Leadership Competencies among Vocational Students in Design Capabilities

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Abstracts
Leadership competencies are leadership skills and behaviours that contribute to superior performance. This study was undertaken to investigate the tendency of vocational students in leadership competencies towards design subject in Vocational College. The study sample consisted of 278 samples from vocational college students. This research used the questionnaire to answer the research question related to leadership competencies. The data was analyzed using descriptive statistics which includes mean score and standard deviation. The finding shows that "self-awareness" is the highest mean score among the leadership competencies that vocational students practice.
Keywords: Leadership competencies, vocational students

Introduction

Vocational College comes from Technical College that was upgraded in order to strengthen the national education system that aims to provide skilled and semi-skilled workers for industrial purposes, and to prevent students who are weak in academics from dropping out (Idris, 2013). The goals in vocational subjects in vocational education are to produce students who are competent in the relevant fields of business and to enable them to get a job, start a business or pursue a higher level of training (Good, 2010). Students with high competence will have high interest in things done and have an attitude of responsibility to implement their job or solve a problem. This is supported by Royo (2011), who states that the invention is a subject that uses a combination of three-dimensional or concept of the mind, or the skills and attitude in executing a task or solving a problem. The result of the combination of these three dimensions will produce an idea that starts with the mind. Accordingly, the application of the skills they have created through innovation in vocational students can produce students who are competent, skilled in their fields to meet the needs of the industry and at the same time able to achieve the objectives set out in the vocational curriculum. A high level of competence in students will also show good performance on the job and allow the workforce to meet the needs of the industry. The transformation of vocational education aims to produce students not only with knowledge but also skills and leadership. Transformation in education Technical and Vocational Education (TVE) requires power design among vocational college students to produce work output from the vocational stream that can meet the needs and requirements of the industry (Curriculum Development Centre, 2002).

A focus on leadership competencies and skill development will promote better leadership. However, skills needed for a particular position may change depending on the specific leadership level in the organization. By using a competency approach, students can determine what positions at which levels require specific competencies.

2. LEADERSHIP COMPETENCIES

Leadership competencies are leadership skills and behaviour to contribute to superior performance. Competence is another essential quality of great leadership. We admire people who demonstrate high levels of competence. A person who influences or leads a group is expected be a competent leader, i.e. be well qualified and fit for leadership. Competence is characterized by both knowledge and skills. The potential for success in personal and professional situations is based on an understanding of one's competencies – the strengths that one brings to an endeavour – as well as weaknesses.

While developing the overall level of competence, there are several types of leadership competencies that are important in leadership and which exist in people in varying degrees (McCauley, 2006):

Leading the group	Leading the self	Leading others
- managing change - solving problems and making decision - task risks and innovating - setting vision and strategy - managing the work -enhancing skills and knowledge -understanding and navigating the organization	-demonstrating ethics and integrity -displaying drive and purpose -exhibiting leadership stature - managing yourself - increasing self-awareness - developing adaptability	-communicating effectively -developing others -building and maintaining relationships - managing effective teams and work group.

2.1   DESIGN PROCESS

According to Renwick (2004), the design process involves:

1) Identify problems, brief, analysis	Understanding the problem using free sketches, notes and images.
2) Specification	Written statement about what is required in designing
3) Previous study	Record the information using sketches, notes, diagrams, questionnaires and charts.
4) Ideas	Sketch or drafting idea by using a variety of techniques
5)Idea evaluation	By using notes or sketches
6) Expand evaluation idea	Show how products will be produced by using sketches and design view
7) Drawing design	By using orthographic design, design software
8) Production planning procedures	By using chart that shows stage-by-stage development

3. Methodology

The research design used in this research is quantitative research. According to Othman (2013), an approach that uses quantitative research refers to the use of objective measurements to produce numerical data that are typically analyzed using statistics. Survey is a method to obtain information in the form of opinions, attitudes and perceptions of a population of responding individuals sampled (Creswell, 2005). Based on this justification, the survey design is very suitable and reliable to answer the research question.

3.1 Population and Sample

In this study, the researchers used a simple random sampling in selecting vocational colleges. The advantage of using a simple random sampling is that if it is a large sample, the sample will be representative of the population (Idris, 2010). In the selection of the sample, researchers will focus on vocational colleges offering courses in technology only. In this study, a total of 1021 students in second year in vocational colleges offering courses in engineering technology are selected as the population for this study. The determination of sample size refers to the sample size determination table submitted by Krejcie & Mogan (1970). A sample of 278 students was selected by the researchers from the four zones that were chosen.

