1965), Hamdani (2009), ibn Athiyah (2016), Ibn Assyur(1997), al-Ghazali(1980)
4	Moral	Keeping Jealousy Away	6	Qutb (1980), al-Razi (2000), Ibn Kathir (1970), al-Qurtubi (2004), Sayid Ridha (1999)
		The Perfect Patience	4	Al-Mawardi (t.th), Ibn Kathir (1970), Hamka (1965), Abdullah (2005)
		Calmly Facing Criticism and Challenges	5	Al-Maraghi (1974), Hamka (1965), al-Ghazali (1980)
		Ihsan	5	Al-Shawkani (1996), Ibn Kathir (1970), Hamka (1965), al-Ghazali (1980), Qutb (1980)
		Responsible	6	Ibn Kathir (1970), Hamka (1965), al-Zuhaily (1991), al-Ghazali (1980), Qutb (1980),al-Saadi (2000)
		Forgive Mistakes, Pray for Kindness	5	Hamka (1965), al-Naysabury (1996), al-Hanbali (1998), al-Soapiy (1979), al-Saadi (2000)

**Data Analysis**

Rasch's measurement model used in the analysis of the startup study data examined the validity and efficacy of the instrument based on four main analyses, namely the confidence index and individual item seclusion index, item fit suitability, item power based on CORR PTMEA value, and supervised residual correlation value.

*Reliability of Items and Respondents*

Reliability refers to the precision and stability with which a measurement tool in measures a concept in a study (Creswell, 2012). According to Ghazali and Sufean (2018), instrument validity and reliability are critical in defending the questionnaire items' static entity against defects. The more precise the data collected in order to produce a high-quality study, the higher the questionnaire's level of validity and reliability. John and Sumita (2013) positioned the Cronbach's Alpha to score turnover as a measure that could be used to explain the study instrument's reliability and was deemed to be the most accurate reliable measure when using the Likert scale (Whitley, 2002; Robinson, 2009). Cronbach's Alpha values of 0.7 and greater are considered acceptable and can be used in actual studies (Bond & Fox, 2015; Stephanie, 2014).

**Table 2:** Evaluation of the Overall Evaluation of Pilot Survey Questionnaire Items

INPUT: 70 Person 110 Item REPORTED: 70 Person 110 Item 5 CATS WINSTEPS 3.73

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SUMMARY OF 70 MEASURED Person

	TOTAL SCORE	COUNT	MEASURE	MODEL ERROR	INFIT		OUTFIT	
					MNSQ	ZSTD	MNSQ	ZSTD
MEAN	505.0	110.0	4.58	.26	1.08	.2	.98	-.3
S.D.	33.0	.0	1.66	.12	.50	2.4	.53	2.3
MAX.	549.0	110.0	8.90	1.01	4.05	4.9	4.24	4.4
MIN.	410.0	110.0	.95	.16	.25	-6.5	.20	-7.2
REAL RMSE	.32	TRUE SD	1.63	SEPARATION	5.04	Person RELIABILITY	.96	
MODEL RMSE	.29	TRUE SD	1.63	SEPARATION	5.64	Person RELIABILITY	.97	
S.E. OF Person MEAN = .20								

Person RAW SCORE-TO-MEASURE CORRELATION = .96  
 CRONBACH ALPHA (KR-20) Person RAW SCORE "TEST" RELIABILITY = .98

**Table 2:** (continued)

SUMMARY OF 110 MEASURED Item

	TOTAL SCORE	COUNT	MEASURE	MODEL ERROR	INFIT		OUTFIT	
					MNSQ	ZSTD	MNSQ	ZSTD
MEAN	321.3	70.0	.00	.29	.98	-.2	.98	.0
S.D.	12.7	.0	.99	.04	.32	1.5	.72	1.4
MAX.	341.0	70.0	2.09	.40	2.27	5.1	6.81	7.4
MIN.	290.0	70.0	-1.93	.23	.56	-2.8	.33	-2.3
REAL RMSE	.31	TRUE SD	.94	SEPARATION	3.09	Item RELIABILITY	.91	
MODEL RMSE	.29	TRUE SD	.95	SEPARATION	3.24	Item RELIABILITY	.91	
S.E. OF Item MEAN = .10								

UMEAN=.0000 USCALE=1.0000  
 Item RAW SCORE-TO-MEASURE CORRELATION = -.99

According to Table 2, the Cronbach's Alpha value of 0.98 indicates that this study has a high level of reliability, is excellent, and is acceptable. Bond and Fox (2007) defined 0.8 as strong acceptable level of reliability levels, whereas McMillan and Schumacher (1984) defined an alpha range of 0.70 to 0.90 as acceptable for instruments to be used in studies.

