



The Development of Indicators for Desirable Characteristics in terms of Leadership of Vajiravudh College's Students

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Abstract

The objective of this study is to develop indicators for desirable characteristics in terms of "leadership" of Vajiravudh College's students. The sample consists of 133 eleventh-grade and twelfth-grade Vajiravudh College's students of the 2016 academic year, selected by using the Purposeful Sampling method. The research instruments adopted to collect data are questionnaires, Exploratory Factor Analysis, Principal Axis Factoring, and Oblique Rotation by means of ProMax method. The results showed that the set of variable analysis studied here could be extracted into 4 critical components, including knowledge/ability, responsibility, sacrifice, and discipline. The range of the eigenvalues was located between 0.90-1.00 with an accumulative variance of 57.193. The result demonstrated the key factor in possessing leadership traits of Vajiravudh College's students and the school has applied such factor to a strategy to determine the capability direction of students' leadership skills.

Introduction

"Vajiravudh" is considered a royal memorial of King Rama VI, who graciously established the school with a royal aim to provide education and development of discipline for male students and to transform them into persons that are complete with knowledge and morality to the level that could be compared to those of other civilised countries. Vajiravudh College is a place where male students across the country have been raised, instructed and enlightened to gain desirable characteristics according to His Royal Policies. Many graduates have held high positions in various organisations, both in public and private sectors.

Aside from paving ways for students to achieve

productivity, the core standards of educational management tend to provide a fine cultivation and to produce students to be a "good and knowledgeable person with morality" in line with the royal standards. The school's educational management has built up a range of the finest qualities of graduates, especially a key characteristic of "Leadership." Considering the number of students each year who have graduated from the school, there are only approximately 70-80 students each batch, which is actually quite small compared to those graduated from other schools. However, the Vajiravudh's students have achieved successful career paths in many fields (VC Alumni: Managers, 2000). According to survey and preparation of strategic school's academic year of 2012-2016, it was found that the most

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qualification preferred by the parents after students' graduation was leadership skills. Therefore, Vajiravudh College has set a goal for the desirable leadership characteristics, considering them as core characteristics that the students need to achieve, additionally to the prior determined key features in the core curriculum for basic education in 2008. Furthermore, systems and manuals for evaluation of all desirable key characteristics of the students include 9 main aspects (Saroj Leesawan, 2012.) i.e. 1) Appreciation of nation, religion and the King, which are all three main components of the Kingdom's identities. Thailand has depicted long historic independence and sovereignty. It has observed Buddhism as an anchor of the people's mind. Also, the monarchy system has been playing a huge role in the royal duties so far as a result of calm and peace in every corner of the country; 2) Honesty, the students would not be greed, or unfaithful, while declaring oneself as a self-respectful and sincere person; 3) Discipline, the students must behave with sense of orderliness, responsibility, punctuality with leadership spirits and being respectful to others; 4) Being eager to learn. The students keep thinking, processing and adapting themselves and being knowledgeable and able to cope with the globalization; 5) Living with senses of sufficiency, modesty, and morality, the students can secure themselves with the wisdom of prudence and goodness; 6) Being committed to tasks with great efforts, the students should be decisive and determined in duties both physically and mentally; 7) The students recognise and conserve Thai identities due to various reasons including gentle personality, peaceable traits, hospitality along with its own language, culture, history, solidarity, and unity to maintain the pride of the dignity of Thailand. Hence, Thais should maintain and concentrate with the uniqueness; 8) Having a sense of public consciousness in order to refrain from an offence that may have effect to the public. To maintain and use shared facilities with respect of public interest; 9) Leadership skills, including management and control ability to lead others as a leader and follower, and the ability to organise work smoothly.

By means of indicators to develop leadership skills of Vajiravudh College's students, as mentioned above, each aspect has raised awareness for development and improvement of indicators for characteristics in terms of leadership of Vajiravudh College's students due to the fact that all are key characteristics engaged in His Royal Policy in the School's educational management, aiming to be used in the advancement of effective

tools. Furthermore, the students could develop and provide themselves some key features in order to meet the royal policy's standards.

