EXPLORATORY FACTOR ANALYSIS AND RELIABILITY OF 'STUDENT OUTCOME' INSTRUMENT USING IBNU MASKAWAIH'S THEORY

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Abstract

The success of a school depends on student outcome which can be measured based on three main aspects, namely academic, co-curriculum and personality. The ineffectiveness of programs organized by schools to cultivate good values among students has led to the need for certain efficient and systematic mechanisms to be established to assess the current level of student outcome. Therefore, this study proposed the development and validation of holistic student outcome instrument based on Ibn Maskawaih's theory in the mission of shaping students according to the true Islamic mold. Quantitative method with descriptive survey study design through the distribution of questionnaires to respondents was used. A total of 209 Form 4 students were selected from 7 schools in the state of Perlis. Findings from Exploratory Factor Analysis showed that the factors of al-hikmah, as-syaja'ah and al-'Iffah are very suitable to be used to measure the level of student outcome. Based on the al-hikmah

actor, the four factors that are suitable for use are intelligence, memory, rationality and smart. Meanwhile the three factors that are suitable to be used for the al-iffah factor are politeness, generosity and harmony. Finally, there are seven factors that are suitable to be used for the as-syajaah factor, namely high minded, perseverance, mental endurance, high ideal, patience, physical endurance and courage. As a result of exploratory factor analysis (EFA), it was found that al-hikmah, al-lffah and as-syajaah factors have been successfully discovered and are suitable for use

Keywords: outcome; *al-hikmah*; *al-iffah*; *as-syajaah*; exploratory

Introduction

The effectiveness of a school depends on the development of students that will not be achieved if the parties involved cannot identify what the real concept of student outcome. Student outcome is about students' achievements in academics, co-curriculum and personality development that brings success to a school in producing high quality education. Simply put, student outcome is the human form that we want to produce in schools, as that have been outlined and written in the National Education Philosophy (FPK). Therefore, student outcome in a school is the result of efforts by the parties directly involved with the students in the school and it can be achieved if all parties involved clearly understand what their main goals for the education system they provide. Schools should plan and organize quality programs towards achieving student outcome. The ineffectiveness of programs organized by the school will not help to improve student outcome[1] To ensure that good student outcome is achieved in all aspects, the school must seriously implement the integration of values in education.

Student outcome is the fifth Standard in the second wave of Malaysia Education Quality Standards (SKPMg2). Student outcome means students who are holistically educated in efficient school management and able to achieve their full potential in mastery of knowledge and skills, skilled, virtuous, responsible and able to achieve personal well-being[2]

Student outcome is assessed based on three main aspects, namely academic, cocurriculum and also the personality of the student. Evaluation of this aspect is to assess students holistically in terms of physical, emotional, spiritual and intellectual in line with the National Philosophy of Education. Report on student outcome is not only assessed from academic perspectives alone, but is a more balanced report covering all components and emphasizes the mastery of students' skills and their ability to respond to questions that require High Level Thinking Skills (HOTS) [3] Therefore, constructing and validating holistic student outcome instruments based on the thinking of Islamic figures to realize student outcome can be formed according to the true Islamic mold.

Literature Review

Development of Student Outcome based on Ibn Maskawaih's thinking

According to Ibn Maskawaih there is a close connection between the development of values and spiritual attitudes (characters) with education and psychology[4]. In his psychological theory, Ibn Maskawaih has presented three types of inner soul namely;

a) The power of thought (Quwwatun Natiqah/Malakiyah).

This is the highest function of the inner soul, encompassing the power of thinking and seeing facts. The device that executes this function is the brain.

b) The power of anger / savagery (Quwwatun Ghodobiyah/Sab'iya).

This inner soul includes the courage to take risks, aspire towards power, position and honor. The 'heart' (emotions) usually takes charge this function.

c) The power of lust / animals (Quwwatun Syahwiyyah/Bahimiyah).

