

**Exploration of relationship between
management qualification and career
success for engineers in energy sector**



Pay For
of Saudi Arab

Assignment

Abstract

As the culture of survival of the fittest establishes globally in every organization, the race to move ahead in one's career becomes challenging day by day. In the field of engineering, it is now considered an essential element to be dually qualified, both in engineering and in management. The field of engineering management is expanding rapidly due to the requirement from the industry for engineers to possess managerial skills, as this is the area, where engineers do not clasp their expertise. This study aims to discover the relationship between possessing dual qualifications (engineering and management degrees) and career success. It was a need to identify how dual skills impact on the career success of an engineer. For this energy sector of Saudi Arab was chosen. Two hypothesis were formed according to the dual skills in order to identify their impact on the career success. The data was collected from 70 on job engineers who possessed dual qualification through a questionnaire, which was based on the identified variables and was constructed according on five point Likert scale. The collected data was then analysed statistically on statistical software known as SPSS, the version of the software used is v20.0. After careful analysis of the data the results of hypothesis were declared, the results shows that both the skills have a significant impact on the career advancement, where managerial skills obtained through management education contributes more on the career success of an engineer. The aims and objectives of this research were also met through the declaration of the results, it was evident that dual qualifications not only contribute a significant impact on the career success of an engineer but it also boosts the personal development in an individual. The research can become a source to develop importance among individuals and organizations to develop a culture of obtaining dual qualification as it benefits both the employee and the employer.

Chapter 1: Introduction

Chapter 1 of this research involves introductory components, which is problem statement, aims of research, background of research and scope of research.

1.0 Problem Statement

In today's competitive world, it is very difficult for employees to climb the ladder of success without having a competitive edge over the other employees in the company (Babcock & Morse, 2001). As companies make efforts to reduce their costs, the human resource department also faces challenges to hire the most efficient resource at the most affordable salary.

As the contemporary education system starts to diversify, many new degrees and professional education areas have started to open for people to enhance their skill sets. Previously the job of a person in the marketing department may only have been to look after the marketing activities but as companies are compelled to adopt cost reduction policies to make their systems more efficient, people have started to perform multiple tasks; hence, multi-skilled people have been in demand. Today a marketing person would not only perform his marketing duties but might also look after the finances or accounts of the company (Banik, 2008).

Similarly, in the area of engineering, previously engineers used to perform only engineering tasks and people who had degrees or professional education in business management performed all of the management work (Benjamin & Dow, 2006). Today companies require and expect engineers to perform dual duties, both of engineering and engineering management. Due to this, competition has intensified and many engineers want to pursue their Master's degree in management so that they can succeed and be promoted ahead of others (Enzer, 2014)

The major issue in this transition is the change that transforms a person who had technical skills into a person who possesses dual capabilities. This change is not easy to achieve. It is a known fact that change is very difficult for human beings to accept and therefore many people hesitate to advance their education. One question worthy of further research is whether people who take risks and spend their time and money to advance their skill set really do succeed later on in their careers (Babcock & Morse, 2001).

In the context of the Saudi Arabian energy sector, it is desirable to establish the success of engineers who pursue management degrees after their engineering education.

1.1. Aims of research

- ✓ To determine the impact of possessing dual qualifications (engineering and management) on the career level of engineers.
- ✓ To determine the difference in career success before and after having a dual qualification.
- ✓ To establish the benefits that engineers receive after being awarded a formal management degree.

1.2. Background and Context

1.2.1. Energy Sector and its functionality

The function of the energy sector is to produce energy of various types and to make it consumable for the public and through this they earn profits. The main departments that involved in such organizations constitutes mainly engineering department i.e. engineers employing their technical skills for the production of energy and the administrative or management staff. An example of this can be considered as for an IT company where telecom engineers work to develop IT products but the management people works on its marketing and cater all the operations of the company (Billiton & gao, 2008)

Energy sector is a sector that is very big, and its products remains an input in all industries according to a report from U.S. Industry Quarterly review on energy (2015). The energy sector also depends on widespread capital expenditures to mine fossil energy sources and change them into end-market products such as electricity or gasoline. Accordingly, energy production depends on long cycles, with an average time of seven years between the exploration phase and the production phase for oil fields.

The key players of energy in the world are the OPEC, china, Russia and the United States. The US energy report (2015) assert that 20% of the world oil reserve can be found in Saudi Arabia with production leads of 13% of OPEC production target (Smith, 2015). The implication of this shows that energy sector in Saudi Arabia has so many activities especially manufacturing phases and production phases going on and this adversely requires engineers in all field for it exploration. Engineer ranging from mechanical, electrical, chemical, maintenance, fire and safety engineering are few to mention.

1.2.2. Role of Engineers in the Energy Sector

Electrical engineer and management roles are two different activities in the energy sector because electrical engineers' roles deal with electrifying and power activities in this sector while the management role deals with activities linking managing and coordination of the organisation according to company strategy (Bailey & Barley, 2005). However, the world is changing and becoming a global village and organisations are constantly changing their structure and ideas in order to move ahead of their competitors. Therefore, the trend in organisations is to become cross-functional with organisations looking for competent staffs that have the ability to multi-task in roles. It is evident that when someone possesses both an electrical engineering background and management background they become sought after candidates, especially in energy sector organisations in Saudi Arabia where the organisations seek engineers with these skills (Enzer, 2014).

According to Bowman & Farr (1999) looking at people in the electrical engineering department and engineering management department in an organisation can seem like two different entities notably it can be observed that these departments do not appear to be inter-related and are apart from each other in the organization. That is not the case, however, because both of these departments are inter-linked and have various things in common which obviously indicates something for this research to find. If, for example, taking the case of an organization making chips for macro computers (such as Intel), there exists a deep relationship between both departments because only engineers know the specifications and configuration of the chip which is subsequently tendered to the management department to see whether it is a viable product for marketing (Dow, 2010).

Therefore, the relation can be vividly judged between the two departments so that once the product is made specifications are set for the product before it is marketed, which is the work of an engineer making it and then in accordance to it, the product is distributed in the market. Therefore, in accordance with the discussion above, it is evident that cross-functional teams may prove beneficial for organizations because they involve persons from different departments who can view things from different aspects and can give maximum propositions for its betterment or can predict the future prospects for any product (Giegold, 2001; Mallik & Chaudhury, 2000).

Concerning this, the research work aims to reflect more on the relation between the department of engineering and management in the energy sector organization. Moreover, it will be discussed on how a person with an engineering background pursuing the business degree

afterwards and working in the management department of the organization for which he/ she used to work in the engineering department can be proved useful for the organization.

However, the main objective of this research remains the point of analysing engineers who have and want to enhance their skill set with add-on skills of management for their career progression.

1.3. Scope and Objectives

The main objective of this research work is to establish the level of success engineers benefit from in their careers after pursuing a management degree. It is one of the core objectives to show how a person with an engineering background is also useful for the management department if their skill set is advanced by attaining a formal management education.

Several participants are included in the surveys to identify how many engineers progressed further after receiving a degree in management. Thought has been given to how much importance engineering graduates place on attaining a management degree. The proposed research work reflects that a person with an engineering background working in the management department can be of significant importance for an organization and due to this, the organization can also reduce its costs by hiring a single person for dual tasks.

By promoting employees who possess both engineering and management capabilities, suitable degrees can become a major source of success for any organization (Duman & Wearne, 2003)

Considering this reason, the presented research work can be considered viable and rational for future research and academic investigation because few reports have previously focused on a case study of an energy sector organisation in Saudi Arabia, with most papers discussing management and addressing electrical engineering roles as a separate matter.