

Design and Validation of Islamic Leadership Teachers Instrument in Learning Process Based on Classical Test Theory and Item Response Theory

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ABSTRACT

This study aims to design and validate the Islamic Leadership instruments of teachers in the learning process by using the approach of classical test theory and item response theory. Islamic Leadership teacher is the behavior of teachers in leading to give direction, motivation, influence learners and create confidence to reach the goal in process of learning in class based on character of Prophet that is siddiq, amanah, tabligh and fathonah. This research is a Research and Development (R & D) research with quantitative approach. Data obtained from 304 elementary, junior and senior high school teachers in Bandung regency. Based on quantitative data analysis using classical test theory approach shows instrument validity (0,91) and reliability of instrument ($\alpha = 0.95$) which is known from Cronbach Alpha value, meanwhile using item response theory approach indicates 52 valid items and eight pair items invalid statements and known instrument reliability ($\alpha = 0.93$), respondent reliability ($\alpha = 0.83$), and item reliability ($\alpha = 0.96$). In general, this instrument may account for 24.6% of respondents' variance. Based on these findings, Islamic Leadership teachers in the learning process can be measured using this instrument.

Keywords: *Islamic Leadership, Teacher, classical test theory, item response theory.*

The constitution of the state of the republic of Indonesia number 20 of 2003 explains that education is a conscious and planned effort to create an atmosphere of learning and learning process so that learners actively develop their potential to have spiritual strength, self-control, personality, intelligence, noble character, and the necessary skills himself, society, nation and state. The concept of education according to the law affirms that the end of the educational process one of them focuses on the character development of learners, so that in teaching

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other than the teacher give the material knowledge is also given materials that are morally charged that can be implemented well by students both in and outside the school environment (Nurdin & Sibaweh, 2015, p 243). In addition to being an educator, teachers are also leaders in education and learning in the classroom and in the subjects they receive, teachers must be able to influence students to behave and behave on the basis of certain norms, teachers must be able to influence their students to learn the knowledge and skills they are taught, in other words the teacher is the leader for the students (Wirawan, 2013, pp. 554).

Teacher leadership is a skill and readiness a teacher must possess to influence, guide and direct or manage learners so that they will do something to achieve the learning objectives (Muslich, 2007, pp. 8). Effective and efficient leaders are reflected in decision-making activities, instructive activities, consultative activities, participatory activities, and delegative activities (Wahab, 2008, pp. 91-100).

Certain characteristics are needed in effective and efficient leadership situations, Mahazam et al (2015) in his research proves that specifically, the characteristics of leaders in Islam are of an effective quality and have the necessary capabilities in leading other modern organizations. Furthermore, the relationship of human behavior connected directly with the strongest source in Islam namely the Qur'an and the Prophetic Hadith indicates that effective leaders in Islam also meet the effective understanding of leaders in modern organizations. However, leadership characteristics in Islam are more comprehensive in order to become a leader, in Islam to be an effective and efficient leader of the Prophets' role models in the leadership of every Muslim that is *siddiq* (true), *trust worthy* (can be trusted), *fathonah* (intelligent) and *tabligh* (convey).

To know the leadership of teachers in the learning process required a validity tested tool, but in Indonesia there is no measuring tool of teacher leadership, especially that makes the four properties of the Prophets as the foundation. Therefore, researchers designed a measuring instrument or instrument of Islamic Leadership teachers in the learning process and tested the validity so that research on teacher leadership in Indonesia is growing.

In measurement theory there are two measurement models for performing instrument validation testing, namely classical test theory (CTT) and item response theory (IRT). The IRT model places the characteristics of the instrument that are not tied to the characteristics of the group or sample, but to each person and each item of statement, so that the IRT approach can estimate the errors in individual and item statement items, in addition the IRT model has advantages over CTT-related errors samples using invariant samples so that the grain parameters are not dependent on the level of sample ability. The IRT approach is considered more accurate and powerful in assessing the characteristics of the instrument than the CTT model, although the classical theory approach is still widely used today because of its unfeasible advantages over assumptions so that it is easy to use in accordance with field data (Hambelton & Rogers 1993, pp. 255). Measurements in psychological studies to date

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95% are still being developed based on the CTT approach (Ziniel, 2013). Therefore, in this study the designed instrument will be validated using both measurement approaches.