This inner soul includes the desire for delicious food, drinks, sexual needs and all kinds of sensory pleasures. The device that controls this desire is the stomach.

According to Ibn Maskawaih, each individual has different inner soul. One is strong, the other is weak and this depends on one's behavior, customs or education that one has acquired.

Further, Ibn Maskawaih explained that among the main values and morals is wisdom (al-hikmah). Wisdom is the main attribute of the inner soul of natiqah, that is, the inner soul acts critically and analytically to know or recognize the meaning and reality of something in the context of its existence in the sight of God. Therefore, if the nature of al-hikmah is nurtured, a person will acquire other attributes such as intelligence, memory, reasoning, quick to understand and easy to learn[3, 5] Meanwhile, in the inner soul of ghodobiyah, the main attribute displayed is the nature of courage. The nature of courage (as-syaja'ah) is clearly manifested if a person can control the inner soul such as his anger with the guidance of al-hikmah; and use it accordingly based on his thinking to face risks such as not being afraid to face scary things. Therefore, if the nature of as-syaja'ah is nurtured, a person will have other qualities such as gratitude, courage to face danger, high ambition, perseverance, and patience in the face of adversity, politeness, mental endurance and physical endurance.

In addition, Ibn Maskawaih explained that when the *bahimiyah* soul is in a state of harmony and balance, led by the soul of *natiqah* aqliyah and not according to lust, then the nature of *al-'Iffah* (purity) is born. *Al-'Iffah* is the main attribute of sensory sensation and this trait can be seen when a person controls his lust (after the occurrence of a reaction to a stimulus) with his healthy judgment so that he does not submit to his lust, instead he has freed himself from being a slave to that lust. Retrospectively, Ibn

Maskawaih also explained that if the nature of *al-'Iffah* is nurtured, a person will have other qualities such as shyness, calm temperament, patience to withstand the turmoil of lust, generosity, meekness, love of peace and courtesy [4, 6]

Based on the thoughts of Ibn Maskawaih, a person's morals such as *al-hikmah*, as-syaja'ah and *al-'Iffah* can be formed through nurture. Therefore, the indicator of student outcome based on universal values need to be built based on the theoretical framework of Ibn Maskawaih's thinking to cultivate these values for students to be appreciated and practiced.

In short, the construction of the student outcome questionnaire instrument in this study was based on Ibn Maskawaih's thinking which consisted of the following constructs and dimensions:

- 1. AL-HIKMAH (Construct)
 - a. Intelligence
 - b. Memory
 - c. Rational
 - d. Smart
- 2. AL-IFFAH (Construct)
 - a. Politeness
 - b. Generosity
 - c. Harmony
- 3. AS-SYAJA'AH (Construct)
 - a. High minded
 - b. Courage
 - c. High ideals
 - d. Perseverance
 - e. Patience
 - f. Mental endurance
 - g. Physical endurance

Research Methods

This study used a quantitative descriptive survey method study design. According to [7] descriptive study approach describes phenomena by analysing descriptive data obtained through questionnaires. A descriptive survey study is a study of what is happening. This design was chosen because the descriptive survey study is able to describe issues and problems in various perspectives especially those involving attitudes, views, beliefs, feelings, behaviors and perceptions [8] also explained that this descriptive survey method is suitable to be used to measure opinions, attitudes and behaviors. For the survey method (questionnaire) the study sample consisted of 209 Form 4 students were selected from 7 schools in the state of Perlis at Peninsular Malaysia.

