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Developing and Validating an Instrument to Measure Religious Field, Field of Worship and Morality at the Rahmatan Lil' Alamin Foundation in northern Thailand

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Abstract: Based on the researcher's observations, the influence of Islamic da'wah and education carried out by Yayasan Rahmatan Lil 'Alamin needs to be studied in depth to identify the aspects of effectiveness and challenges faced by this institution in carrying out its mission. Through this study, emphasis will be given to the extent of the effectiveness of Islamic education in guiding converts towards an appreciation of the true teachings of Islam. An analysis will also be carried out on the da'wah programs and activities implemented by this foundation, as well as their suitability with the current needs of converts. Through a study of the experiences of other institutions that are also active in the field of Islamic da'wah and education, it was found that there is still a great need to develop a strategy that is more effective and relevant to the unique needs of converts in non-Muslim societies. Islamic education in this context needs to be holistic, with the goal of guiding converts to develop spiritually and be able to adapt socially in a balanced way. This study was conducted to develop and validate an instrument based on the Exploratory Factor Analysis (EFA) process to measure the factors Religious Field, Field of Worship, Morality. This study used a quantitative research method by analyzing the relationships between variables in the study model. Before the data was analyzed, Exploratory Factor Analysis (EFA) was conducted to identify the suitability of the items used in the study instrument. This study explains in detail the procedure for conducting Exploratory Factor Analysis (EFA) for each factor. The findings of this study show that the validity values based on Kaiser-Meyer-Olkin (KMO), Total Variance Explained (TVE), Factor Loading and reliability values based on Cronbach's Alpha, have met all the required values.

Keywords: Validity, Reliability, Religious Field, Field of Worship, Morality

Introduction

Islamic dakwah is a pressing need in various times. It is the main way to convey the message of Islam to non-Muslims and also to strengthen the hold of converts on the principles and values of Islam. Dakwah is not only focused on introducing Islam to individuals, but also includes providing them with

support and guidance after they embrace Islam, to ensure their continued commitment to the teachings and values outlined by Islam. This approach is particularly important in a context where converts face social and cultural pressures that can affect their spiritual and religious development. In northern Thailand, where Muslims are a minority compared to followers of other religions, various challenges arise for converts (Rahman, Hossain, et al., 2025). They live in a non-Muslim cultural and religious environment, making continued adherence to Islamic teachings a challenging task. Converts in this region face various obstacles, especially those related to daily religious practices and social interactions with communities that may not understand or accept their change in faith (Hossen & Pauzi, 2025b).

Recognizing this reality, Yayasan Rahmatan Lil 'Alamin has taken the initiative to provide comprehensive support to converts in northern Thailand. This foundation plays an important role in guiding and educating them based on the principles of Islamic education. It is an important platform in enlightening converts on the fundamentals of Islam and providing a conducive environment for them to appreciate and practice Islamic values (Hossen & Mohd Pauzi, 2023). Among the foundation's efforts are the implementation of various da'wah and education programs aimed at instilling true religious values in converts and providing them with life skills as Muslims who hold fast to their religion. However, the da'wah process in the northern region of Thailand is not immune to various obstacles. The influence of local non-Islamic cultures and the challenges of maintaining Muslim identity in a complex social environment mean that converts are often exposed to material temptations and social pressures. Therefore, there is an urgent need to provide continuous and comprehensive support, not only from a psychological and social perspective, but also from a structured religious education and guidance perspective (Alam et al., 2025).

Explortory Factor Analysis (EFA)

EFA is conducted to identify some components that exist in the set of questionnaires that have been formed. EFA is a statistical technique that transforms a set of original construct data linearly into a set of smaller constructs that can give a comprehensive picture of all the information contained in the original construct (Duntemen, 1989). The purpose of EFA is to reduce the dimensions of the original data to several smaller components that can be interpreted more easily and meaningfully (Duntemen, 1989; Lewis-Beck, 1994 & Field, 2016). According to Tabachnick and Fidell (2013), EFA needs to go through several stages. The first stage calculates the correlation matrix between all the factor-analyzed constructs. The next stage involves extracting some factors from the correlation matrix and determining the number of factors formed (Hossen, 2023). The rotation of the factors is done to improve the interpretation so that the factors are more meaningful and can be interpreted. The final and most important stage in factor analysis is to interpret the results of the factors obtained and give an appropriate name to each factor (Rahman, Hossain, et al., 2025).

According to Chik, Abdullah, Ismail and Mohd Noor (2024) and Hoque et al (2017), if researchers adapt instruments that have been built by previous researchers and modify statements to fit the current study, then they need to re-run the EFA procedure. This is because the current study area may be different from previous studies, or the current study population is significantly different from previous studies in terms of socioeconomic status, race and culture. Thus, there may be some items that have been constructed before, no longer suitable for the current study or there may also be a different item structure in the current study compared to the structure in the previous study. Therefore, researchers need to recalculate the Internal Reliability value of the current instrument,

which is the new Cronbach's Alpha value (Chik et al., 2024). In this study, the researcher conducted a pilot study on 100 students in the field of religion and re-conducted EFA on items measuring the construct (Hossen & Pauzi, 2025a).