Understanding Master's Leadership

Teacher leadership is an ability or readiness a teacher must possess to influence, guide and manage learners so that they will do something to achieve the learning objectives (Muslich, 2007, pp. 8). Another notion of teacher leadership is presented by Good (2008, p. 13) which states that "Teacher leadership is the process by which teachers, individuals or collectively, influence their colleagues, principals, and other members of the school community to improve teaching and learning practices with the aim of increased student learning and achievement. "

In the United States, the idea of teacher leadership has long been divided into three waves (Good, 2008, p.12), namely:

1. The first wave, teacher leadership is confined to a formal organizational hierarchy and concerned only in the teaching functions, under the strict control of "teacher's bosses." Here, the teacher is only seen as the executor of the superior's decision.
2. The second wave, teacher leadership has been separated from the hierarchy of conventional organizations. Here, there has been a separation between leadership and the teaching function, by forming a kind of team of curriculum developers formally. Nevertheless, teacher leadership is still under the control of the curriculum development team. The teacher's job is to implement the materials that have been prepared by the curriculum development team. The approach used in this second wave is often referred to as "remote controlling of teachers".
3. The third wave, the concept of teacher leadership has integrated teaching with non-formal leadership. Leadership of teachers is seen as a process by giving teachers widespread opportunities to express their leadership capabilities. The conceptualization of teacher leadership is built on the basis of professionalism and equity.

There are five teacher leadership activities (Wahab, 2011, pp. 91-100) that reflect the effectiveness of a leader, including:

1. Decision Making Activities, the ability to carry out decision-making activities requires that a leader not only has intellectual intelligence, but also requires emotional intelligence or excellent social intelligence.
2. Instructive activities, this activity requires the ability to convey clearly and use etiquette because the process takes place in the interaction between humans.
3. Consultative Activities, in this activity not only means providing opportunities for learners to convey the problems, but also provides opportunities for learners to deliver criticism, advice, information, and opinions related to learning that is useful to make improvements in leadership, especially for future decision-making.

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4. Participatory Activities, this activity involves the advice and opinions of learners, with this pattern learners will feel that the decision is a decision also, which must be supported implementation responsibly by everyone.
5. Delegative activities, delegation must be implemented to realize dynamic learning in following the development of science and technology, the speed and accuracy of decision making will make learning more effective, activities continue even though teachers are unable to attend.

Each leadership has different characteristics or characteristics, Rue and Byars (1999) state that certain characteristics are required in leadership situations such as self-confidence, mental and physical strength, enthusiasm, responsibility and empathy and good relationships with others. Meanwhile, Judge, Bono, Ilies, and Gerhardt (2002) stated that there are five main factors of personality that determine one's success in leading such as the nature of openness, friendliness, caution or sincerity, emotional stability, and openness to experience. However, the evidence shows that there are four qualities possessed by most successful leaders (but not all leaders) expressed by Yukl (2006) and Sidle (2007) in Hellriegel and Slocum (2011, pp. 270) ie intelligence, maturity or maturity and flexibility, encouragement of achievement and integrity is the conformity between what is said and done by someone. Integrity and honesty are two things that can not be separated, many surveys show that honesty is the most important characteristic of leaders, because a leader's honesty affects the subordinate's level of trust in his leader (Mariati, 2009, p. 62).

From the characteristics or attributes of a leader who have been put forward above Mahazam, et al (2015) in his research proves that specifically, the characteristics of leaders in Islam have an effective quality and have the necessary capabilities in leading other modern organizations. Furthermore, the relationship of human behavior connected directly with the strongest source in Islam namely the Qur'an and the Prophetic Hadith indicates that effective leaders in Islam also meet the effective understanding of leaders in modern organizations. However, leadership characteristics in Islam are more comprehensive in order to become a leader, in Islam to be an effective and efficient leader of the nature of the Prophets to be role models in the leadership of every Muslim that is:

- a. Siddiq means honesty. Honesty here is not just for your self, but also honesty with God and others who have the power to escape from a lie.

Allah SWT. Say:

وَمَنْ يُطِيعِ اللَّهَ وَالرَّسُولَ فَأُولَٰئِكَ مَعَ الَّذِينَ أَنْعَمَ اللَّهُ عَلَيْهِمْ مِنَ النَّبِيِّينَ وَالصِّدِّيقِينَ وَالشُّهَدَاءِ وَالصَّالِحِينَ وَحَسُنَ أُولَٰئِكَ رَفِيقًا

"And whoever obeys Allah and the Messenger (Muhammad), then they will be with those who are blessed with favor by Allah, namely: the Prophets, the lovers of righteousness, the martyrs, and the righteous . And they are the best friends."(Surat an-Nisaa ': 69)

- b. Amanah is trustworthy. Amanah is the basis of responsibility, trust, and is something to be fulfilled in accordance with the obligations imposed and the part in akhlakul karimah (Baiquni & Fauziana, 1995, pp. 113).

