

# THE EFFECT OF EDUCATION AND TRAINING ON COMPETENCY

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## Abstract

*This paper analyses the concept of competence and the important effect of education and training on the individual competence, hence the organizational competence. The purpose of this paper is first to describe the development of competence and define it; second, to study comparatively two different cases on the effect of education and training on competency. The paper addresses whether education and training has an effect on individuals' competency and therefore on organisational competency. The literature review reveals two cases that studied the effect of education and training on competency. One case shows that there is an effect on competency, but the other case shows that there is no effect.*

*The research methodology used in this paper is a comparative study. The comparative analysis method is used to investigate and analyse critically both cases through a comparative frame work in order to better understand the two different results. This comparative analysis reveals that there is indeed a positive relationship between education and training on competency despite the different result of the two different cases. The implication of the study is that education and training has to be properly implemented for there to be an effect on competence.*

*Keywords: Competence, Competency, Education, Training, Theoretical Knowledge.*

## 1 INTRODUCTION

The concept of competency has been developed over a long period of time. It plays an important role in organisational success. In fact, many authors have discussed the importance or effect of competency on an organisation. Amongst these distinguished academics are Selznick (1957) and Prahalad and Hamel (1990), where they analysed the effect of competency on individuals and how their performance reflects on the organisation's success.

The purpose of this paper is to examine the question whether education and training has an effect on individuals' competency, and therefore on organisational competency. The findings of two different sets of researchers provide contradictory conclusions, where one stream of research concludes that there is a direct effect and another that there is no effect at all. It is argued in this paper that education and training has a direct positive effect on competency. Where researchers show no effect, it is our contention that this is probably because education and training were not properly designed and implemented.

The aim of this paper is to understand the effect of education and training on individual competence and on organisational competence. The paper starts by defining the meaning of competence and competency. Many authors have written articles using the terms “competence” and “competency” interchangeably, assuming that they carry the same meaning. In the later part of this paper, the importance and the role of competence, education and training are critically analysed using two differing and opposite perspectives from two separate sets of researches. One set provides evidence that there is no effect of education and training on competence; whereas, and another set provides contradictory and solid evidence of the important role of education and training on organisational competence.

Relevant and well-designed education and training has a direct effect on competency. If education and training are related and tailored to the market need and individuals are provided with the right theoretical knowledge and the proper skills for their work, then these individuals will be able to carry out their tasks. In fact, there are other factors that affect the individual’s receptiveness to these competencies other than education and training. For example, individual’s capacity to receive education and training, his/her ability, experience, personal attitude, behaviour, skills and the overall organisational environment where they work. These characteristics contribute to organisational success. The contribution of this paper is to highlight the direct effect of education and training on competence.

The remainder of this paper is organised as follows: the comparative literature analysis research methodology is outlined next. Then the core constructs of the competency argument competency, education and training are defined and critically analysed in their separate sections. Whether there is a correlation between education and training and individual competency is then discussed. The final section concludes the paper and details further ongoing research.

## 2 METHODOLOGY

This paper is an ongoing research. Comparative analysis of the literature is an accepted form of desk based research that compares the works of different authors (Hart, 1998). Two cases have been identified from the literature review. Both the cases examine the effect of education and training on competency; however reaching two contradictory results. Using a comparative analysis, both of these cases will be analysed thoroughly on the method that each organisation used to implement education and training. This critical comparative analysis will help to determine whether there is a positive effect of education and training on competency.

The purpose of this paper is to critique and analyse the reasons for the two cases having two different results on the effect of education and training on competency. This critical comparative analysis suggests that there is a positive link and effect of education and training on competency.

A comparative analysis requires a comparative framework (Hart, 1998). The research framework used in this paper is contrasting two contrasting arguments. One argument concludes that education and training has an effect on competency. The other argument concludes that there is no effect. These two studies are critically analysed on the following criteria: (a) the implementation of the education and training programme, (b) the market relevance of the education and training programme, (c) right theoretical knowledge, and (d) right skills. It is argued that where researches show no link it is probable that education and training were not implemented properly and did not meet market needs. If education and training is properly implemented then there is a strong probability that the effect on competency will be positive.

### 3 COMPETENCY

#### 3.1 Development of the term Competency

The concept of competency was developed as early as 1957 by Selznick (1957). The POCCI model was developed to identify the resource allocation to develop core competency to gain competitive edge (Yang, et al., 2006). Prahalad and Hamel (1990) in their article “The core competence of the Corporation” analysed two companies, GTE and NEC, in an attempt to argue the importance of core competency on corporate success. GTE started as a stable and profitable company, whereas NEC in contrast was much smaller. Nevertheless, NEC was able to overtake GTE because it conceived core competency in its organisation, and GTE did not. Indeed, competency was the most important factor to complete a task (Prahalad 1990). McLagan (1983) described competency as the trait and knowledge of a worker that works as the base of an effective performance.