Findings

Exploratory Factor Analysis (EFA) for Religious Field

Each item in the field of faith uses 18 items. Next, the use of a likert scales to measure items is between one (1) (Strongly Disagree) to five (5) (Strongly Agree). The EFA procedure using the Principal Component Analysis (PCA) method with Varimax Rotation was carried out on the 18 items that measure the Religious Field. The results of Table 1 below show that the Bartlet Test value is significant (P Value < 0.05). The Kaiser-Meyer-Olkin Sampling Adequacy Measure (KMO) is 0.973 which exceeds the minimum value of 0.6 (Chik et al., 2024; Hoque et al., 2017). Both of these achievements (Bartlet Test significant, & KMO value>0.6) reflect that the observed data is suitable for the next procedure in EFA (Chik et al., 2024).

Table 1 *KMO Values and Bartlet's Test for Religious Field*

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.973
Bartlett's Test of Sphericity	Approx. Chi-Square	5740.947
	df	153
	Sig.	0.000

Total Variance Explained (TVE) is important for researchers to know what percentage of the items used can measure a research construct. Reading from Table 2 below found that Religious Field measured using 18 items in one component can measure Religious Field as much as 86.946%. This value is sufficient because it exceeds the minimum requirement of 60% (Chik et al., 2024; Hoque et al., 2017).

Table 2 *Total Variance Explained for Religious Field*

Component	Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	15.650	86.946	86.946

Table 3 below shows the distribution of items accepted to measure Religious Field. All items have a factor loading value exceeding the minimum limit of 0.6 and items that are less than 0.6 should be discarded because they do not contribute to the measurement of the construct (Chik et al., 2024).

Table 3 *Factor Loading for One (1) Component Religious Field*

Component Matrix[a]	
Items	Component
RF1	0.936
RF2	0.921
RF3	0.942
RF4	0.961
RF5	0.954
RF6	0.964
RF7	0.956
RF8	0.836
RF9	0.951
RF10	0.951
RF11	0.935
RF12	0.947
RF13	0.906
RF14	0.953
RF15	0.925
RF16	0.889
RF17	0.932
RF18	0.914

Another piece of information that researchers need to report is the reliability value of the items that have been built to measure that construct. The measure of instrument reliability is estimated through Cronbach's Alpha value that exceeds the minimum limit of 0.7 to be adopted in the study. Table 4 below shows the value of Cronbach's Alpha equal to 0.991, for each item in the Religious Field that exceeds 0.7 and can be used in this study (Chik et al., 2024 & Hoque et al., 2017).

Table 4 *Cronbach's Alpha Value for Each Item in the Religious Field*

Component	Number of Items	Cronbach's Alpha
1	18	0.991

Exploratory Factor Analysis (EFA) for Field of Worship

Each item in the field of faith uses 32 items. Next, the use of a likert scales to measure items is between one (1) (Strongly Disagree) to five (5) (Strongly Agree). The EFA procedure using the Principal Component Analysis (PCA) method with Varimax Rotation was carried out on the 32 items that measure the Field of Worship. The results of Table 5 below show that the Bartlet Test value is significant (P Value < 0.05). The Kaiser-Meyer-Olkin Sampling Adequacy Measure (KMO) is 0.976 which exceeds the minimum value of 0.6 (Chik et al., 2024; Hoque et al., 2017). Both of these achievements (Bartlet Test significant & KMO value>0.6) reflect that the observed data is suitable for the next procedure in EFA (Chik et al., 2024).

Table 5 *KMO Values and Bartlet's Test for Field of Worship*

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.976
Bartlett's Test of Sphericity	Approx. Chi-Square	9369.805
	df	496
	Sig.	0.000

Total Variance Explained (TVE) is important for researchers to know what percentage of the items used can measure a research construct. Reading from Table 6 below found that Field of Worship measured using 32 items in one component can measure Field of Worship as much as 80.641%. This value is sufficient because it exceeds the minimum requirement of 60% (Chik et al., 2024; Hoque et al., 2017).

Table 6 *Total Variance Explained for Field of Worship*

Component	Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	25.805	80.641	80.641

Table 7 below shows the distribution of items accepted to measure Field of Worship. All items have a factor loading value exceeding the minimum limit of 0.6 and items that are less than 0.6 should be discarded because they do not contribute to the measurement of the construct (Chik et al., 2024).