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Allah SWT. Say:

يَا أَيُّهَا الَّذِينَ آمَنُوا لَا تَخُونُوا اللَّهَ وَالرَّسُولَ وَتَخُونُوا أَمَانَاتِكُمْ وَأَنْتُمْ تَعْلَمُونَ

"O ye who believe! Do not betray Allah and the Messenger (Muhammad) and (also) do not betray the trusts entrusted to you while you know." (Surat al-Anfaal: 27)

c. Fathonah can mean that fathonah is an intelligence that includes intellectual, emotional and especially spiritual intelligence (Tasmara, 2001, pp. 212):

Allah SWT. Say:

يُؤْتِي الْحِكْمَةَ مَنْ يَشَاءُ ۚ وَمَنْ يُؤْتَ الْحِكْمَةَ فَقَدْ أُوتِيَ خَيْرًا كَثِيرًا ۚ وَمَا يَذَّكَّرُ إِلَّا أُولُو الْأَلْبَابِ

"Allah grants al wisdom to whom He will. And whoever is blessed with wisdom, indeed he has indeed been blessed with many gifts. And no one can take lessons except those who have common sense." (Surat al-Baqarah: 269).

d. Tabligh is conveying. The value of tabligh has provided a charge that includes aspects of communication skills, leadership, development and quality improvement of human resources, self-ability to manage things (Tasmara, 2001, pp. 200).

Allah SWT. Say:

وَلْتَكُنْ مِنْكُمْ أُمَّةٌ يَدْعُونَ إِلَى الْخَيْرِ وَيَأْمُرُونَ بِالْمَعْرُوفِ وَيَنْهَوْنَ عَنِ الْمُنْكَرِ ۚ وَأُولَٰئِكَ هُمُ الْمُفْلِحُونَ

"And let there be among you a group of people calling for righteousness, enjoining the maqruf and preventing from evil; they are the ones who are lucky." (Surah Ali 'Imran: 104).

Understanding of Learning

Pribadi (2009, pp. 10) defines learning as a deliberately designed process for creating learning activities within individuals. In line with that definition, Corey (in Sagala, 2011, p.61) defines learning as a process whereby a person's environment is intentionally managed to enable him to participate in certain behaviors under specific conditions or generate responses to a given situation, a special subset of education.

The learning process can be implemented effectively if implemented through the stages undertaken by teachers include:

a. Learning Planning

These stages relate to the ability of teachers in the formulation of learning objectives, the determination of learning materials, the determination of methods and learning media, and the determination of evaluation tools (Sumiati and Asra, 2009, p.4) which can be seen from the way or process of composing RPP and Syllabus (Kunandar, 2009, pp. 250).

b. Implementation of Learning

Implementation of learning is at the core of the implementation of education characterized by the existence of classroom management activities, the use of media and learning resources, and the use of methods or learning strategies.

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c. Evaluation of Learning

Evaluation of learning is one component of the measurement of the degree of achievement of the objectives and effectiveness of the learning process implemented (Sumiati and Asra, 2009, pp. 4).

An overview of Islamic Leadership Instruments teachers in the learning process.

The Islamic Leadership teacher's construct measurement consists of 60 items of statement pairs. This gauge contains items that evaluate how the teacher attitudes toward the implementation in each learning process. The construct of Islamic Leadership teacher itself is defined as the behavior of teachers in leading to provide direction, motivation, influence learners and create confidence to achieve the goals in the learning process in the classroom based on the nature of the Prophets namely siddiq, amanah, tabligh and fathonah:

1. Shiddiq is the honest attitude of the teacher expressed openly.
2. Amanah is the attitude of teachers in carrying out reliable responsibilities.
3. Tabligh is the ability of the teacher to convey the truth to others.
4. Fathonah is the intelligence, skill or mastery of teachers in making decisions appropriately.