Research Procedures and Findings

The main purpose of this research was to examine the suitability of the items and the internal structure of the constructs measured by the instrument. In addition, exploratory factor analysis (EFA) was performed to assess the structure of scale factors. Next, a reliability analysis of the pilot items was performed to test the reliability of the initial set of questionnaires. Exploratory factor analysis (EFA) is a statistical method that increases the reliability of a scale by identifying the items that can be removed. EFA is also able to identify construct dimensions by analyzing the relationship between items and factors (Netemeyer, Bearden, & Sharma, 2003). Thus, using EFA in the early stages of the study is able to help to improve the instrument for measuring what should be measured

Al-Hikmah Exploratory Factor Analysis

There were 16 items analyzed using the Principal Component Analysis (PCA) process. This process is used to collect correlation patterns from the variables being evaluated (Tabachnick Meanwhile, varimax rotation was used, as suggested by [1, 2] and the KMO value for school culture was 0.912 and Bartlett's Test of Sphericity was also significant as in Table 1.

Table 1. KMO and Bartlett's Test Result for Student Outcome under Al-Hikmah
C:onstructTesting for Direct and Indirect Effects Hiliran Ampang

KMO and Bartlett's Test								
Kaiser-Meyer-Olkin Measure of Sampling Adequacy. 0.912								
	Approx. Chi-Square	3829.978						
Bartlett's Test of Sphericity	df	630						
	Sig.	.000						

Based on factor analysis, the researcher found that there were four factors in student outcome under *Al-Hikmah* construct from Ibn Maskawih's theory. Factor one

is intelligence, factor two is memory, factor three is rational, and factor four is smart as shown in Table 2.

Table 2 : Rotated Component Matrix Variables for student

Al-Hikmah									
Rotated Component Matrix ^a									
	1	2	3	4					
Intelligence2	.754								
Intelligence3	.753								
Intelligence5	.697								
Intelligence6	.663								
Intelligence4	.649								
Memory17		.840							
Memory18		.742							
Memory16		.724							
Rational21			.598						
Rational22			.593						
Rational20			.593						
Rational19			.561						
Smart33				.726					
Smart32				.694					
Smart31				.580					
Smart29				.52					

The value of Eigenvalue as a whole was over 0.1 as suggested by Hair et. al (2010). The total number of variants described was 36.5% as stated in Table 3.

Table 3

: Eigenvalues and Total Variance Explained under Al-Hikmah construct

Total Varia	ance Explained (<i>Al</i>	-Hikmah)							
	Initial Eigenvalue	s		Extraction Sum	ed	Rotation Sums of Squared			
	Illiliai Ligerivai de	.		Loadings			Loadings		
Component	Total	% Var	Cum %	Total	% Var	Cum %	Total	% Var	Cum %
1	13.14	36.51	36.510	13.144	36.510	36.510	4.869	13.526	13.526
2	2.836	7.878	44.388	2.836	7.878	44.388	4.270	11.861	25.387
3	1.773	4.925	49.313	1.773	4.925	49.313	3.370	9.361	34.747
4	1.410	3.917	53.230	1.410	3.917	53.230	3.170	8.806	43.553
Extraction	Method: Principal C	omponent A	Analysis.						

Al-Iffah Exploratory Factor Analysis

Next, for the *Al-Iffah* factor, there were 18 items in the question analyzed using the Principal Component Analysis (PCA) process. This process was used to collect correlation patterns from the variables being evaluated [3] Meanwhile, varimax rotation was used, as value of *Al-Iffah* was 0.895 and Bartlett's Test of Sphericity value was significant as in Table 4.

KMO and Bartlett's Test for Student Outcome under Al-Iffah

KMO and Bartlett's Test							
Kaiser-Meyer-Olkin Measure of Sampling Adequacy. 0.895							
Bartlett's Test of Sphericity Approx. Chi-Square							
df	990						
Sig000							
	of Sampling Adequacy. Approx. Chi-Square df						

Based on factor analysis, the researcher found that there were three factors in student outcome under *Al-Iffah* from Ibn Maskawih's theory. Factor one is politeness, factor two is generosity, and factor three is harmony as stated in Table 5.