#### 3.2 The difference between competence and competency

The term competence and competency are confused in the literature. Many authors, including Winterton (2009), McClelland (1973), Thornston (1992), Athey and Orth (1999), Kurz and Bartram (2002), Schippmann (2000), Lustrri 2007, Le Boterf (2000), etc, wrote about competence and/or competency using one of these terms, and sometimes both of them in the same article, believing that both terms hold the same meaning. But these two terms are different. Over time, a considerable debate has occurred over the meaning of both of these terms.

Competence and competency are used in this paper as defined by Winterton (2009) which is based on McClelland’s (1973) use of the term. Competency or competencies are an individual’s characteristics that they need to have in order to perform well in their job. On the other hand, the term competence or competences is used to describe the job requirements that the individual needs to know or to have in order to be able to perform a task required by a specific occupation. In another words, it is the ability of an individual to perform a required task in their job. Some authors have also attempted to describe competency as an input, which is used in the American approach, or a personal characteristics. Others have described competence as an output, which is the British approach that reflects the job requirement of that individual (Winterton, 2009).

#### 3.3 The many meanings of competency

McClelland (1973) defines competencies as personal characteristics which will lead to a high performance. Similarly, Thornston (1992) illustrated that competency is a collective characteristic of behaviour that relates to work performance. These characteristics were categorised as aptitudes, abilities, and knowledge, where all can be improved or enhanced by education and experience. Athey and Orth (1999) described competency in terms of management competences, where employees’ competencies are optimized and developed by an integrated set of human resource activities to improve the employees’ effectiveness, hence improving the organisational effectiveness. In the same vein, Kurz and Bartram (2002) and Schippmann (2000), describe competency, as the focus on “how” the work is done rather than on “what” has been done.

Lustrri 2007 based on Zarifian (1999), defined competency as an individual’s capacity to take initiative, to do more than what is expected, to understand and control new emerging situations and to be responsible for decisions, hence achieving recognition. Le Boterf, (2000, p.12), stated that competency is an action which results from the combination of:

- 1) Personal resources: (knowledge, abilities, qualities, experiences, cognitive capacities, emotional resources etc). He draws four elements from the individual personality:
  - Knowledge: This includes: Theoretical knowledge, (understanding a phenomenon, object, situation, an organisation or a process). Environmental knowledge, (the context, comprising

knowledge regarding systems, processes, materials and products, strategies, organisational structure and culture, etc). Procedural knowledge (Knowing how an action must be conducted; it involves procedures, methods, adequate operational modes and a set of actions performed in an established order).

- Know-how: This includes: Formalised know-how (how to use procedural knowledge). Empirical know-how (learning from practical experiences which require sight, discernment, reflexes, intuition, sensitivity, etc). Cognitive know-how (the intellectual operations necessary for the formulation, analysis and resolution of problems, conceiving and conducting projects, decision making, creation, invention, generalisation, analogical reasoning, etc) which is very similar to Zarifians' (1999) described when defining competency.
  - Aptitude or quality: related to knowing-how-to-be, and referred to as behavioural competencies; such as abilities in relationships, flexibility, pro-activity, etc.
  - Emotional and physiological resources: related to knowing how to control emotional reactions which in the end may help in avoiding obstacles and risks or may give an advantage in solving a problem.
- 2) Environmental resources: as stated by Le Boterf (2000) includes technology, databases, books, relationships, networks. In this sense, the individual can recognise those areas than need to be developed in order to improve their personal resources that will help him/her to perform in a more competent way.

Strebler et al. (1997) also described competency in two ways, as follows:

- Competency is based on the individual's behaviours that they need to demonstrate while working.
- In the second description, competency is defined as the minimum standards required by individual to perform.

The above illustrates the importance of competency; the question that emerges out of this is what factors affect employees to be or not to be competent in their work.

## 4 EDUCATION

Education is an important element of competency. Education is becoming increasingly in demand for the purpose of knowledge and preparation for work, but it is also important for social image or status.

Jorgensen (2004) argues that there is a separation between education and work. There are three reasons for this separation based on a study that was carried out in Denmark that compared it with France and Germany. Firstly, the purpose of education is not only to educate individuals for the market place but also to turn individuals into active participants in a democratic community. Secondly, education is not for learning purposes alone but also to acquire certain social position. Thirdly, education is looked at from the perspective of human development - in other words, individuals educate themselves for personal development rather than to merely meet a required work specification.