Table 1 Grid Instruments Islamic Leadership Teachers in the Learning Process

Component	Sub Component	Indicator	Item Number
Learning Planning (Teachers' duties in the formulation of learning objectives, determination of learning materials, determination of methods and instructional media, and the establishment of evaluation tools that can be seen from the way or process of preparing RPP and Syllabus)	Decision Making Activities (teacher activities in deciding the lesson plans to be implemented in the lesson)	<i>Shiddiq</i>	1
		<i>Amanah</i>	2
		<i>Tabligh</i>	3
		<i>Fathonah</i>	4
	Instructive activities (teacher activities in designing tasks to be given to learners)	<i>Shiddiq</i>	5
		<i>Amanah</i>	6
		<i>Tabligh</i>	7
		<i>Fathonah</i>	8
	Consultative Activities (teacher activities in designing more effective learning after receiving criticism, suggestions, information and opinions from learners)	<i>Shiddiq</i>	9
		<i>Amanah</i>	10
		<i>Tabligh</i>	11
		<i>Fathonah</i>	12
	Participatory Activities (activities of teachers in designing learning that requires the liveliness of learners)	<i>Shiddiq</i>	13
		<i>Amanah</i>	14
		<i>Tabligh</i>	15
		<i>Fathonah</i>	16
	Delegative activities (teacher activities in designing lessons with responsibilities given to learners)	<i>Shiddiq</i>	17
		<i>Amanah</i>	18
		<i>Tabligh</i>	19
		<i>Fathonah</i>	20
Implementation of Learning (The essence	Decision Making Activities (teacher activities in deciding learning activities)	<i>Shiddiq</i>	21
		<i>Amanah</i>	22
		<i>Tabligh</i>	23

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Component	Sub Component	Indicator	Item Number
of the organization of education is characterized by the task of teachers in managing the class, using media and learning resources, using methods and learning strategies)	Instructive activities (teacher activities in designing tasks to be given to learners)	<i>Fathonah</i>	24
		<i>Shiddiq</i>	25
		<i>Amanah</i>	26
		<i>Tabligh</i>	27
		<i>Fathonah</i>	28
	Consultative Activities (teacher activities in designing more effective learning after receiving criticism, suggestions, information and opinions from learners)	<i>Shiddiq</i>	29
		<i>Amanah</i>	30
		<i>Tabligh</i>	31
		<i>Fathonah</i>	32
	Participatory Activities (activities of teachers in designing learning that requires the liveliness of learners)	<i>Shiddiq</i>	33
		<i>Amanah</i>	34
		<i>Tabligh</i>	35
		<i>Fathonah</i>	36
	Delegative activities (teacher activities in designing lessons with responsibilities given to learners)	<i>Shiddiq</i>	37
		<i>Amanah</i>	38
		<i>Tabligh</i>	39
		<i>Fathonah</i>	40
Evaluation of Learning (Assessment of the growth and progress of learners towards the goals that have been set)	Decision Making Activities (teacher's activities in deciding after-learning assessment)	<i>Shiddiq</i>	41
		<i>Amanah</i>	42
		<i>Tabligh</i>	43
		<i>Fathonah</i>	44
	Instructive activities (teacher activities in assigning tasks to learners)	<i>Shiddiq</i>	45
		<i>Amanah</i>	46
		<i>Tabligh</i>	47
		<i>Fathonah</i>	48
	Consultative Activities (activities of teachers in receiving criticism, suggestions, information and opinions of learners)	<i>Shiddiq</i>	49
		<i>Amanah</i>	50
		<i>Tabligh</i>	51
		<i>Fathonah</i>	52
	Participatory Activities (teacher activity involves determining assessment with learners)	<i>Shiddiq</i>	53
		<i>Amanah</i>	54
		<i>Tabligh</i>	55
		<i>Fathonah</i>	56
	Delegative activities (teachers' activities in providing assessments through learners that can be trusted)	<i>Shiddiq</i>	57
		<i>Amanah</i>	58
		<i>Tabligh</i>	59
		<i>Fathonah</i>	60

METHODOLOGY

This research is a Research and Development (R & D) research with quantitative approach, R & D research method is used to produce certain product and test the effectiveness of certain product in this research Islamic Leadership teacher instrument in learning process.

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Respondents in this study amounted to 304 elementary, junior and senior high school teachers in Bandung Regency by using convenient sampling because the conclusion that will be obtained through this research is about the reliability of measurement instruments, not about the research sample.

The first step of this research is instrument design. The design of the instruments carried out through the stages as follows:

Preliminary study stage, including: determination of idea and purpose of product making, material gathering, and arrangement of instrument grid.