Table 5

Rotated Component Matrix variables for student outcome using Varimax Method

	Al-Iffal	h	
Rota	ated Compor	nent Matrix	
	1	2	3
Politeness69	.800		
Politeness 71	.788		
Politeness 70	.742		
Politeness 66	.707		
Politeness 68	.674		
Politeness 67	.661		
Politeness 64	.659		
Politeness 65	.526		
Generosity58		.857	
Generosity 61		.748	
Generosity 57		.747	
Generosity 60		.719	
Generosity 56		.716	
Generosity 55		.585	
Harmony79			.842
Harmony80			.673
Harmony75			.613
Harmony81			.563
Extraction Meth	nod: Principal	Component	Analysis.
Rotation Method	: Varimax wit	h Kaiser Nor	malization.
a. Rotatio	on converged	in 12 iteratio	ns.

Overall, the value of Eigenvalues was over 0.1 as suggested by [1] The total number of variants described was 34.7% as stated in Table 6.

Table
Eigenvalues and Total Variance Explained under Al-Iffah construct

			Total V	ariance l	Explaine	ed (<i>AI-Iffah</i>)		
	In	itial Eige	nvalues	Extraction Sums of			Rotation Sums of		
				Squ	ared Loa	adings	Squ	ared Lo	adings
Co		%			%			%	
mpone	т	of	С	Т	of	С	Т	of	С
nt	-	Vari	umulat	-	Vari	umulat	-	Vari	umulat
	otal	anc	ive %	otal	anc	ive %	otal	anc	ive %
		е			е			е	
	1	3	34	1	3	34	5	1	13
1	5.61	4.69	.698	5.61	4.69	.698	.91	3.14	.146
	4	8	.090	4	8	.090	6	6	.140
	3	7	41	3	7	41	5	1	25
2	.175	.056	.754	.175	.056	.754	.49	2.20	.354
	.170	.000	.704	.170	.000	.704	4	8	.004
	2	4	46	2	4	46	3	7	32
3	.191	.868	.622	.191	.868	.622	.32	.395	.749
							8		
		Extr	action Met	hod: Prin	cipal Co	mponent A	nalysis.		

Asy-Syajaah Exploratory Factor Analysis

Next, for the *Asy-Syajaah* factor, there were 33 items in the question analyzed using the Principal Component Analysis (PCA) process. This process was used to collect correlation patterns from the variables being evaluated [6] Meanwhile, varimax rotation was used, as suggested by Kaiser (1958) and the KMO value of *Asy-Syajaah* was 0.936 and Bartlett's Test of Sphericity value was significant as in Table 7.

Table 4

: Testing for Direct and Indirect Effects Hiliran Ampang

KMO and Bartlett's Test							
Kaiser-Meyer-	Kaiser-Meyer-Olkin Measure of Sampling Adequacy. 0.936						
Bartlett's Test	of Sphericity	Approx. Chi-Square	9804.721				
		df	1953				
		Sig.	.000				

Based on factor analysis, the researcher found that there were seven factors in student outcome under *Asy-Syajaah* from Ibn Maskawih's theory. Factor one is high-minded, factor two is perseverance, and factor three is mental endurance, factor four is high ideal, factor five is patience, factor six is physical endurance and factor seven is courage as stated in Table 8.

Table 8: Rotated Component Matrix variables for student outcome using Varimax

Rotated Com			Asy-Syaja			<u> </u>	
		Rotated	d Compon	ent Matri	x ^a		
				Compon	ent		
	1	2	3	4	5	6	7
High-minded	.8						
83	17						
High-minded	.8						
84	07						
High-minded	.6						
90	92						
High-minded	.6						
82	37						
High-minded	.5						
85	88						
High-minded	.5						
88	50						
High-minded	.5						
89	08						
Perseveranc		.7					
e111		74					

