

Identifying Leadership Development Factors in Indonesian Islamic Boarding Schools (Pesantren) Using Factor Analysis Method

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ABSTRACT

Pesantren or Islamic boarding school is a center of Islamic learning which has a significant role in producing the leaders of the nation. The significant role is believed to be the result of the leadership spirit that developed in student's life and also the clerics. However, the growth of leadership does not occur evenly among the boarding schools. This research aimed to find a superior method in developing leadership among boarding school students. Factor analysis method was used to extract leadership developing factors from a set of data collected by a questionnaire, followed by an ANOVA test to determine the similarity of coaching method in the model boarding schools. The research found 13 leadership development factors and 2 types of education in the model boarding schools.

Keywords: *Leadership, factor analysis, Islamic boarding school (pesantren)*

1. INTRODUCTION

Pesantren (hereinafter referred to as “Islamic boarding school” or “boarding school”) is a center of Islamic learning with boarding school system that spread over thousands of locations in Indonesia. Although in various regions it has different mentions, but there are always elements that always exist in every boarding school. Principal elements of Islamic clerics called “kyai”, mosque, religious students called “santri”, student's boarding called “pondok” and classical Islamic scriptures is a unique element that distinguishes it with other educational institutions.

The significant role of boarding school, either in the Dutch colonial era as well as in the era of independence, is believed to be the result of the leadership spirit that developed in student's life and also the clerics. This leadership has grown a high concern to what happens in the society, nation and state, and then motivate the boarding school students to take the lead action required. Leadership has grown well in the student life with guidance and coaching from the clerics.

However, the growth of leadership does not occur evenly among the boarding schools. Some boarding schools already have a systematic method of leadership development, while other boarding schools do not have such a system. In terms of output, there are only a few boarding schools in Indonesia whose alumni become leaders in the national and international level.

Refers to the condition, a study to find excel method in leadership development among boarding school students is required. This method is necessary to be duplicated in other Islamic boarding schools to strengthen leadership skills among the boarding school students. The government's support is absolutely necessary in improving the process of leadership development among boarding school students.

In order to find a superior leadership development method, this study needs to take some excellent boarding schools as models. The boarding schools that are considered to meet this requirement are Pondok Modern Gontor in Ponorogo, East Java, Pesantren Tebu Ireng in Jombang, East Java, and Ma'had Al-Zaytun in Indramayu, West Java. From the model boarding schools, it is expected to find a method that can be duplicated in other boarding schools.

This research aims to develop a superior model of coaching the leadership development for boarding school students. The research is based on the assumption that the students in the model boarding schools represent the population of boarding school students across Indonesia. It is based on the reality that the boarding schools in Indonesia are the basis for Islamic education, so that the students come from the same population, that are young students who want to study the religious sciences of Islam.

This research is also based on a hypothesis that the development of leadership in the boarding school students is mostly done through extracurricular activities, not through academic activities. This hypothesis underlies the preparation of the questionnaire used in this research.

2. LITERATURE REVIEW

2.1. Leadership

According to Sarros and Butchatsky [1], "Leadership is defined as the purposeful behavior of influencing others to contribute to commonly agreed goals for the benefit of the individual as well as the organization or the common good." By definition, leadership can be defined as a behavior with a specific purpose to influence the activities of the members of the group to achieve common goals that are designed to benefit individuals and organizations.

Meanwhile, Bennet and Anderson [2] wrote, "Leadership is usually associated with the targets of that critique: the powerful." From the definition it can be identified that the parameters are generally directed at the leadership style and behavior of leaders, while its orientation is the achievement of the goals or effectiveness of the leadership. Effective leadership is interpreted as a leadership that is able to produce activities within the framework of the best long term interests of the group.

Based on the previous definitions, the leadership has several implications, that is: First, leadership means involving persons, namely the subordinates (followers). The subordinate must have the willingness to accept direction from the leader. Second, an effective leader is someone whose power ability to inspire followers to achieve a satisfactory performance. According to French and Raven [3], the power held by leaders can come from:

- Reward power, based on the perception of subordinates that the leader has the ability and resources to reward subordinates who follow the directives leaders.
- Coercive power, based on the perception of subordinates that the leader has the ability to impose penalties for subordinates who do not follow the directives leader.
- Legitimate power, which is based on the perception of subordinates that the leader has the right to use its influence and authority.
- Referent power, based on the recognition of subordinates to the figure of a leader. The leader can use his influence because of his personal characteristics, reputation or charisma.
- Expert power, based on the perception of subordinates that the leader is someone who are competent and have expertise in their fields.