Product development stage, including: validation test by expert judgment, phase I revision, limited trial to 150 elementary, junior high and high school teachers using likert type instrument, second phase revision, trials to 300 elementary, junior and senior high school teachers using a paired comparison scale, revision phase III, psychometric tests to 600 elementary, junior and senior high school teachers. Then performed improvements of Islamic Leadership teacher instruments in the learning process.

Data analysis was done by two approaches, namely classical test theory assisted by Anates V.4 software developed by Yudi Wibisono and Karno To (2004), and response item theory approach assisted by Winsteps 3.73 software developed by Linacre (2006). Psychometric device used by using classical test theory approach that is instrument reliability, meanwhile using item response theory method psychometric device used among others include instrument reliability (respondent and item), and unidimensionality of instrument.

FINDINGS AND DISCUSSIONS

The analysis was conducted with data from 304 respondents of elementary, junior and senior high school teachers. The classical test theory approach assisted by Anates V.4 software does not require tabulation of data so that existing data can be directly inserted into Anates V.4 software, meanwhile to approach item response theory data is tabulated in Ms. software. Excel to then be converted and analyzed with the help of Winsteps 3.73 software.

Instrument Reliability

One of the psychometric characteristics often used in the classical theory approach is reliability. The result of instrument reliability analysis with classical test theory approach with cronbach alpha formula assisted by Anates V.4 software showed overall reliability of instrument reliability coefficient 0,95. These results show that these instruments are highly reliable internally.

The result of instrument reliability analysis with item response theory approach done with Winstep is shown in table 2. Based on table 2, it is found that the amount of data analyzed from 304 respondents with 60 items statement from Islamic Leadership teacher instrument in

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learning process is 18240 data. The resulting chi-square value is 12909.15 with degrees of freedom (d.f) of 17877 ($p = 0,000$ and $p < 0.01$). This shows that the overall measurement is very good and significant result. The results of this analysis contains two outputs, namely output for respondents (person) and output for items. Table of respondents explain in general the fit or not the respondents are analyzed. Similarly, the item table explains whether in general the items used in the instrument can be said to be fit or not. Referring to table 2 below, the average value of the measure obtained in the person table is 2.11 ($\mu > 0.00$). This shows that respondents generally have high Islamic Leadership scores, in the sense that respondents have a tendency to approve items that measure indicators of Islamic Leadership teachers. A log of 2.11 also indicates that the respondent has a small diversity in the measured constants. The separation index on the respondent table shows the value of 2.22 with the separation index, the strata of respondents in this study can be seen using strata person strata formula (Sumiantono & Widhiarso, 2014), namely:

$$H = \frac{[(4 \times SEPARATION) + 1]}{3}$$

Information:

H: Person Strata Value

SEPARATION: The value of separation for the respondents generated

Based on this formula, obtained value of $H = 3.29$, this indicates that the respondents can be divided into three major groups of groups that have high Islamic values, high, and low. Based on the index separation in the item table, the value of the strata item based on the same formula with the strata is 6.73, this indicates that the items used in this study can be divided into seven levels based on the difficulty level for the respondent's approval. It can be interpreted that the items used have been accurately able to assess the respondent's answers in relation to the Islamic Leadership teacher's construct.

Table 2 Summary Instrument Statistics: Reliability of Respondents and Items
SUMMARY OF 304 MEASURED Person

	TOTAL			MODEL		INFIT		OUTFIT	
	SCORE	COUNT	MEASURE	ERROR		MNSQ	ZSTD	MNSQ	ZSTD
MEAN	49.2	60.0	2.11	.45		1.00	.1	.92	.0
S.D.	8.9	.0	1.22	.19		.13	.7	.41	.9
MAX.	59.0	60.0	4.52	1.02		1.36	3.1	3.39	3.2
MIN.	7.0	60.0	-2.36	.28		.71	-2.3	.15	-2.2
REAL RMSE	.50	TRUE SD	1.11	SEPARATION	2.22	Person RELIABILITY	.83		
MODEL RMSE	.49	TRUE SD	1.12	SEPARATION	2.28	Person RELIABILITY	.84		
S.E. OF Person MEAN = .07									

