Perception of Leadership in Electrical Engineering Students, UTHM

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Abstract
Demand for graduates with leadership skills more in priority to meet the needs of human resources. Hence, this study was undertaken to investigate the level of leadership skills among students in Electrical Engineering at University Tun Hussein Onn Malaysia. Descriptive study carried out to evaluate student leadership. The study sample consisted of 319 students Eclectic Engineering. We used the questionnaire to identify student's preconceived of leadership. If we wish to develop successful leaders, we need for students to understand leadership skills in order to upgrade their existing abilities. Data were analyzed using frequency, mean and standard deviation. The findings show that articulate the highest in leadership skills.
Keywords: Leadership, student's perceptions.

Introduction

The concept of leadership has been around since the early 1800s, but the process of how one becomes a leader has changed dramatically over the decades. It was believed that only certain people could be leaders based on certain characteristics or traits. These characteristics are what distinguish a leader from a follower. Stogdill (1933) looking at the characteristics associated with leadership, and found that certain physical characteristics, social backgrounds, intelligence and ability, personality, task-related characteristics and social characteristics influenced leadership. Although leaders may have these characteristics, one of the criticisms of the trait theory is that traits are difficult to measure and difficult to define. The problem that is linked to leadership is that some people are not leaders in all situations. Leadership may change in certain situations. Although a person is a leader in one situation, he/she may not be effective in a different situation despite having certain characteristics. Some of the literature on leadership today discussed what skills are needed to be an effective leader. These skills can be seen as characteristics or traits that are needed by leaders, so the concept of trait theory has evolved into something different where anyone can possess these skills rather than a select few. But having these traits alone does not make someone a leader. A person must take certain actions in order to be a leader so simply possessing these characteristics or traits is not sufficient.

So, before we see the perception of leadership inelectrical engineering students, we have to know what is leadership. Leadership can be viewed and analyzed from psychological, sociological, political, military, philosophical, and historical perspectives. There were as many different definitions of leadership as there were persons who have tried to define the concept. According to Albritton, *et al.*, the leadership is defined by people's perceptions of the leader. Leadership has been called the process by which an individual affects and directs the actions of others for achieving particular personal or group aims under specific circumstances. Leadership is about persuading other people to set aside their personal concerns and pursue a common goal that is imperative for group welfare. Hogan et al. (2009) identify 14 categories of leader behaviour: planning and organizing, problem solving, clarifying, informing, monitoring, motivating, consulting, recognizing, supporting, managing conflict and team building, networking, delegating, developing and mentoring, and rewarding. Northouse describes, "leadership as a process whereby an individual influences a group of individuals to achieve a common goal".

2.   Methodology

This study uses a quantitative approach is a survey of the test and answer the research questions. The aim of this study is to involve the views and perceptions of respondents about the level of leadership among students of electrical engineering. This method was chosen because it is able to decipher the issues and problems of leadership. Descriptive statistics such as mean, percentage and standard deviation will be used to analyze and describe the research question. Based on this justification, is a survey research design is very suitable and reliable able to answer all the research question.

2.1   Population and sample

The study population was a student of Electrical Engineering, UTHM. A total of 1888 students of Electrical Engineering has been identified. Rational choice is because of Electrical Engineering student fulfill all the demands and requirements of the study to be conducted. They also are students who have gone through university teaching and leadership skills have been exposed by the lecturers. According to the calculations

Cochran (1977) made, the required sample size was 319 respondents.

2.2   Instrument

In this study, the researchers chose the instrument in the form of questionnaires to obtain feedback and collecting data from respondents (Tuckmen, MG in MohdShukri, W., 2010). Size scale used in the questionnaire is the Likert scale because this scale is a composite measure that contains two or more items that are intended to evaluate a variable. This study will use a set of questionnaire contains a section to measure the respondents' leadership skills.

2.3 Analysis of data

These data were collected in order of questions to be analyzed. Researchers will review and examine the raw data obtained by the questionnaire that was returned. Data were analyzed using SPSS software. Table 2.1 shows a summary of data analysis based on the research questions and hypotheses.

Table2.1 :Methods analysis

Bil.	PersoalanKajian	KaedahAnalisis
1	What level of leadership among students in Electrical Engineering?	Mean, Standard Deviation.

3.   Results

A total of 320 sets of questionnaires were distributed to the students of the Faculty of Electrical Engineering (FKEE).

3.1   Leadership Findings

The results regarding the level of leadership among engineering students namely FKEE. Analysis of the data based on Part B of respondents leadership in student questionnaire FKEE, UTHM. There are fourteen items leadership skills in the analysis. Based on the analysis of Table 3.1 shows the mean and standard deviation of respondents for fourteen items leadership skills, overall it can be concluded that articulate at its highest (M = 4.72, SD = 0.41) of the respondents leadership skills. It shows that there is effective communication with others respondent in implementing something. In addition, respondents were also put Empathic at a moderate level (M = 3.50, SD = 0.70). Determined skills are at a low level (M = 3.01, SD = 0.80) according to the respondents surveyed. This will be discussed in the next chapter. The overall mean and standard deviation for each items for the overall leadership skills are tabulated in Table 3.1.