Literature review

Trait of Leadership is one of the indicator that indicates the quality of the leader. Trait of leader is the trait that can be developed on any leader. The successful leaders are those who keep on observing themselves to find what their strongest and weakest points are to gain the faith from the controlees and to be beneficial to the work. Professor Dr.SermSak Visalaporn has stated the trait of the leadership as follows, the trait of leader of leadership included having responsibility, having determination to finish the task, having strength, being attempt, knowing when to take risk, being creative, having self-accuracy, being capable to deal with stress, being capable to influence to people and to bring together all the power to make the work successful.

Methodology

This research aims to develop indicators for desirable characteristics in terms of leadership of Vajiravudh College's students. The researchers have focused on the development of indicators by using the Exploratory Factor Analysis (EFA) method to classify variables analysis in order to obtain focal desirable characteristics' elements, "leadership," of Vajiravudh college's students with an expectation for further development of standard tools, which can be used for further evaluations.

1. Population and Sample

The population used in this research was accounted for 133 high school students of Vajiravudh College in the academic year of 2017. The sample was a group of eleventh-grade and twelfth-grade students of Vajiravudh College who have been appointed as the head students of the academic year of 2017. The purposeful sampling method was applied to the sampling acquisition. The researchers expected to have 120 samples. To compensate the response rate, the researchers, therefore, sent out questionnaires to 133 participants, including eleventh-grade and twelfth-grade students of Vajiravudh College. However, only 120 questionnaires were completed, representing the response rate of 90.22 % as described in the following table.

2. Approaches and Improvement

2.1 Studying theories and related literatures in respect of leadership skills possessed by Vajiravudh College students and learning the objectives of

Table 1 The number of sent and returned questionnaires classified by level of students.

Educational Level	Number of sent and returned questionnaires		Response rate (Percent)
	Sent (Copies)	Completed (Copies)	
Eleventh Grade	60	60	100.00
Twelfth Grade	73	60	82.19
Total	133	120	90.22

educational management of the school. The documents relating to the definitions and meanings are also useful. Reviewing and analyzing the relationship between the characteristics of leadership theory and leadership idea based on the royal policies quoted from the Royal Speech on Vajiravudh College's educational management of King Rama VI and comparing them to those gathered documents. Additionally, the key characteristics of a good leader are also adopted as the conceptual framework for this research.

2.2 Creating questionnaires asking about desirable characteristics by specifying its structure and language used. Furthermore, surveys and meetings are used to obtain additional comments from the school personnel and other persons who have involvement in the school's educational management, including administrators, teachers, staff, students, parents and alumni, as well as the Quality Assurance Committee in Vajiravudh education and the Executive Committee of Vajiravudh College, with an aim to analyse originated data on designing leadership characteristics of the students. Then, to correlate the information to analyse the relationship between the leadership characteristics according to the context of the school and leadership-skill theories in order to establish desirable leadership-skill characteristic indicators for Vajiravudh college students as a practical definition of leadership traits of the students.

2.3 Requesting qualified persons to examine content validity of the indicators for the desirable characteristics in terms of leadership of Vajiravudh College's students. The qualified persons include Director of Academic Affairs, Head of the Department of Registration and Evaluation, and Head of the Board of Desirable Characteristics of Vajiravudh College's Students. The questionnaire must contain accurate content, suitable language, and additional suggestions.

2.4 Submitting draft questionnaires to the advisors and specialists along with detail in respect of the research topic, objectives, definitions and content validity review for assessment. After that, distributing

the revised questionnaires to 190 non-specific samples of participants, consisting of alumni, directors, teachers and staff of Mahavajiravudh institutional network.

2.5 Distributing questionnaires in the trial stage with no specific groups of population to see whether the questions are readable based on the Cronbach alpha coefficient calculation. In terms of assessment criteria, the validity of data is based on the alpha coefficient, which needs to be greater than 0.50. The result shows that the reliability of the questionnaire is totally accounted for .982 based on 63 questions.

2.6 Using the questionnaires in the trial stage and improving them for better results.

2.7 Using the questionnaire to collect data from the samples by using the purposeful sampling method, focusing on eleventh-grade and twelfth-grade students of Vajiravudh College, who have been appointed as the head students in the leadership training, an elective course concerning exercise of leadership skills.

3. Research Instrument

The researchers have used questionnaires asking about leadership behaviours of Vajiravudh College students. Each questionnaire consists of three parts, 34 questions, with 5 rating scales. The questionnaire includes questions to require for general information, such as gender, education, educational level of respondent, and open questions to focus on respondents' opinions over behavioural "leadership" characteristics. The scales are classified into 5 levels as shown in Table 2.