Person RAW SCORE-TO-MEASURE CORRELATION = .88

CRONBACH ALPHA (KR-20) Person RAW SCORE "TEST" RELIABILITY = .93

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SUMMARY OF 60 MEASURED Item

	TOTAL SCORE	COUNT	MEASURE	MODEL ERROR	INFIT		OUTFIT	
					MNSQ	ZSTD	MNSQ	ZSTD
MEAN	300.3	355.0	.00	.19	.99	.1	.92	-.1
S.D.	33.7	.0	.97	.05	.09	.8	.24	1.1
MAX.	345.0	355.0	2.43	.34	1.16	2.5	1.48	3.6
MIN.	185.0	355.0	-1.99	.13	.71	-1.1	.20	-2.2
REAL RMSE	.20	TRUE SD	.95	SEPARATION	4.80	Item	RELIABILITY	.96
MODEL RMSE	.20	TRUE SD	.95	SEPARATION	4.84	Item	RELIABILITY	.96
S.E. OF Item MEAN = .13								

UMEAN=.0000 USCALE=1.0000

Item RAW SCORE-TO-MEASURE CORRELATION = -.97

18240 DATA POINTS. LOG-LIKELIHOOD CHI-SQUARE: 12909.15 with 17877 d.f. p=1.0000

Global Root-Mean-Square Residual (excluding extreme scores): .3334

Capped Binomial Deviance = .1323 for 21300.0 dichotomous observations

Cronbach alpha value (KR-20) that measures interaction between respondent and item shows good result that is $\alpha = 0,93$, this indicates the existence of match between respondent with instrument used. In addition, the reliability value for the item is 0.96 indicating that the instrument has excellent reliability ($\alpha > 0.94$) (Sumiantono & Widhiarso, 2014). Based on psychometric evaluation, it can be said that the overall actual data obtained has been in accordance with the requisite item response theory approach that is Rasch model.

Instrument Validity

The value of Islamic Leadership instrument validity based on the classical test theory approach with the help of Anates is known the value of item validity (0.91) seen from the correlation of XY. Meanwhile, using the item response response theory of validity is known from the values of MNSQ, ZSTD, and Pt Mean Corr each item statement based on Boone's criteria, et al. (2014, in Sumintono & Widhiarso, 2015, p.72), namely:

1. The value of Mean Square Outfit (MNSQ) received: $0.5 < \text{MNSQ} < 1.5$
2. The accepted Z-standard Outfit (ZSTD) value: $-2.0 < \text{ZSTD} < +2.0$
3. Point Measure Correlation Value (Pt Mean Corr): $0.4 < \text{Pt Measure Corr} < 0.85$

Table 3 Misfit Test Results Instruments

Item STATISTICS: MISFIT ORDER

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	ZSTD	OUTFIT MNSQ	ZSTD	PT-MEASURE CORR.	EXACT MATCH EXP.	OBS%	EXP%	Item
29	259	355	1.14	.14	1.16	2.5	1.48	3.6	A .38	.47	71.7	74.5	N29
24	332	355	-.97	.24	.96	-.2	1.39	1.1	B .29	.29	93.8	93.0	N24
1	269	355	.95	.14	1.05	.8	1.38	2.6	C .41	.45	76.6	76.5	N1
60	230	355	1.67	.13	1.11	2.1	1.26	2.6	D .45	.51	67.1	70.4	N60
34	282	355	.67	.15	1.05	.6	1.24	1.5	E .40	.43	78.6	79.2	N34
14	269	355	.95	.14	1.11	1.5	1.19	1.4	F .40	.45	75.3	76.5	N14
6	295	355	.36	.16	1.06	.7	1.16	.9	G .37	.40	82.9	82.6	N6
55	336	355	-1.21	.26	.86	-.7	1.14	.5	H .30	.28	94.7	94.1	N55
3	289	355	.51	.15	1.05	.6	1.14	.8	I .39	.42	79.9	81.0	N3
22	322	355	-.50	.20	.96	-.2	1.13	.5	J .34	.33	90.5	90.1	N22
13	253	355	1.26	.14	1.09	1.5	1.13	1.2	K .43	.48	73.0	73.4	N13