Meanwhile, the item's reliability value of 0.91 indicates that the resulting item has a high level of reliability greater than 0.8 (Bond & Fox, 2007). The isolation index of items (*item separation*) for these study items was 3.09 thus indicating the difficulty level of the item having a good isolation index where there were three levels of difficulty the item was detected. Additionally, this value exceeds the 2.0 specified in the Rasch model (Linarcce, 1997).

Through person reliability, the survey respondents had a reliability value of 0.96. This indicates that the sample used in the study is reliable, as it exceeds the reliability threshold of 0.8, set by (Bond & Fox, 2007). The isolation index of respondents, which was 5.04, meets the criteria for a value greater than 2.0, as stipulated by (Linarcce, 1997).

Overall, the reliability of the items and respondents to the teacher's emotional intelligence instrument based on Surah Yusuf was high and widely, as the Cronbach's Alpha value exceeded 0.8, the item isolation index exceeded 0.8, and the study respondent exceeded the stipulated value of 2.0.

#### *Polarity Item*

According to Bond and Fox (2001), examining the polarity of items is critical because it serves as an early detection measure for construct validity. By determining Point Measure Correlation (PTMEA-CORR.) for Rasch's Measuring Model (Bond and Fox, 2007), an item's ability to measure constructs can be confirmed (Linarcce, 2010). Linacre (2010) defines a negative or zero value for the Point Measure Correlation (PTMEA CORR.) as an indication that the relationship between the response to an item or respondent and the construct is contradictory. It also demonstrates that when measuring constructs, the item does not move in parallel with other items. If the PTMEA CORR. value is negative, the item should be dropped or fixed because it indicates a response that is inconsistent with the variable (Linarcce, 2002). While the of PTMEA CORR. value is positive, it indicates that the item is capable of measuring the constructs being measured. A polarity analysis was conducted on the items in this study to determine how well the items for the constructs of faith, worship, *muamalah*, and morals could move in parallel with one another. A positive PTMEA CORR. value indicates that the item is acceptable, whereas a negative PTMEA CORR. value indicates that researchers should improve or eliminate the item in accordance with the stipulated conditions.



**Table 3:** Point Measure Correlation (PTMEA-CORR).

INPUT: 70 PERSONS 110 ITEMS REPORTED: 70 PERSONS 110 ITEMS 5 CATS WINSTEPS 3.73

PERSON: REAL SEP.: 5.04 REL.: .96 ... ITEM: REAL SEP.: 3.09 REL.: .91

ITEM STATISTICS: CORRELATION ORDER

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL		INFIT		OUTFIT		PT-MEASURE		EXACT OBS%	MATCH EXP%	ITEM
				S.E.	MNSQ	ZSTD	MNSQ	ZSTD	CORR.	EXP.				
20	294	70	1.88	.23	2.25	4.8	3.34	7.4	.22	.63	50.0	68.4	B20	
14	329	70	-.52	.30	2.27	5.1	6.81	6.1	.25	.53	81.4	78.9	B14	
59	318	70	.37	.27	1.99	4.4	2.44	3.6	.26	.58	67.1	73.6	D8	
6	320	70	.22	.28	1.68	3.3	2.17	2.9	.35	.58	64.3	74.3	B6	
12	325	70	-.17	.29	1.44	2.2	1.38	1.0	.41	.56	70.0	76.5	B12	
9	311	70	.86	.26	1.26	1.4	1.39	1.5	.42	.60	61.4	71.5	B9	
73	302	70	1.42	.24	1.73	3.2	1.78	3.1	.43	.62	62.9	69.8	D22	
45	329	70	-.52	.30	.69	-1.8	.50	-1.2	.66	.53	85.7	78.9	C20	
82	298	70	1.66	.24	.82	-.9	.84	-.7	.66	.62	80.0	69.5	E3	
96	324	70	-.09	.29	.77	-1.3	.66	-1.0	.66	.56	78.6	76.1	E17	
19	334	70	-1.02	.33	.58	-2.3	.40	-1.3	.66	.49	91.4	82.4	B19	
28	331	70	-.71	.31	.61	-2.3	.44	-1.4	.68	.52	90.0	80.2	C3	
84	328	70	-.43	.30	.81	-1.0	.57	-1.0	.68	.54	84.3	78.3	E5	
90	329	70	-.52	.30	.61	-2.4	.46	-1.4	.69	.53	88.6	78.9	E11	
39	332	70	-.81	.32	.56	-2.6	.37	-1.6	.70	.51	87.1	81.0	C14	
76	323	70	-.01	.28	.69	-1.9	.52	-1.5	.71	.56	82.9	75.7	D25	
77	312	70	.79	.26	.56	-2.8	.58	-1.9	.71	.60	88.6	71.9	D26	
67	321	70	.15	.28	.67	-2.0	.54	-1.6	.71	.57	78.6	74.8	D16	
94	311	70	.86	.26	.59	-2.6	.52	-2.3	.73	.60	78.6	71.5	E15	
104	325	70	-.17	.29	.59	-2.6	.43	-1.8	.74	.56	85.7	76.5	E25	
MEAN	321.3	70.0	.00	.29	.98	-.2	.98	.0			78.1	76.4		
S.D.	12.7	.0	.99	.04	.32	1.5	.72	1.4			9.4	5.2		