Perseveranc	.6					
e 114	84					
Perseveranc	.6					
e 112	26					
Perseveranc	.5					
e 115	90					
Perseveranc	.5					
e 109	63					
Mental 133		.7 60				
Mental 127		.6 70				
Mental 128		.6 22				
Mental 134		.5 61				
Mental 135		.5 07				
High ideal			.6			
108			31			
High ideal			.6			
107			25			
High ideal			.6			
106			05			
Patience 122				.6 75		
Patience 118				.5 85		
Patience 123				.5 70		
Patience 120				.5 16		
Patience 119				.5 08		
Physical137					.6 33	
Physical 136					.5 91	

_								
Physical 141						.5		
,						79		
Dhysical 142						.5		
Physical 142						20		
Physical 130						.5		
r flysical 139						04		
Courage 94							.7	
Courage 34							15	
Courage 95							.6	
Courage 95							44	
Courage 93							.5	
Courage 93							92	
Extraction Method: Principal Component Analysis.								
Rotation Method: Varimax with Kaiser Normalization.								
	a	. Rotation	converged	in 21 itera	tions.			
	Physical 141 Physical 142 Physical 139 Courage 94 Courage 95 Courage 93	Physical 142 Physical 139 Courage 94 Courage 95 Courage 93 Extraction	Physical 142 Physical 139 Courage 94 Courage 95 Courage 93 Extraction Method: V	Physical 142 Physical 139 Courage 94 Courage 95 Courage 93 Extraction Method: Principal Rotation Method: Varimax wit	Physical 142 Physical 139 Courage 94 Courage 95 Courage 93 Extraction Method: Principal Compone Rotation Method: Varimax with Kaiser N	Physical 142 Physical 139 Courage 94 Courage 95 Courage 93 Extraction Method: Principal Component Analysis	Physical 142 Physical 139 Courage 94 Courage 95 Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.	

The value of Eigenvalues was over 0.1 as suggested by Hair et. al (2010). The total number of variants described was 42.5% as stated in Table 9.

Table 9

: Testing for Direct and Indirect Effects Hiliran Ampang

			Total Varia	ance Exp	olained (Asy-Syaja	nah)			
	lni	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Co		%			%			%		
mpone	_	of	С	_	of	С	_	of	С	
nt	T	Vari	umulat	T	Vari	umulat	T	Vari	umulat	
	otal	anc	ive %	otal	anc	ive %	otal	anc	ive %	
		е			е			е		
	2	4	42	2	4	42	8	1	14	
1	6.80	2.54	.544	6.80	2.54	.544	.91	4.14	.145	
	3	4	.544	3	4	.544	1	5	.145	
	4	7	49	4	7	49	5	9	23	
2	.468	.092	.636	.468	.092	.636	.67	.012	.157	
							7			
	2	4	53	2	4	53	5	8	32	
3	.678	.251	.887	.678	.251	.887	.57	.847	.003	
							4			

4	.895	.008	56 .895	.895	.008	56 .895	.28 6	6 .804	.807
5	.782	.829	59 .724	.782	.829	59 .724	.20	.671	.478
6	.604	.545	62 .269	.604	.545	62 .269	.70 4	.879	51 .358
7	.506	.390	64 .659	.506	.390	64 .659	.43 5	.452	56 .810
		Extra	action Met	hod: Prin	cipal Co	mponent A	nalysis.		

Item reliability

Reliability was analyzed using Cronbach's Alpha. All items above 0.60 are considered sufficient [5]. The Cronbach's Alpha value for each factor to all three factors reached the required level. The overall findings are presented as in Table 10.

Table 10 : Cronbach's Alpha value for student outcome items untuk

Factors	Cronbach's Ipha	Number of items
A 1 1 11 1	0.000	10
Al-Hikmah	0.903	16
Al-Iffah	0.924	18
Asy-Syaajaah	0.960	33

Discussion

According to Ibn Maskawaih's thinking, a person's morals can be nurtured either informally through the community and family members or through the structure of the formal education system which has clearer objectives. The pure values that include *al-Hikmah*, as Syaja'ah and al-'Iffah need to be internalized and practiced by every students to make sure these values are effective. This opinion supports the study of which states that student outcome is holistically nurtured students in efficient school management and able to achieve their full potential in mastery of knowledge and skills, berketrampilan, virtuous, responsible and able to achieve self well-being based on the

fifth Standard in the second wave of Malaysian Education Quality Standards (SKPMg2).