Table 7 *Factor Loading for One (1) Component Field of Worship*

Component Matrix[a]	
Items	Component
FW1	0.889
FW2	0.916
FW3	0.866
FW4	0.919
FW5	0.934
FW6	0.927
FW7	0.947
FW8	0.933
FW9	0.954
FW10	0.946
FW11	0.960
FW12	0.931
FW13	0.862
FW14	0.920
FW15	0.933
FW16	0.947
FW17	0.945
FW18	0.926
FW19	0.936
FW20	0.905
FW21	0.947
FW22	0.903
FW23	0.852
FW24	0.832

FW25	0.666
FW26	0.840
FW27	0.851
FW28	0.844
FW29	0.863
FW30	0.910
FW31	0.928
FW32	0.734

Another piece of information that researchers need to report is the reliability value of the items that have been built to measure that construct. The measure of instrument reliability is estimated through Cronbach's Alpha value that exceeds the minimum limit of 0.7 to be adopted in the study. Table 8 below shows the value of Cronbach's Alpha equal to 0.992, for each item in the Field of Worship that exceeds 0.7 and can be used in this study (Chik et al., 2024 & Hoque et al., 2017).

Table 8 *Cronbach's Alpha Value for Each Item in the Field of Worship*

Component	Number of Items	Cronbach's Alpha
1	32	0.992

Exploratory Factor Analysis (EFA) for Morality

Each item in the field of faith uses 10 items. Next, the use of a likert scales to measure items is between one (1) (Strongly Disagree) to five (5) (Strongly Agree). The EFA procedure using the Principal Component Analysis (PCA) method with Varimax Rotation was carried out on the 10 items that measure the Morality. The results of Table 9 below show that the Bartlet Test value is significant (P Value < 0.05). The Kaiser-Meyer-Olkin Sampling Adequacy Measure (KMO) is 0.949 which exceeds the minimum value of 0.6 (Chik et al., 2024; Hoque et al., 2017). Both of these achievements (Bartlet Test significant & KMO value>0.6) reflect that the observed data is suitable for the next procedure in EFA (Chik et al., 2024).

Table 9 *KMO Values and Bartlet's Test for Morality*

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.949
Bartlett's Test of Sphericity	Approx. Chi-Square	2605.772
	df	45
	Sig.	0.000

Total Variance Explained (TVE) is important for researchers to know what percentage of the items used can measure a research construct. Reading from Table 10 below found that Morality measured using 32 items in one component can measure Morality as much as 86.049%. This value is sufficient because it exceeds the minimum requirement of 60% (Chik et al., 2024; Hoque et al., 2017).

Table 10 *Total Variance Explained for Morality*

Component	Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	8.605	86.049	86.049

Table 11 below shows the distribution of items accepted to measure Morality. All items have a factor loading value exceeding the minimum limit of 0.6 and items that are less than 0.6 should be discarded because they do not contribute to the measurement of the construct (Chik et al., 2024; Hoque et al., 2017).

Table 11 *Factor Loading for One (1) Component Morality*

Component Matrix[a]	
Items	Component
MO1	0.933
MO2	0.913
MO3	0.943
MO4	0.917
MO5	0.939
MO6	0.962
MO7	0.894

MO8	0.944
MO9	0.901
MO10	0.928

Another piece of information that researchers need to report is the reliability value of the items that have been built to measure that construct. The measure of instrument reliability is estimated through Cronbach's Alpha value that exceeds the minimum limit of 0.7 to be adopted in the study. Table 12 below shows the value of Cronbach's Alpha equal to 0.982, for each item in the Morality that exceeds 0.7 and can be used in this study (Chik et al., 2024 & Hoque et al., 2017).

Table 12 *Cronbach's Alpha Value for Each Item in the Morality*

Component	Number of Items	Cronbach's Alpha
1	10	0.982

Overall Results of Exploratory Factor Analysis (EFA) Constructs

Based on the results of the EFA analysis on the questionnaire items, no items were excluded. Table 13 below shows the latest ranking of item categories after the EFA analysis was conducted.

Table 13 *Overall EFA Analysis Construct*

No	Constructs	Validity				Reliability
		Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO>0.6)	Bartlett's Test of Sphericity (Sig.< 0.05)	Total Variance Explained (>60%)	Items Factor Loading (>0.60)	Cronbach's Alpha (>0.70)
1	Religious Field	0.973	0.000	86.946	18 items > 0.60	0.991
2	Field of Worship	0.976	0.000	80.641	32 items > 0.60	0.992
3	Morality	0.940	0.000	86.049	10 items > 0.60	0.982

Conclusion

Overall, the requirements of the items in each factor Religious Field, Field of Worship and Morality, as a whole, meet the KMO value (> 0.6), Bartlet Test achievement (significant), the total variance value exceeds the limit of 60% of the minimum value of 60. Cronbach Alpha exceeds the minimum limit of 0.7 for use in the study. This illustrates that the item is not excluded and is eligible for use in this study (Chik et al., 2024 & Hoque et al., 2017). Therefore, this study can conclude that, Religious Field, Field

of Worship and Morality, are able to increase the effectiveness of da'wah towards converts under the auspices of Yayasan Rahmat Lil Alamin, Northern Thailand.

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