Jadual 3.1: Mean and Standard Deviation Leadership

No	Item	Mean (M)	Standard Deviation (SD)	Level
1.	Articulate: Communicates effectively with others	4.72	0.41	Higher
2.	Perceptive: Discerning and insightful	4.70	0.42	Higher
3.	Self-confident: Believes in oneself and one's ability	4.66	0.39	Higher
4.	Self-assured: Secure with self, free of doubts	4.62	0.37	Higher
5.	Persistent: Stays fixed on the goals, despite interference	4.60	0.39	Higher
6.	Determined: Takes a firm stand, acts with certainty	3.01	0.80	Lower
7.	Trustworthy: Is authentic, inspires confidence	4.60	0.31	Higher
8.	Dependable: Is consistent and reliable	4.59	0.37	Higher
9.	Friendly: Shows kindness and warmth	4.59	0.37	Higher
10.	Outgoing: Talks freely, gets along well with others	4.57	0.40	Higher
11.	Conscientious: Is thorough, organized, and careful	4.55	0.46	Higher
12.	Diligent: Is industrious, hardworking	4.53	0.32	Higher
13.	Sensitive: Shows tolerance, is tactful and sympathetic	4.50	0.43	Higher
14.	Empathic: Understands others, identifies with others	3.50	0.70	Medium
	OVERALL	**4.60**	**0.33**	**Higher**

4.   Discussion

The effective communication with others respondent in implementing something show the higher level. Follow

by Baltas (2007), perceived an effective leader as a person who was honest, farsighted, inspiring, fair, supportive, expressive, reliable, respectful of others' opinions, a good listener, able to learn from his/her own mistakes and who possessing strong communicative and administrative skills.So the colleges and universities strive to give students opportunities to practice citizenship, contribute service, and enhance communities as leaders especially in Electrical Engineeringcourse . Researchers Shertzer and Schuh (2004), performed a research study on how college student leaders perceived leadership and what confining beliefs the students held that restricted or promoted themselves from becoming leaders: "The students were asked a broad range of questions with the intention of discovering their perceptions of what leadership is, who leaders are, and what the process of leadership entails.According to Bauer and Green (2006), personality similarities between a leader and his or her followers impact perceptions about that leader. Follow by Turban and Jhones' (1998) investigation also suggested that, similarities in personalities have an effect on an individual's evaluation of a leader. According to Albritton et al., (2008) people generally have common set of beliefs about the characteristics leaders should possess. The authors also reported that, an individual is more likely to be viewed as a leader, if that individual is perceived to match a follower's leader prototype.So that, the effective communication was most important for student to involved in industrial.Rost, (2008) categorized leadership perceptions into two paradigms, industrial and post-industrial. Komives et al., (1998) labelled the industrial paradigm as the "myths" of leadership. According to these researchers, the "myths" of leadership included three characteristics, leaders are born and not made, one needs charisma to be an effective leader, and there is one standard way of leading.

The respondents were also put Empathic at a moderate level.According to Middlebrooks and Haberkorn (2000) leadership requires a leader and involves individuals and what they know, believe, and do. In addition, authors also stated that much leadership development has focused on the traits, skills, behaviours, and activities of individuals who have succeeded in leader positions.So, the most important thing is,the leader should be understands others and dentifies with others. According to ErenKouzes J, Posner B (1993), personal traits of a leader include intelligence, the art of public speaking, skills in interpersonal relations and communication, trustworthiness, the ability to inspire confidence and take risks, entrepreneurial abilities, courage and self-confidence. In addition, added initiative, vision, honesty, sincerity, truthfulness, directness, decisiveness, the ability to succeed and emotional maturity to leaders' characteristics. AccordingGore (1999) listed the features of an ideal leader as: positive behavioural attitudes, courage, decisiveness, dedication, trustworthiness, desire, ability to take the initiative, argumentative, possessing a sense of justice, unselfish, knowledgeable, passionate, truthful, able to move quickly, and the ability to make accurate decisions. This idea shoudbe have in empathic as a electrical engineering students.Follow by Rogers (1998) in turn, defined the post-industrial paradigm, leadership is based on relationships, and does not belong to any individual, leadership is meant to create change, and leadership can be done by anyone, not only by people who are designated leaders.

Determined skills are at a low level according to the respondents surveyed because a leader has the ability to guide people who share a common goal, determine the most effective methods for achievement, and execute the plan to do so. A desirable leader is also a person who is perceived as a member of the group through his/her actions, and who maintains an organizational environment in which group members feel as comfortable as does the group leader. Physical features, including height, weight, strength, and age, are seen as indicators of maturity, good health, and beauty, Kocel T (1984). Follow by Kouzes and Posner (1998), stated personality features were influential in the public's perception of individuals as leaders.According Brown, et al., (1998), categorized Canadians' opinions regarding leadership characteristics for electrical engineering students as a competence, dynamism, integrity, empathy, responsibility, personal style, political skills, episodic judgment, social background, political position.Empowering beliefs are those that encourage students to attain leadership roles. The beliefs were put into three categories, support from others, opportunities, and background and environment. Constraining beliefs discourage students from attaining leadership roles. They were in three categories lack of capabilities, lack of confidence, and lack of opportunities, Shertzer, J. E., &Schuh, J. H. (2004).

5.   Conclusion

The conclusion for this research is follow by Rogers JL (1996), it said that investigated the perception of the leaders in the student population found out four commonalities, leadership is an individual possession, leadership is positional, leaders possess particular qualities and skills, leaders act from internal motivations.This mean that electrical engineering students today was interested incommunication with others. If we wish to develop leaders, we need for students to understand leadership skills and abilities and to be able to recognize the effective leaders in their personal and professional life. Also, it would be interesting to repeat this survey at the end of the semester, after students have finished the theircourses in order to see whether their perceptions of leaders and their characteristics have changed under the influence of surrounding.

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