Third, leadership must have the honesty to himself (integrity), responsible for the sincere attitude (compassion), knowledge (cognizance), courage to act in accordance with the belief (commitment), trust in him and others (confidence) and the ability to convince people other (communication) in building the organization.

Although leadership is often equated with management, the two concepts are different. The difference between leaders and managers is clearly stated by Bennis and Nanus [4]. Leaders focus on doing the right while managers focus on doing precisely. Managers are people who do things right and leaders are people who do the right thing. Leadership ensures that the road traversed in the appropriate direction, while the management is to see that we can run as efficiently as possible.

2.2. Factor Analysis Method

Factor analysis is a collection of methods used to examine how underlying constructs influence the responses on a number of measured variables [5].

There are basically two types of factor analysis: exploratory and confirmatory. Exploratory factor analysis (EFA) attempts to discover the nature of the constructs influencing a set of responses. Confirmatory factor analysis (CFA) tests whether a specified set of constructs is influencing responses in a predicted way.

Both types of factor analyses are based on the *Common Factor Model*, illustrated in Figure 1. This model proposes that each observed response (measure 1 through measure 5) is influenced partially by underlying common factors (factor 1 and factor 2) and partially by underlying unique factors (E1 through E5). The strength of the link between each factor and each measure varies, such that a given factor influences some measures more than others. This is the same basic model as is used for LISREL analyses.

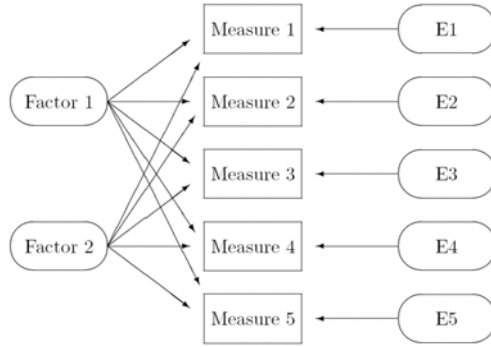


Figure 1: The common factor model

Factor analyses are performed by examining the pattern of correlations (or covariances) between the observed measures. Measures that are highly correlated (either positively or negatively) are likely influenced by the same factors, while those that are relatively uncorrelated are likely influenced by different factors.

The factor analysis performed in this research is exploratory. The primary objectives of an EFA are to determine: (1) the number of common factors influencing a set of measures, and (2) the strength of the relationship between each factor and each observed measure.

3. DATA PROCESSING

The preliminary questionnaire had 58 questions to be approved by the respondents. The approval of the respondents was divided into four, namely:

1 = strongly disagree 2 = disagree 3 = agree 4 = strongly agree

The preliminary questionnaire was filled out by 30 respondents. Sample of 58 questions contained in the preliminary questionnaire can be seen in Table 1.

Table 1: Sample questions in the preliminary questionnaire

No.	Question
1	The boarding school's curriculum has academic and non academic education which is very useful for everyday life
2	Students enjoy a full schedule activity from morning until late at night because it is believed to form a positive mental
...	...
58	The success of students in daily life after leaving the boarding school is strongly influenced by activity, discipline, seriousness, and sincerity during the education in the boarding school

3.1. Validity and Reliability

After a validity test, it was found that 9 items were not valid questions. The invalid items were no longer used in the research questionnaire. Thus, the research questionnaire contained only 49 items of research questions.

Meanwhile, a reliability test was carried out by calculating the Cronbach's Alpha with items involving only valid questions (49 items of questions). The Cronbach's Alpha value of 0.981 was obtained which meant that the questionnaire was considered reliable to use.

3.2. Sampling

In distributing the research questionnaire, samples were taken from the model boarding schools as many as:

1. 100 students of Pondok Modern Darussalam of Gontor in Ponorogo, East Java.
2. 40 students of Pesantren Tebu Ireng in Jombang, East Java.
3. 45 students of Ma'had Al-Zaytun in Indramayu, West Java.

3.3. Data Processing

Data processing was carried out of questionnaire data using factor analysis method which aims to classify the items questions (manifest variables) into the factors (latent variables). The first step of factor analysis is to test

the feasibility of using this method by Bartlett's Test of Sphericity. Using the SPSS 12.0 software we obtained the following results.