Based on the analysis carried out in Table 3, no item recorded negative polarity. This indicates that all items are parallel with one another in measuring constructs and are able to measure what they should measure.

*Item Fit*

Linarce (2003) emphasises the importance of inspecting the matching of items to ensure that each item built to measure a set construct is suitable. A value of 0.5–1.5, according to Linarce (2003); Bond & Fox (2007), indicates accurate and productive measurements. If an item’s MNSQ value is greater than 1.5 logits, it indicates that the item is misleading, and if it is less than 0.5 logits, it indicates that the item is too predictable. Items that do not meet these criteria should be discarded or improved. In this study, the researchers used Chi-Square statistical analysis of infit and outfit mean squares to examine the matching of items for constructs of faith, worship, muamalah, and morals in this study (MNSQ). The Likert Scale index value is between 0.5 and 1.5 (Linarce, 2003). According to Table 4, there are 23 items that are out of range as determined by the item statistics: misfit order. It demonstrates that there are items that perplexed respondents as well as items that are predictable. These items should be evaluated to determine whether they should be improved or removed from the existing list, namely items B14, B20, D8, B6, D18, D19, D22, B13, D11, C21, C2, B25, C15, C25, C22, C12, C26, D7, C3, E11, C17, E25, B19, and C14.

**Table 4: Item Equity Analysis**

INPUT: 70 PERSONS 110 ITEMS REPORTED: 70 PERSONS 110 ITEMS 5 CATS WINSTEPS 3.73

PERSON: REAL SEP.: 5.04 REL.: .96 ... ITEM: REAL SEP.: 3.09 REL.: .91

ITEM STATISTICS: MISFIT ORDER

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT OBS%	MATCH EXP%	ITEM	
14	329	70	-.52	.30	2.27	5.1	6.81	6.1	A	.25	.53	81.4	78.9	B14
20	294	70	1.88	.23	2.25	4.8	3.34	7.4	B	.22	.63	50.0	68.4	B20
59	318	70	.37	.27	1.99	4.4	2.44	3.6	C	.26	.58	67.1	73.6	D8
6	320	70	.22	.28	1.68	3.3	2.17	2.9	D	.35	.58	64.3	74.3	B6
69	296	70	1.77	.24	1.90	3.7	1.88	3.5	E	.43	.63	72.9	68.7	D18
70	325	70	-.17	.29	1.28	1.5	1.84	1.9	F	.50	.56	75.7	76.5	D19
73	302	70	1.42	.24	1.73	3.2	1.78	3.1	G	.43	.62	62.9	69.8	D22
13	333	70	-.91	.32	1.05	.3	1.58	1.1	I	.47	.50	82.9	81.7	B13
62	322	70	.07	.28	1.02	.2	1.53	1.5	J	.56	.57	78.6	75.3	D11
46	341	70	-1.93	.40	.74	-1.0	.42	-.7	V	.52	.40	91.4	87.8	C21
27	340	70	-1.77	.38	.73	-1.1	.41	-.8	U	.54	.42	88.6	86.7	C2
25	337	70	-1.37	.35	.73	-1.3	.41	-1.1	T	.62	.46	90.0	84.4	B25
40	334	70	-1.02	.33	.70	-1.6	.46	-1.1	Q	.65	.49	91.4	82.4	C15
50	337	70	-1.37	.35	.67	-1.7	.38	-1.2	M	.61	.46	90.0	84.4	C25
47	338	70	-1.49	.36	.66	-1.6	.40	-1.0	L	.59	.45	90.0	85.0	C22
37	338	70	-1.49	.36	.65	-1.7	.37	-1.1	K	.60	.45	92.9	85.0	C12
51	338	70	-1.49	.36	.64	-1.7	.35	-1.1	J	.61	.45	92.9	85.0	C26
58	334	70	-1.02	.33	.62	-2.1	.41	-1.3	I	.65	.49	88.6	82.4	D7
28	331	70	-.71	.31	.61	-2.3	.44	-1.4	H	.68	.52	90.0	80.2	C3
90	329	70	-.52	.30	.61	-2.4	.46	-1.4	G	.69	.53	88.6	78.9	E11
42	339	70	-1.63	.37	.59	-2.0	.33	-1.1	F	.61	.43	94.3	85.7	C17
104	325	70	-.17	.29	.59	-2.6	.43	-1.8	E	.74	.56	85.7	76.5	E25
19	334	70	-1.02	.33	.58	-2.3	.40	-1.3	B	.66	.49	91.4	82.4	B19
39	332	70	-.81	.32	.56	-2.6	.37	-1.6	A	.70	.51	87.1	81.0	C14
MEAN	321.3	70.0	.00	.29	.98	-.2	.98	.0				78.1	76.4	
S.D.	12.7	.0	.99	.04	.32	1.5	.72	1.4				9.4	5.2	