This study proved that the factors presented referring to Ibn Maskawaih's Theory is very suitable to be used to measure the level of student outcome based on the findings (EFA) obtained. Therefore, this discussion is about 3 factors that have been analyzed at the beginning of this study and its suitability as a profile indicator for student outcome in Malaysian schools. This study is in line with the study of [2] who stated that student outcome refers to a level of achievement that can be measured and compared. Learning outcomes are not only determined by one aspect, but more focused on the development of students' potential in a complete and comprehensive manner. Assessment can be made with various approaches to prove the effectiveness of the learning process and the achievement of objectives

Al-Hikmah

Based on *Al-Hikmah* Exploratory Factor Analysis, Principal Component Analysis (PCA) was used to collect correlation patterns from the variables assessed Varimax rotation was used as suggested by [5] and the findings showed that the KMO value for student outcome was 0.912 and Bartlett's Test of Sphericity achieved significant value. Furthermore, the value of Eigenvalue as a whole was over 0.1 as suggested by [6] the total variance described was 36.5%. This showed that the four elements under *Al-Hikmah* namely intelligence, memory, rationality and intelligence achieved the value of reliability and were suitable for measuring student outcome based on Ibn Maskawaih's theory

The *Al-Hikmah* factor describes the wisdom that every student should have in cultivating one's pure values. These factors involve intelligence, memory, rationality and smart. Intelligence enables a person to be able to understand all phenomena such as understanding something learned in the classroom. It is a person's ability to receive, process and evaluate information as well as use initiatives to solve problems in a particular environment 48). In addition, intelligence also means the ability to understand something quickly and perfectly[3] (

Memory is a mental process that stores things that have been learned and then releases them in response to necessary situations, such as problem solving and teaching and learning activities. Memory is also a form of storing information that is meaningful to be an experience in the future (Vermon, 1980).

Rationale is the ability of a person to think about the good or bad of something through the logic of reason bestowed by Allah swt. In learning, students' ability to make rational and logical judgments can help improve the skills and performance of desired achievement.

Smart is the ability of a student to learn or accept something learned quickly and easily. It is also interpreted as someone who is easy to understand and quick to learn about new knowledge and skills imparted by the teacher.

This study supports the study of [4] which stated that moral education in schools should be built based on some key elements of goodness namely rational (cautious), politeness, perseverance and justice. Rationale is the level of judgment that uses common sense in determining good or bad things. Justice, on the other hand, refers to *Mu'jam Wasith* in terms of language is knowledge that can prevent a person from committing oppression. The elements used are very accurate to measure the profile for student outcome based on Ibn Miskawaih's theory.

Al-Iffah

Referring to *Al-Iffah* Exploratory Factor Analysis, Principal Component Analysis (PCA) was used to collect correlation patterns from the variables assessed ([2]T& Fidel, 2007). Varimax rotation was used as suggested the findings showed that the KMO value for student achievement was 0.895 and Bartlett's Test of Sphericity achieved significant value. Furthermore, the value of the Eigenvalue was over 0.1 as suggested by[4] and the total variance described was 34.7%. This showed that the three elements under *Al-Iffah* which are politeness, generous and harmony achieved the value of reliability and were suitable for measuring student outcome based on Ibn Maskawaih's theory.

Al-Iffah highlights the characteristics of patience that should be internalized and instilled in Muslim students. A person who has the nature of Iffah is a person who has the strength to stop oneself from doing things that are forbidden even if one is inclined to those things. In terms of learning, students become more inclined to be gentle, civilized, generous, politeness and prefer peaceful and harmonious atmosphere.