3.2 Instrument and data analysis

Instrument is a measure that can be used to determine whether the data and information required is available or not. The instrument used is questionnaires Chua, (2006). According to Ismail (2009), questionnaires can reduce the possibility of bias due to personal characteristics and skills of researchers. For the purposes of this study, questionnaires will be distributed to the respondents. The questionnaire that was distributed in the study contains two parts: Part A and Part B. Part A contains items related to demographics, while Part B is about the leadership competencies towards design subject in vocational college.

Data was analyzed using mean and standard deviation to measure the highest tendency to leadership competencies among vocational students in design capabilities.

4.   Findings

Table 3.1 shows the mean and standard deviation for the respondents based on the literature review about leadership competencies. There are 13 items that have been presented to respondents. The item with the highest mean score (with the mean score of 4.26) is the question "I always increase my self-awareness to complete my design task". Meanwhile, the item with the lowest mean score (with the mean score of 3.92) is the item for number 8 that is "I always manage myself for easy work in leading my group". All the particulars shown in

Table 3.1 below:

No	Item	Mean (M)	Standard Deviation	Level
1.	*I can adapt to manage change when my idea is not chosen in my group*	4.22	0.915	High
2.	I can solve problems that happen in the group	4.25	0.771	High
3.	I can make good decision in my group.	4.23	0.786	High
4.	As a leader, I will take a task risk.	4.13	0.803	High
5.	I can manage my work into documents.	4.13	0.823	High
6.	I always enhance my skills and knowledge to lead the group	4.09	0.834	High
7.	*I always understand every group problem when leading my group.*	4.12	0.835	High
8.	I always communicate with people effectively	3.92	0.868	High
9.	I always increase my self-awareness to complete my design task.	4.26	0.778	High
10.	I always ask a teacher about my design ideas	4.06	0.846	High
11.	I always manage myself for easy work in designing.	4.06	0.848	High
12.	I prefer working in a group while designing.	4.27	0.780	High
13.	I always maintain good relationship between my group mates	4.02	0.880	High

5.   Discussion and conclusion

From the data that was analyzed, the highest mean score among the leadership competencies is from leading the self (self-awareness). Self-awareness can be defined as having clear and realistic perception of who you are. Self-awareness is not about uncovering a deep dark secret about yourself, but understanding who you are, why you do what you to, how you do it, and the impact this has on others. Self-awareness is directly related to both emotional intelligence and success. By that, self-awareness helps students to achieve goals because it considers their strength, weaknesses, and students' goal setting. It also guides students to the right path by choosing to pursue opportunities that are the best fit for a student's skill-set, preferences and tendencies. Besides that, self-awareness can identify situation and people that hit their triggers and anticipating their own reaction easier and the most important thing is to make positive behavioural changes that can lead to greater personal and interpersonal success (Urdang, 2010). This shows that, if vocational students set their goal to design a good product, it will influence a positive impact to success because only students know their strengths and weaknesses during designing.

The findings indicate that communication has the lowest mean score among the items that were answered by the respondents. Communication is simply the act of transferring information from one place to another, whether this can be vocally, in written form, visually or non-verbally (Ray, 2003). The ability to communicate is an important skill in honing students' talents in leadership (Tomlinson, 2004). According to Ray (2003), good interpersonal communication skills enable us to work more effectively in groups and teams. That means, when students want do their design product, communication between their group members, instructor or people surrounding, can assist in designing a product that is more functional and marketable. Therefore, in leadership competencies, each vocational student must develop and improve their communication skill, so that when they graduate from vocational college, they will be more marketable and can face the industry sector more easily.

Besides that, leadership skills are important to vocational college students because as future leaders, they should be willing to take responsibility. According to Brundret (2003), vocational students must have leadership characteristics such as competence, dynamic, integrity, empathy and responsibility, which will make vocational students in vocational colleges more confident and more marketable once they enter the industry for work.

In summary, this paper will help vocational students to know their design capabilities based on student leadership competencies. Besides that, having competencies will involve their knowledge and skill in fostering creative and innovation design product in an organization or in a group through critical reflection, problem analysis, risk assessment, self awareness and so on. This study found that students in vocational colleges should have the leadership competencies that will be guideposts as they reach deep within themselves by learning about their own beliefs, their talents and their performance in designing products.

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