MEAN 321.3 70.0 .00 .29|.98 -.2|.98 .0| |78.1 76.4| |

S.D. 12.7 .0 .99 .04|.32 1.5|.72 1.4| |9.4 5.2| |

Seven of the 110 items tested were eliminated due to exceeding the MNSQ standard range of 0.5 to 1.5. The items are B6, B14, B20, D8, D18, D19, and D22.

**Guided Residual Correlations**

The Residual Correlation’s value is the standard that serves as a point of reference to ensure that no two items overlap. Linarce (2010) defines a correlation value of 0.7 or greater as a good correlation value, implying that the items constructed are monolithic in nature and are not mutually beneficial to other items. Correlation values greater than 0.7 indicates that two items are in opposition to one another. As such, only one of the items must be measured (Linacre, 2010). The purpose of this study was to determine whether items related to faith, worship, *muamalah*, and moral constructs were dependent on other items. According to the analysis conducted as shown in Table 5, three item pairs have correlation values greater than 0.7, namely item pairs C25 and C26 at 0.89, item pairs C2 and C17 at 0.72, and item B13 pairs with C6 at 0.72. As a result, only one item is selected for constructive measurements. When the MNSQ values of the affected items are considered, the items to be dropped are C25 and C17, as their MNSQ values also exceed the values specified in the fit item's check, while items B13 and C6 have been repaired previously.

**Table 5:** Analysis of Supervised Residual Correlation Values

Correlation	Entry Number	Entry Number	Decision
.89	C25	C26	C25 dropped (MNSQ outfit:0.38)
.72	C2	C17	C17 dropped (MNSQ outfit:0.33)
.72	B13	C6	Maintained and repaired
.62	C2	C12	Maintained and repaired
.61	C12	C25	C25 dropped (MNSQ outfit:0.38)
.60	E12	E18	Maintained and repaired
.58	C15	E13	Maintained and repaired
.58	B2	B7	Maintained and repaired
.58	E3	E14	Maintained and repaired
.57	B12	C18	Maintained and repaired

**Total Items Permanent and Dropped for Questionnaire**

As a result of the analysis of the pilot study, the researchers found that only nine items did not meet the study's measurement criteria and needed to be dropped as per Table 6:

**Table 6:** Summary of Total Items Preserved and Dropped by construct

Construct	No. of original items	No. of dropped items	Items dropped	No. of items preserved
Faith	25	3	B6, B14, B20	22
Worship	26	2	C25, C17	24
<i>Muamalah</i>	28	4	D8,D18,D19,D22	24
Moral	31	-		31
<b>Sum</b>	<b>110</b>	<b>9</b>		<b>101</b>

**Conclusion**

Based on the analysis of the Teacher's Emotional Intelligence initiative's validity and reliability based on Surah Yusuf, it was determined that the items in this instrument have favourable test characteristics in terms of validity, reliability, and consumerism, and are therefore believed to be applicable for future researchers to conduct studies on the teacher's emotional intelligence based on the Quran. The items of faith, worship, *muamalah*, and morals as sub-constructs of the teacher's emotional intelligence based on Surah Yusuf have a high degree of validity and reliability. The reliability of items and individuals is high, demonstrating that the instrument's items are valid and reliable. It can also be used as a reference in the training of teachers' emotional intelligence by associated parties. However, this information pertains to only 70 secondary school teachers from a district in the state of Johor. Consequently, it is recommended that additional studies be conducted using a larger sample size and a larger population. Meanwhile, the Structural Similarity Modelling (SEM) approach can be used to validate constructs and generate a framework for study models.

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