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50	232	355	1.63	.13	1.02	.5	1.12	1.3	L	.49	.51	70.7	70.5	N50
56	269	355	.95	.14	1.06	.9	1.12	1.0	M	.42	.45	74.7	76.5	N56
4	319	355	-.38	.20	1.09	.7	1.11	.5	N	.30	.34	88.5	89.2	N4
21	285	355	.60	.15	1.11	1.4	.99	.0	O	.39	.42	77.6	80.0	N21
37	254	355	1.24	.14	1.03	.6	1.11	1.0	P	.46	.48	71.4	73.6	N37
16	297	355	.31	.16	1.10	1.1	.96	-.2	Q	.36	.40	81.3	83.1	N16
54	342	355	-1.68	.30	.89	-.4	1.10	.4	R	.27	.24	96.7	95.9	N54
18	223	355	1.79	.13	1.03	.5	1.09	1.0	S	.51	.52	71.7	69.9	N18
30	261	355	1.11	.14	1.08	1.2	1.03	.3	T	.43	.47	72.7	74.9	N30
40	303	355	.14	.17	1.07	.7	1.07	.4	U	.35	.39	84.5	84.8	N40
25	302	355	.17	.17	1.07	.7	.98	.0	V	.36	.39	84.5	84.5	N25
9	302	355	.17	.17	1.06	.6	.86	-.6	W	.38	.39	83.2	84.5	N9
31	301	355	.20	.17	1.06	.6	.93	-.3	X	.37	.39	82.2	84.2	N31
57	288	355	.53	.15	1.05	.7	1.03	.2	Y	.39	.42	78.9	80.7	N57
12	308	355	.00	.18	1.05	.5	.98	.0	Z	.36	.37	84.5	86.1	N12
45	317	355	-.30	.19	1.00	.1	.78	-.8		.36	.35	87.8	88.7	N45
38	276	355	.80	.15	1.00	.1	1.00	.0	z	.44	.44	76.0	77.9	N38
52	313	355	-.16	.18	1.00	.0	.83	-.6	y	.37	.36	87.8	87.5	N52
BETTER FITTING OMITTED				+-----+										
53	295	355	.36	.16	.99	.0	.90	-.5	x	.41	.40	82.2	82.6	N53
43	321	355	-.46	.20	.99	.0	.86	-.4	w	.35	.34	89.1	89.8	N43
19	333	355	-1.03	.24	.98	-.1	.81	-.4	v	.31	.29	93.4	93.3	N19
35	319	355	-.38	.20	.97	-.2	.82	-.6	u	.37	.34	89.1	89.2	N35
46	342	355	-1.68	.30	.97	.0	.46	-1.3	t	.29	.24	95.4	95.9	N46
51	281	355	.69	.15	.97	-.4	.91	-.6	s	.45	.43	79.6	79.0	N51
26	326	355	-.67	.21	.87	-.8	.96	.0	r	.36	.32	92.4	91.2	N26
2	311	355	-.10	.18	.96	-.3	.79	-.9	q	.39	.36	88.2	87.0	N2
58	302	355	.17	.17	.95	-.5	.79	-1.0	p	.42	.39	84.5	84.5	N58
8	310	355	-.07	.18	.95	-.4	.78	-1.0	o	.40	.37	85.9	86.7	N8
28	329	355	-.81	.22	.94	-.3	.75	-.7	n	.34	.31	92.1	92.1	N28
32	338	355	-1.35	.27	.94	-.2	.72	-.6	m	.29	.27	95.4	94.7	N32
11	307	355	.03	.17	.91	-.8	.93	-.2	l	.41	.38	88.2	85.9	N11
23	308	355	.00	.18	.93	-.6	.77	-1.1	k	.41	.37	87.2	86.1	N23
15	331	355	-.92	.23	.91	-.5	.52	-1.5	j	.36	.30	92.4	92.7	N15
7	332	355	-.97	.24	.90	-.5	.67	-.9	i	.35	.29	92.4	93.0	N7
47	333	355	-1.03	.24	.89	-.6	.56	-1.3	h	.36	.29	93.4	93.3	N47
42	335	355	-1.15	.25	.89	-.5	.56	-1.2	g	.34	.28	94.1	93.9	N42
27	320	355	-.42	.20	.86	-1.0	.53	-2.0	f	.42	.34	89.5	89.5	N27
36	344	355	-1.88	.33	.84	-.5	.68	-.5	e	.28	.23	97.0	96.5	N36
41	333	355	-1.03	.24	.83	-.9	.68	-.8	d	.36	.29	93.4	93.3	N41
10	332	355	-.97	.24	.82	-1.0	.63	-1.0	c	.38	.29	93.1	93.0	N10
44	336	355	-1.21	.26	.81	-1.0	.56	-1.1	b	.36	.28	94.7	94.1	N44
59	345	355	-1.99	.34	.71	-1.1	.20	-2.2	a	.34	.22	97.4	96.8	N59
				+-----+										
MEAN	300.3	355.0	.00	.19	.99	.1	.92	-.1				84.6	85.0	
S.D.	33.7	.0	.97	.05	.09	.8	.24	1.1				8.2	7.6	