Other researchers, such as Lave and Wagner (1991), support the opposite opinion. They believe in the practical application of education for market purposes. In other words, education must be built to meet market requirements. It is the combination of general learning knowledge and theoretical knowledge that is looked at as the foundation knowledge for these individuals. Later, this knowledge should be followed by another kind of learning that the organisation will provide to the individual based on the work requirements. In this case, even those individuals with less education will benefit from the organisational learning.

Education is increasingly important not only for the growing demand of technology, science and other fields, but also for improving individuals' prospects, hence gaining a better opportunities for employment. A study was conducted by Bynner (1998) to collect evidence on how individuals' educational needs changed over a period of time. Two thirds of the people, who were born in 1958,

left school at the age of 16 and easily found jobs and maintained them. People who were born in 1970, however, faced a different picture. Due to their lack of knowledge and skills, they had many problems finding jobs and even when they found employment, found it hard to maintain it.

#### 4.1 Education and Competency

Education has an effect of competency. Initially, competency was used in the field of education to describing trainee-teachers' behaviour (Bowden and Maters, 1993). Later, competency was used in the management field, where it then became a widespread term. In 1973, McClelland illustrated the importance of competency, as a key factor, on learning efficiency. Competency was described as being more effective as output of learning than intelligence (IQ) (Yang B. 2006). Burgoyne (1993) described competency in different ways to fit different scenarios. In relation to education, Burgoyne related it to work preparation and professional recognition (Bowden and Maters, 1993). Lustrini (2007) based on Dutra (2001), analysed and described the mutual contribution of both the individual competency and the organisational competency based on individual learning, hence individual sharing. In other words, the company will provide the individual with its assets (in this case learning or knowledge), which involve dealing with many different scenarios. In return, an individual returns to the company their learning experience applied to work, hence enabling the organisational success.

## 5 TRAINING

Training has an effect on competency. Training, similarly to education, has been researched by many authors including Burke (1989), Lewarn (2002), Emad and Roth (2008), Karka (1998), Smith (2006) Bandura (1986), etc. The idea of linking education to industrial/business models goes back to the 1920s, centred on specific outcomes in behavioural objective form (Burke, 1989). Some countries integrated competency-based training into the national education system (Lewarn, 2002a), such as the national vocational qualification (NVQ) in England, later followed by Scotland, Wales, Australia, and New Zealand based on Emad G. and Roth W. 2008 study referencing Karka S. (1998). Also, the Australian government introduced a system called the Vocational Education and Training (VET) scheme.

Smith, et al., (2006) have conducted extensive research into Australia's Vocational Education and Training (VET). In late 1980s, the federal labour government identified the need for the VET system in order to develop individuals' skills to meet the industries' needs.

The degree of receptiveness of the individual to these training programmes varies according to several factors. Based on Bandura's theory (1986) of social cognition, Young and Sexton (1997) treated entrepreneurial learning as a mental process that acquires and stores skills and knowledge using attitudinal, emotional, motivational and personality-related factors such as self-efficacy, confidence, motivation to complete tasks and achieve goals.

#### 5.1 Training and Competency

The development of the VET (Australian system), as well as the NVQ (English system), are both competency based, for the individual to meet organisational needs (Roodhouse, 2004). Hyland (1996), however, argued that the NVQ system was not developed for employers' needs rather it was developed because of the presence of a number of awarding bodies.

However, Emad and Roth's (2008) study about maritime education and training systems shows that education and training did not help knowledge to transfer to the job requirement nor to fulfil the targeted objectives. The reasons underlying the outcome are:

- The formal education is not obtained for competence at work; rather it is a compulsory requirement to enable individuals a passing grade in certain written and oral examination.

- Students are acquiring the kind of knowledge that helps them pass the test rather than obtain job related competency.
- Instructors believed that students did not need to understand and it is good enough if the students know the correct answer.

The end result is that these individuals learn what they learned to obtain the job rather than to carry out the job. In another study by Man (2006) links entrepreneurial learning with the competency approach. He suggested the competency approach - entrepreneurial learning by considering four dimensions:

- Inputs: It could be the individual attitude, emotion, value and personality-based factors that stimulate and deepen the learning process.
- Process: The individual learns mainly by doing. Later, the individual must be able to apply what they have learnt into actual practices and current situation.
- Outcome: the outcome is considered as competency areas that need to be acquired.
- Contexts: the internal structure and social relationships within the organisation.