Table 2 Questionnaire's criteria interpretation

Criteria	Interpretation
5	Description matches the opinions or behaviours equivalent to the best scale of leadership skills
4	Description matches the opinions or behaviours equivalent to the satisfying scale of leadership skills
3	Description matches the opinions or behaviours equivalent to the good scale of leadership skills
2	Description matches the opinions or behaviours equivalent to the fair scale of leadership skills
1	Description matches the opinions or behaviours equivalent to the least scale of leadership skills

4. Collection of Data

4.1 Submitting a request form issued by the Graduate School of Suan Dusit Rajabhat University asking for permission to conduct the research and collect data from the populations of Vajiravudh College.

4.2 Manually querying the development of desirable leadership characteristic indicators.

4.3 After receiving all questionnaires completed by the students, the researchers have checked the accuracy and completeness before taking them into the analysis process. For the inaccurate and incomplete questionnaires, the researchers have grouped them in another pile. Therefore, there are 120 questionnaires being used for data analysis.

5. Data Analysis and Statistics

Data analysis adopted in this research aims to develop the desirable leadership characteristic indicators of Vajiravudh College's students by analysing data based on basic statistical process, including medium and standard deviation along with quality assessment of research tools i.e. Cronbach's alpha coefficient and the Exploratory Factor Analysis Software.

Results

According to the study on the desirable leadership characteristic indicators of Vajiravudh College students, the results show three critical parts, including basic data on research samples, reliability of the research instruments, and the result of Exploratory Factor Analysis as follows:

Part 1 Basic Data on Research Samples

The research samples consist of 120 Vajiravudh College's students, including 84 eleventh-grade students (70.00 percent) and 36 twelfth-grade students (30 percent) as shown in Table 2 below.

Table 2 Basic Data on Research Samples

Samples		Number	Percent
Educational Level	Eleventh Grade	84	70.00
	Twelfth Grade	36	30.00
Total		120	100.00

Part 2 The Reliability of The Research Instruments

The analysis results of the reliability of the questionnaire tool with the application of Cronbach's alpha coefficient show that the quality and reliability of all indicators are in high level in all aspects with 0.94 accuracy range of tool as shown in Table 3.

Table 3 The Reliability of the Questionnaire

The Desirable Leadership Characteristic Indicators of Vajiravudh College's Students	Accuracy Range (n = 120)
1. Having sense of responsibility and accepting both positive and negative results of their action	.819

Table 3 The Reliability of the Questionnaire

The Desirable Leadership Characteristic Indicators of Vajiravudh College's Students	Accuracy Range (n = 120)
2. Observing school's regulations and behaving properly and being a role model to others	.825
3. Understanding and having sympathy for others; being able to provide advice and taking care of other students	.802
4. Contributing to the public and willingly helping others without expecting of rewards	.831
5. Staying both physically and mentally healthy	.581
6. Being reasonable and always decisive in something	.728
7. Being creative	.741
8. Being able to work within a team and also to organize systematic workflow	.704
9. Having good senses of communication	.770
Total	.940

Part 3 The Result of Exploratory Factor Analysis

The researchers have collected the data on the characteristics of leadership by constructing a variable element and conducting the Exploratory Factor Analysis to observe the variables through extracted elements by principle axis factoring analysis along with oblique rotation by means of Promax method in sorting the variables in the form of key components. On account of element-considered analysis criteria, 1.00 and above of eigenvalue and 5.00 and above of each variable in the elements would be subjected as follows:

3.1 The Test Result of Variable Appropriation of Leadership Skills

The test result of the observed variables was analysed by Kaiser-Meyer-Olkin Measure of Sampling Adequacy. KMO has accounted for 0.839, which is greater than 0.80, suggesting that the variant is particularly suitable for being analysed at the best level and Bartlett's Test of Sphericity, resulted in a statistically significant relationship between various variables at .000, which is indicative of usable and practical variables.