A polite person means a person who always maintains his manners and behavior, and is soft spoken when interacting with a teacher, someone or a group of other students during learning activities. Such an attitude makes people around him feel at ease and comfortable to hang out with him.

Generosity is a noble trait where a person is not stingy, for example, with knowledge, and thus, prefer to help or share knowledge with friends and teachers. It

is a sincere and voluntary nature that a person does without expecting anything in return for the help he has given.

Harmony is a state in which one loves peace and tranquility. One needs to have a high level of patience to create the desired harmonious atmosphere and further facilitate learning activities to take place smoothly.

The morality that is conceptualized to *Al-Iffah* is based on patience, politeness, respect, tolerance and harmony. In line with the study of [2] which stated that morals in the form of patience, politeness, respect and tolerance can increase the level of student discipline in school. It is able to educate students to evaluate something by accepting good behavior and rejecting bad. In addition, according to Khalid, Muhammad Idris & Riasat Ali (2018) good morals and ethics are core components in the educational process because patience and tolerance, for example, can foster a harmonious atmosphere among students. A harmonious atmosphere or environment is not only good in school but also good in life among the community and the society outside.

Asy-Syajaah

Finally is the *Asy-Syajaah* Exploratory Factor Analysis which involved elements analyzed using Principal Component Analysis (PCA) to collect correlation patterns from the variables assessed[3] found that the KMO value for student development was 0.936 and Bartlett's Test of Sphericity achieved significant value. While the value of Eigenvalue as a whole was above 0.1 as suggested by [4] and the total variance described was 42.5%. This showed that all seven elements under *Asy Syajaah* namely high minded, perseverance, mental endurance, high ideal, patience, physical endurance and courage achieved the reliability value and can be used as a profile in measuring student outcome according to lbn Maskawaih's theory.

Asy Syajaah is a courageous nature to face problems or obstacles or constraints in learning activities. Courage by emphasizing perseverance and patience in finding solutions to learning problems faced reflects the high level of mental and physical strength of a student. Asy Syajaah includes 7 factors, namely high minded, perseverance, mental endurance, high ideal, patience, physical endurance and courage.

High minded in learning means having high ambitions or high spirits to achieve success. A person is said to be high minded if he is willing to make the sacrifices needed to achieve the results he wants to achieve.

Perseverance and patience are the resilience of a person during the learning process while at the same time testing his ability to find the best solution in facing constraints in learning. Perseverance and patience to continue learning despite facing problems is a willingness that must be present in students to highlight the courage in facing challenges.

Mental and physical endurance are related, whereby positive thinking through the brain is then translated into physical deeds to achieve learning objectives. Therefore, mental and physical endurance and intelligence must always be at a good level to ensure that students are always sensitive to the challenges faced in the learning process.

Courage is the nature of believing and confident in one's high and strong selfefficacy, so as to be able to produce a force that can motivate oneself to fight for something that is considered important to him [6] In learning, the courage to face these difficulties and challenges can help students in achieving success.

Morality based on *Asy Syajaah* (courage) requires a firm stance based on perseverance, truth and goodness in nurturing and appreciating the pure values in a person. According to [8] someone who has the courage, discipline, and spirit to do the right thing is having the need for integrity. In addition to the field of learning, they are also responsible for doing good for the country, caring for others and the environment around them, as well as having a high determination to make social contributions

Conclusion

As a result of exploratory factor analysis (EFA), three main factors such as *Al-Hikmah*, *Al-Iffah* and *Asy-Syajaah* have been successfully discovered. Through the *Al-hikmah* factor, there are four main elements, the *Al-Iffah* factor has three main elements and the *Asy-Syajaah* factor has seven main elements. All these three factors have undergone reliability test and all of them exceeded the set values to achieve reliability values. This questionnaire can be used to the next level to measure student outcome according to Ibn Maskawaih's theory.

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