The findings of this study suggest that there are six behavioural patterns of entrepreneurial learning: seeking learning opportunities, learning continuously, learning selectively and purposely, learning in depth into the trade, improving the reflecting upon experience and transferring what have been learnt into current practices.

Based on the above studies, training does have a direct effect on competence; therefore it is used in several countries prior to gaining employment through training schemes like the NVQ, VET and other systems. A different outcome is in Emad and Roth's (2008) study, however, where training was not used for developing competency, its main purpose, rather it was used to get or maintain jobs. Therefore, it did not have a direct effect on competency.

## **6 THE EFFECT OF EDUCATION AND TRAINING ON COMPETENCE**

From the discussion above, an important question arises: what important factors affect individual competency hence organisational competency? Is there a direct positive affect of education and training on competence?

The development of competency has been discussed and analysed by many authors, who have also related the organisational success to its ability to be competent, such as Selznik (1957), Prahalad and Hamel (1990). Earlier articles suggest what the organisation should be doing to make individuals more competent. In later articles, the trend is to suggest that these individuals should take the initiative to develop themselves and be more competent and apply whatever they have learned to practice.

Two important factors that affect competency are education and training. Earlier in this paper the increasing demand of theoretical knowledge was discussed. Some authors argue that education has grown because of the growing requirement of the organisation and social life. In other words, education does not necessarily relate to work knowledge. Nevertheless, many argued that education should be built to meet the market requirements, whether in school or in the organisation, in order to compete with the ever-growing demand of technology, science etc. Indeed, education acts as the theoretical foundation of knowledge that individuals use to build organisational knowledge in the future.

One reason that some of the studies show the unrelatedness of education and work competency is because they do not design education with market needs in mind. Therefore, the given education for future employees was irrelevant to the job requirement. As a result, the types of knowledge given will not meet the type of knowledge required for particular jobs. In Kuwait for example, different organisations (private and governmental) are suffering from unqualified employees, at the same time employees are suffering from lack of knowledge to do the required task. After some time period, these

employees develop a sense of carelessness to do the job because they don't know how to do it and because of the endless complaints of the upper managers. In this case, education plays a very important role in employees' competency.

Training, similar to education, is considered as one of the required skills in order to perform a task. Similar to education, some authors believe that training may not be relevant to competence as discussed by Emad and Roth (2008). In this study, a maritime education and training system showed that education and training did not help knowledge transfer to the job requirement.

There were several reasons to explain why the education and training seemed not to affect competency: the formal education did not naturally imply competence at work; students were acquiring the kind of knowledge that would help them pass rather than becoming competent; and finally, instructors believed that the student needed to know the right answer and not necessarily understand it. The importance of training is evidenced in many countries that have developed competency-based knowledge systems such as the national vocational qualification (NVQ) in England, later followed by Scotland, Wales, Australia (vocational education and Training VET), and New Zealand (Karka, 1998 cited in Emad and Roth, 2008, p.262).

Education and training are not the only two factors affecting individual competences. Other factors should also be considered. For example, personal characteristics such as ability, experience, cognitive capacities, receptiveness, behaviour, knowledge background etc. Also the environment to which individuals are exposed to; whether in their personal environment or in the organisation environment that they work in are important factors.

## 7 CONCLUSION

This paper is part of a wider research with the aim of describing the effect of education and training on competence. The critical comparative analysis concludes that there is a direct positive effect of education and training on competency.

Indeed, competency is increasingly important to organisational success. Constantly changing and ever growing needs of technology, organisations need to have employees who know how to react, interact and make the right decision to these changing situations. In order to maximise each individual's competence, it is important to know what factors affect competences.

This paper critiques and analyses the important effect of education and training on competence. Education and training should be treated and tailored to the markets' need in order to maximize the work benefit from the individuals' competences. Education and training should be well implemented in order to have a positive effect on employees' competency.

There are other factors that affect individual competence; such as the organisational environment, personal characteristics; such as ability, experience, receptiveness, behaviour, knowledge background etc. All those factors play an important part in an individual's competences.

The methodology used in the paper is the comparative analysis method. In the first part of this paper, the development and the definition of competency were provided. Then a comparative analysis was carried on two opposing arguments on the effect of education and training on competency. Both arguments were critically analysed to evaluate the effect of education and training on competency. This paper suggests the direct and positive link of education and training on competency, hence, emphasising the importance of both education and training on individual competency.

The next stage of this research involves the collection of data through semi-structured interviews and survey questionnaire, which will be done with employees in private and public organisations in Kuwait. A set of questions has been designed to collect data on the effect of education and training on competency.

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