Table 4 KMO values and Bartlett's Test

Kaiser-Meyer-Olkin	Bartlett's Test of Sphericity		
	Approx. Chi-Square	df	Sig
0.839	2.670	561	.000

3.2 Analysis Result of Leadership Characteristics

Considering the eigenvalues of the leadership attributes, there are 4 extracted components found, explaining cumulative variance as 57.193 percent at a range of eigenvalues between 0.984 to 6.541 through 4

aspects: 1) Discipline, 2) Responsibility, 3) Knowledge and Ability, and 4) Sacrifice, respectively, which are all key features of the leadership skill of Vajiravudh College students.

Table 5 Eigenvalues of Analysis Result of Leadership Characteristics

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	6.541	34.450	34.450
2	1.865	9.822	44.271
3	1.470	7.740	52.011
4	.984	5.182	61.776
5	.870	4.583	65.904
6	.784	4.128	69.127
7	.612	3.223	72.028
8	.551	2.901	74.618
9	.492	2.590	76.994
10	.451	2.376	79.190
11	.417	2.197	81.077
12	.358	1.886	82.921
13	.350	1.845	84.578

3.3 Leadership-Skill Components

For Analysis of Exploratory Factor Analysis in this survey, the researcher used the Promax method and found that all variables could be analysed in 4 aspects: 1) Discipline, 2) Responsibility, 3) Knowledge and Ability, and 4) Sacrifice, respectively, as shown in Table 6.

First Aspect: Discipline

There are 5 variables found in this aspect, weighing greater than 0.500, with a range of elements weighing between 0.594 - 0.849, consisting of article 6 (maintaining school's discipline), article 7 (being a role model to others), article 8 (willing to help and taking care of others in the school), article 9 (volunteering in a charity without expecting of rewards), and article 10 (being able to share things, etc.).

Second Aspect: Responsibility

There are 3 variables found in this aspect, weighing greater than 0.500, with a range of elements weighing between 0.711 - 0.834, consisting of article 1 (contributing all strength in duties with great capability), article 2 (not leaving the assignment undone, and being able to identify mistakes), article 3 (understanding and having sympathy to others, giving advice as well as taking care of others in the same school).

Third Aspect: Knowledge and Ability

A total of 11 variables are found weighing greater

than 0.500 with a range of elements weighing between 0.564 – 0.839, consisting of article 21 (behaving and performing activities with rightness), article 22 (being patient with any decision), article 23 (having appropriate confidence and assertiveness), article 24 of variable (applying creative ideas and methods in doing tasks), article 25 (being enthusiastic and always pursuing useful skills), article 26 (being energetic in doing activities), article 27 (being able to work and helping the team and others), article 29 (being able to express useful alternatives and supporting the team or group in order to achieve the school's goal), article 32 (being able to train and admonish other students), article 33 (being able to convince or direct others to join school activities), article 34 (being able to express an idea in public).

Fourth Aspect: Sacrifice

There are 7 variables are found in this aspect, weighing greater than 0.500 with a range of elements weighing between 0.513 - 0.82, consisting of article 11 (giving advice and kindly helping others), article 12 (maintaining public property), article 14 (participating in activities in order to solve problems or creating goodwill to the public), article 15 (having a standard physique according to body performance test of Vajiravudh College's regulations), article 28 (being able to guide, order or direct the activities of the group, faculty and the school to reach the goal), and article 30 (being fluent in speaking, writing, and reading).

Table 6 The Promax's Weight and Coefficiency

Variables	Weight			
	F1	F2	F3	F4
6. Maintaining school's discipline	0.594			
7. Being a role model to others	0.849			
8. Taking good cares of others	0.722			
9. Contributing in doing something without expecting of rewards	0.726			
10. Being able to share things or property to others	0.595			
1. Putting all attempts in responsibilities with great willing ability		0.711		
2. Not leaving tasks and coming up with solutions to mistakes		0.834		
3. Understanding and always providing advice with good cares of other students		0.759		
21. Attending activities			0.657	
22. Not thinking or deciding something with emotional influences			0.769	
23. Being confident and assertive			0.839	
24. Applying new ideas and methods to work			0.765	