Table 2: Result of Bartlett's Test of Sphericity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.848
Bartlett's Test of Sphericity	Approx. Chi-Square	3220.402
	df	1176
	Sig.	.000

The Kaiser-Meyer-Olkin (KMO) Value of 0.848 which was more than 0.5 indicated the feasibility of using the factor analysis method to process the questionnaire data. In addition, the Bartlett's Test value of 3220.402 also showed that the correlation between input variables was not an identity matrix so it could be processed using factor analysis.

The next step was factor extraction. Factor extraction aimed to classify the manifest variables into latent variables. The latent variables were the leadership developing factors in the model boarding schools. The latent variables needed to be defined considering the manifest variables contained therein. Using SPSS 12.0 software we obtained the communality of each variable and the factor definitions as shown in Table 3.

Table 3: Factor extraction result

Factor	Question Number	Manifest Variable	Factor Name
1	3	Education curriculum that creates self-reliance	Self management in student life
	4	Discipline	
	17	Tight activities of the boarding school	
	21	The mastery of foreign languages	
	22	Learning and achievement motivating	
	27	Tight but scheduled activities	
	42	Tight but scheduled activities that develops time efficiency	
2	47	Collective religious activities	System of regulation and encouragement for students
	23	A lot of regulations imposed	
	24	School contributions to the community	
	37	Regulations that protect from un-Islamic behavior	
	38	Boarding rules	
	39	Pride of the boarding school	
3	43	The drive to always give the best	Tight education schedule and strict discipline
	2	Tight activities	
	13	Tight academic material	
	31	Influence of extracurricular to self-management	
	46	Strict regulations with appropriate penalties	
4	52	Court or judicial system	Student assignment
	11	Assignment as rayon and class president	
5	26	Assignment system in each lesson	The cleric interaction with students
	5	Students regeneration cycle	
	6	Cleric's assertiveness	
6	8	Cleric's inspiration to students	Care system among students
	20	Extracurricular	
	33	Boarding school's motto	
	54	Dormitory system	
7	57	Regeneration cycle of care among students	Good example and integrity of the cleric (<i>kyai</i>)
	29	Exemplary	
8	35	Cleric's integrity	Education methods and media
	7	Extracurricular activities	
	18	The education method that trains logical thinking	
	30	Education facilities	
9	36	Non-academic facilities	Student's liveliness
	34	Methods of teaching fellow students	
	40	Tribute to outstanding students	
	41	Extracurricular activities	
10	48	Support from local communities	Prevailing culture in boarding schools
	19	Reputable academic and non academic curriculum	
	45	Growing of simplicity culture	
	51	Leadership regeneration based education system	
	56	Spy system in identifying students mistakes	

Factor	Question Number	Manifest Variable	Factor Name
11	58	Effect of activity, discipline, seriousness, and sincerity to the success	Implementation of activity, discipline, seriousness, and sincerity
12	16	Non-academic education activities	Varied educational methodologies
	32	Variative educational methodologies	
	49	Freedom of thinking and doing	
13	10	Forcing the value of discipline, togetherness, independence and leadership	Conditioning and encouragement for students
	50	Isolated boarding school environment	
	55	Motivation of senior, caregivers and teachers to achieve success	

The subsequent data processing after the factor analysis method was to compare the process of leadership forming in the model boarding schools. The method of Analysis of Variance (ANOVA) was used for this need.

The ANOVA test results showed that the three model boarding school do not provide a uniform leadership development as shown in Table 4.

Tabel 4: ANOVA result

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.294	2	.647	14.123	.000
Within Groups	6.599	144	.046		
Total	7.894	146			

The final results of the Post-Hoc comparison procedure was a test of homogeneity, as shown in Table 5.

Table 5: Test of homogeneity

Group	N	Subset for alpha = .05	
		1	2
2	49	3.146796	
3	49		3.291949
1	49		3.373727
Sig.		1.000	.145

Means for groups in homogeneous subsets are displayed.
Uses Harmonic Mean Sample Size = 49.000.

Result of the homogeneity test in Table 5 showed that two groups are homogeneous. The first group consists of only group 2, while the second group consists of group 1 and group 3.

It could be concluded that the Pondok Modern Gontor and Ma'had Al-Zaytun (group 1 and 3) provide the same leadership development process to their students, while Pesantren Tebu Ireng (group 2) provides a different leadership development process from the two.