Referring to Boone's criteria, et.al. (2014) to table 3 above, it is known that from 304 study respondents, there are seven items are outside the criteria ZSTD, MNSQ, and Pt Measure Corr is item number 5, 17, 20, 33, 38, 48, and 49. Meanwhile item number 59 has the value of Outfit MNSQ = 0.20 (<0.50) and Outfit ZSTD = -2.2 (<-2.0) and Pt Measure Correlation = 0.34 (<0.40). This indicates that the item is misfit so it is recommended to be eliminated.

Instrument Unidimensionality

Unidimensionality is an important measure to evaluate whether the developed instrument is capable of measuring what should be measured, in this case the Islamic Leadership teacher's construct. Rasch model analysis uses the principal component analysis of residuals, ie

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measuring the extent to which the diversity of the instruments measures what should be measured (Sumiantono & Widhiarso, 2014).

Table 4 Unidimensionality Instrument Test Results

-- Empirical --	Modeled				
Total raw variance in observations	=	79.6	100.0%	100.0%	
Raw variance explained by measures	=	19.6	24.6%	25.6%	
Raw variance explained by persons	=	11.4	14.3%	14.9%	
Raw Variance explained by items	=	8.2	10.3%	10.7%	
Raw unexplained variance (total)	=	60.0	75.4%	100.0%	74.4%
Unexplnd variance in 1st contrast	=	3.6	4.5%	5.9%	
Unexplnd variance in 2nd contrast	=	3.1	3.9%	5.2%	
Unexplnd variance in 3rd contrast	=	2.6	3.3%	4.4%	
Unexplnd variance in 4th contrast	=	2.4	3.1%	4.1%	
Unexplnd variance in 5th contrast	=	2.2	2.7%	3.6%	

Based on table 4 diatas, visible result of raw variance data measurement is equal to 24,6%. The value is not much different when compared with the expectation of 25.6%. This shows that the unidimensionality requirement of 20% can be met (Sumiantono & Widhiarso, 2014). Another thing to support is that the variants that can not be explained by the instrument are all below 10%. This indicates that the level of independence of items in the instruments falls into either category.

Rank Rating Validity

Rank scale validity is the test performed to verify whether the preferred rating used for the respondent is appropriate. Rasch model analysis provides a verification process for the assumption of ratings given in the instrument. This instrument uses a paired comparison scale with two statement choices in a single item statement item.

Table 5 Results of Rank Rating Validity

SUMMARY OF CATEGORY STRUCTURE. Model="R"

CATEGORY	OBSERVED	OBSVD SAMPLE	INFINIT	OUTFIT	COHERENCE	ESTIM
LABEL SCORE COUNT %	AVRGE EXPECT	MNSQMNSQ	M->C	C->M	RMSR	DISCR
0 0	3279 15	.59 .59	1.00 .89	65% 31%	.6607	0
1 1	18021 85	2.45 2.45	1.04 1.08	86% 96%	.1997	1.00 1

Table 5 shows that on average observation starts from logit +.59 for score choice 1 and increased to logit +2.45 for score choice 2. Seen in table 4 between option 1 and 2 there is an increase in logit value indicating respondent can make sure the choice between 1 or 2, so the use of the paired scale comparison of the two effective answer options used in the Islamic Leadership instrument of teachers in the learning process.

CONCLUSION

The result of validation test on Islamic Leadership instrument of teacher in learning process using classical test theory approach shows instrument validity (0,91) and instrument reliability ($\alpha = 0.95$) which is known from Alpha Cronbach value, meanwhile using item response theory approach shows reliability instruments ($\alpha = 0.93$), reliability of respondents

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($\alpha = 0.83$), and item reliability ($\alpha = 0.96$), whereas for validity it is known that from 60 items of valid item 52 statement pairs and eight other items need to be eliminated. In general, this instrument may account for 24.6% of respondents' variance. The use of Rasch's item response theory approach model also revealed that all items are unidimensional or in other words only measure one factor ie Islamic Leadership teachers, therefore it can be concluded that the Islamic Leadership instrument of teachers in the learning process can be used to measure teacher leadership level.

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Conflict of Interest

The authors colorfully declare this paper to bear not conflict of interests

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