Table 6 The Promax's Weight and Coefficiency

Variables	Weight			
	F1	F2	F3	F4
25. Being interested in and always seeking for useful knowledge			0.653	
26. Being enthusiastic in activities and other matters			0.571	
27. Being able to work as a team			0.705	
29. Being able to help and offer practical alternatives in order to achieve goals			0.646	
32. Being able to give advice and teach lessons to others			0.564	
33. Convincing and inviting others to join a range of school activities			0.573	
34. Being able to express an idea or opinion in public			0.658	
11. Giving comments and helping others when needed				0.559
12. Maintaining and monitoring public property				0.762
13. Consistently joining school, faculty, community or society's activities				0.820
14. Always participating in activities in order to resolve the problems or in creating benefits for the public				0.707
15. Being in line with the standards of Vajiravudh College's regulations				0.513
28. Being able to guide, order or direct the activities of the group, faculty and the school to reach achievement goal				0.685
30. Being fluent in speaking, reading, writing with accuracy				0.597

Discussion

The researchers have addressed the idea, according to the research's objectives and have pointed out observations and interesting issues to be further discussed in 3 main points as mentioned below.

First Main Point: Based on analysis of the questionnaire elements of the desirable character indicator to Vajiravudh College's students, Kaiser-Meyer-Olkin (KMO), it turns out to be 0.839, suggesting that all of the information and the variables were well consistent with the theory of Preyanuch Apiboonyopas on the research of *"An Analysis of Explanatory Analysis Factor in Organizational Research"* and was also credible with the theory adopted by *Supamas Ungsuchote, Somtavil Vijitwanna, and Ratchaneekul Pinyopanuwat*, whether a preliminary inspection of the data elements analysed require consideration of the correlative matrix of the variables if they are not less than 0.30 or not. Similarly, the value in the range of 0.80 will be the most appropriate to be analysed according to Bartlett's Test's statistic, which was equivalent to 2.670 with significance

value of .000. The value that is less than .05 shows that the correlation's matrix of the variables is in relation and able to undergo further analysis of factor extraction. Consequently, the researchers have experimented by adopting Explanatory Factor Analysis through the factor extraction method in the main axis of common factors, along with the Principle axis factoring method rotated with Promax Oblique Rotation as a result of 4 main elements and 27 indicators with eigenvalue at 0.984-6.541 and cumulative variance at 57.193 percent, aligning to the research results of Preeyanuch Apiboonyopas. Also, the researchers have analysed the elements used for Explanatory Factor Analysis in a learning organisation survey and obtained 5 and 2 elements under the application of Principal Component Analysis and the Principal Axis Factoring Method, shown as 65.72 and 57.36 percent of accumulative variance respectively. Moreover, the results are corresponding to those of the research of *Wanpen Wirotchroenwong, Montein Ratanasiriwongwut, and Monchai Tienthong*, who conducted an analysis on Exploratory Factor Analysis of Self-Efficiency in Computer-Skill Perception, classified into 4 elements, all of which obtain eigenvalue at more than 1 with the highest accumulative variance of 69.083. The first element has the largest accumulative variance of 5.275, and also of 1.454 for the second element, then of 1.235 for the third element and of 1.017 for the last element.

Second Main Point: This research is composed of 4 possible elements to be used for indicator development in 4 aspects, including 1) Discipline, 2) Responsibility, 3) Knowledge and Ability, and 4) Sacrifice, which are in accordance with the leadership trait theory and quality standards of Vajiravudh College's educational management along with the result of the executives and seminars for head students in the academic year of 2017.

Third Main Point: Based on the research's results, the importance of leadership-skill characteristics of Vajiravudh College students caused by learning and teaching process of public boarding school format can be proved. Furthermore, the result of the research in this study can be developed in line with the credibility, qualifications and standards, as a tool for desirable leadership characteristic assessments of the Vajiravudh College's students.

Suggestions

In this study, suggestions are divided into two main issues as follows:

1. A suggestion on further use of the study

The desirable characteristic elements of Vajiravudh College's students obtained from this research can be used for further assessment and set as a goal for improvement of students' characteristics based on the Royal Guidance of King Rama VI, which include 4 elements i.e. discipline, responsibilities, knowledge and ability, and sacrifice. Moreover, the research's elements can also be further used to design additional tools to be used in an assessment of desirable characteristics of students in a credible, qualified and accurate way.

2. Suggestions for further studies

For further researches, the researchers may combine the two elements as an integrated analysis, explaining and conducting Exploratory Factor Analysis in the form of parallel analysis in order to group those variables. Furthermore, using Confirmatory Factor Analysis should be considered for consistent with the theory of variable elements in various dimensional aspects, which will lead to higher credibility in further studies.

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