4. DISCUSSION

There are several things that can be analyzed from the 13 factors extracted by factor analysis method as shown in Table 3, namely:

- The factors are the system, conditions and rules that encourage the leadership emergence in the students. This means, the higher the level or intensity of these factors, the stronger the formation of self-leadership in students.
- It should be noted that the factor definitions were made subjectively. Subjectivity can't be separated from data collected by questionnaires. However, subjectivity will be reduced along with increasing the number of respondents. Therefore, the previously generated factors can be considered objective, considering the number of overall respondents of 146 students from 3 model boarding schools.
- Some of the extracted factors have similarity to one another. The 9th factor (student's liveliness) and the 11th factor (implementation of activity, discipline, seriousness, and sincerity) are an example. This similarity arises due to the similarity of some questions in the questionnaire.
- The 13 factors can be used as variables to measure the formation of leadership in Islamic boarding schools in Indonesia. Utilization of the factors to measure the leadership development process in Islamic boarding schools can be done in future research.

Meanwhile, from the ANOVA result, some analysis can be made for this:

- Leadership development experienced by Gontor's students is statistically similar with that experienced by Al-Zaytun's students. This similarity does not mean that all activities take place in Gontor also occur in Al-Zaytun in the same format, but it means that the process of creating leadership in Gontor and Al-Zaytun give the same effects or outcomes for the both students.
- The similarity of the leadership development process in Gontor and Al-Zaytun can be analyzed as a result of the following:
 - Gontor and Al-Zaytun explicitly declared themselves as a modern boarding school. The modernity can be seen from the education system, system development, school management, and also from the building and other physical facilities. The explicit statement as a modern boarding school influence the implemented coaching system and ultimately affect the outcome perceived by the students and then captured through the research questionnaire.
 - The similarity of leadership development at both schools is also based on the fact that the leader of Ma'had Al-Zaytun, Sheikh Panji Gumilang, is an alumni of Pondok Modern Gontor. This relationship is believed to affect the similarity of leadership development that take place in both schools.
- Meanwhile, also statistically, the leadership development experienced by Tebu Ireng's students is different to that experienced by the students of two other schools. This difference occurs because Pesantren Tebu Ireng is considered as a traditional Islamic boarding school, while the two other are modern. The result of interviews and direct observation at Pesantren Tebu Ireng indicate this. Pesantren Tebu Ireng applies *salafiyah* education system, namely the assessment of traditional transcripts guided directly by the clerics with *talaqqi* (dictation) system. This traditional system also affects the leadership development and affects the outcome perceived by the students and then captured through the research questionnaire.
- The ANOVA result only informs the different leadership development process in Pondok Modern Gontor and Ma'had Al-Zaytun than in Pesantren Tebu Ireng. Nevertheless, the data is not sufficient to conclude which method is better than other. To determine which method is superior of the both, further study is needed.

5. CONCLUSION

The leadership development method applied in the model boarding school (Pondok Modern Gontor, Pesantren Tebu Ireng and Ma'had Al-Zaytun) is superior so it can be considered as a model for other Islamic boarding schools in Indonesia. The ideal leadership development model of boarding school students consists of 13 leadership forming factors namely: (1) Self management in student life, (2) System of regulation and encouragement for students, (3) Tight education schedule and strict discipline, (4) Student assignment, (5) The cleric interaction with students, (6) Care system among students, (7) Good example and integrity of the cleric (*kyai*), (8) Education methods and media, (9) Student's liveliness, (10) Prevailing culture in boarding schools, (11) Implementation of activity, discipline, seriousness, and sincerity, (12) Varied educational methodologies, and (13) Conditioning and encouragement for students.

Formation of leadership among the students mostly occurs through non-academic activities such as extracurricular activities, organizations, caring among students and others. Duplication of ideal leadership development methods can be arranged through the organization of the boarding school management and students in adjacent area. The initial program that can be done by the government to support leadership development of boarding schools is to establish an organization and provide assistance for boarding school alumni.

ACKNOWLEDGMENT

The author would like to thank the Ministry of Youth and Sports of the Republic of Indonesia, which has funded and facilitated this research, and the management of Pondok Modern Gontor, Pesantren Tebu Ireng and Ma'had Al-Zaytun which has supported data collection.

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