Models of linkage between education centers and work place

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Abstract

Since the 1970s, greater attention has been given to the integration of work and education and different models of activities, such as work experience, work shadowing, work simulation, work observation, and workplace visiting have been organized in the workplace to prepare students for work (Rombold, 1990; Willshire, 1994).

There have been major changes in the concept of relationship between work and education. There can be seen four models of industry/school. Development of these four models follows the development of the concept of integration of work and training in Australia since the 1970s. Regarding the models, there are four stages in development of this concept. In the second half of the 1900s and in the early 21 century, development of information technology (IT) has been created a new model based on virtual instruments for exercising work in a virtual workplace.

This article will classify and analyze the relationship between industry and school provided in practice. Consequently, four models of "teacher-focused", "student focused", "curriculum focused", and "market focused" have been recognized. Each of them has some

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advantages and disadvantages. However, all models (separated or together) can be used in providing opportunities for both industry and school to make a closer relationship between the two parties. Finally, there are some suggestions by author for application of the models in the case of Iranian vocational education and training system.

Key Words: Education model, workplace, work experience, work shadowing, industry and school linkage, vocational education and training (VET)

Since the 1990s greater attention has been given to the integration of work and education in response to the economic recession and in particular youth unemployment in many Western countries. Therefore, these countries set connections between training centers and the workplace, especially in terms of vocational education and training. They started preparing the students for world of work as a solution in the path of economical expansion and job- creation (McKenzie, 1979; Issackson, 1982; Watkins, 1984; Dale, 1990). During the past three decades, this solution has been expanded along with developments in the theoretical and practical aspects. This article has investigated the above solution.

Models of relationship between school and workplace

According to the literature related to the practical models of relationship between school and workplace, during the recent three decades, many methods have been invented and used for achieving this goal at an international level. Each of these methods focused on a significant factor as the axis and the basis for this relationship, which can be the basis for categorizing these methods in the framework of a special model.

Paterson (1990) identified two types of relationship models based on two axes in his studies on methods of “combining work and training” in England and Australia in the 1970s and 1980s

These two factors are the "teacher" and "student", which in two different approaches, stress the relationship between school and workplace. For this reason, in his categorizing, Paterson has divided the set of relationships between school and the workplace in the 1970S and 80s into two models, the "teacher focused model" and the "student focused model".

In the 1990s numerous developments took place and new methods were invented, which changed the axis and foundation of the relationship between the vocational education and training (VET) and the workplace. This was by emphasizing on the ever-more relationship between education centers, especially in the field of vocational education and training(VET) and combination of training and work. The set of activities that help in creating a closer relationship between training and workplace are divided into four groups: a) teacher focused model, b) student focused model, c) curriculum focused model, and d) market focused model.

Teacher Focused Model. In the first phase of combination of work and training, increasing the teachers' knowledge about the world of occupation has been in the center of attention. The aim of this method was to enable the teachers to familiarize their students with the workplace. This is due to the fact that the teacher is the only person who transfers the knowledge to students. If the teachers do not have a clear understanding of the workplace, how can they familiarize their students with it? Therefore, it is vital to provide opportunities for teachers to become familiar with the workplace to create such relationship.

Student Focused Model. In the second stage, the combination of work and training expanded from increasing the instructors' knowledge about the workplace to the students' attendance at the workplace. Some of the researchers find the relationship between work and training in the students' involvement and contact with the workplace which is done in various forms. With regards to the methods offered by Hobbs (1982), Rumbold (1988), and Paterson (1990), for establishing relationship between the school and workplace in the student focused model, three general forms can be considered; a) students' work experience in a real workplace

setting; b) work in a work simulation such as a training workshop; and c) precise observation of person's work–activities at his work.

Curriculum Focused Model. In the third stage, the concept of combination of work and training was promoted from the stage of preparing the students for work through the process of work placement to the stage of making the VET curriculum relevant to the industry needs. With major changes occurring in industry, commerce and agricultural from efficiency to quality to flexibility and finally to innovation, VET requires flexible and innovative training in order to meet industry changes and needs for skilled, creative, and innovative workforce (Hayton & lavender, 1992).

And therefore, curriculum was influenced by the needs of the economy sector. The appearance and expansion of the new method of "Competency Based Training" helped a lot in the expansion of the concept of combination of work and training in countries such as the United States, the United Kingdom and Australia (Collins, 1993; Brothwick, 1993). This method has a lot of attention on the quality of the product or the output of the education system and emphasizes more relationship between VET and the workplace. The method stresses on responding to the job market and industry needs.

Market focused Model. In the fourth stage, the concept of combination work and training, was promoted to direct relationship interaction between educational institutes and production organizations; in such way that the behavior of each impacts the other. This concept is stated in the supply and demand format in the training market. What this means is that the training courses are offered by the VET Producers in the training competition market. The demand for these courses takes place by production and service institutes. In this model the training market is looked at as a mechanism for creating stronger relationship between training and work (Anderson, 1995). However, in most countries, the payment of technical and vocational expenses is a government responsibility. In other words, governments are the main producers of VET curriculum and its financial hand. Through this, the production institutes are taking advantage of such trainings in a

relatively free way. It can be concluded that in the training market – that of both supply and demand- is under the financial support influence of government policies and there is no possibility for creating a competitive free market so that the mechanism of such market can be used for balancing. For this reason, although the "market focused model" is very effective and beneficial in the fields where there id enough budget supplied by the government and there is high demand for it, it cannot be used in all vocational education and training fields.

From what was said, it can be concluded that any of the four mentioned models is not efficient enough by itself. Rather, a collection of them, proportionate with a country's conditions and circumstances, should be used so that a better relationship can be established between the studies and workplace.

New Developments

Along with the expansion of information technology and appearance of gigantic computer companies that are able to produce and offer hardware and software with new technology on daily basis, the global networks of information have also been expanded in all possible fields and have influenced all organized activities in human societies. Therefore, the new term "Virtual" has become applicable in all fields. In the early 1990s, this term had first become popular in industry (Moon Ho Hwang, 1998) and in the second half of that decade and especially in the beginning of the twenty-first century, it became as much popular in other various fields, especially in education. Terms such as "virtual school", "virtual memory", "virtual machine", "virtual reality", and … are used in various literatures ad in a global level. These important and impressive phenomena, which can be called the "magic-lamp of third millennium" (Jalali and Beydokhti, 2001) have also influenced the form of work-training relationship and have created a new model in the "virtual" concept structure. With the help of this model, instead of taking the students and trainees to the workplace, the atmosphere and the work conditions are similarized with the

help of computer software. This new model can be called "computer focused model" or "virtual relationship model".

Conclusion: Application in the Iranian VET system

In order to use different models of relationship between training and work, each country considers a certain solution by considering its economical conditions. These efforts have been mostly focused on the students through the trainees' work experience. Works such as the making and operation of *Tarh-e-kad* (learning in the workplace) and founding of the *kar-o-danesh* (work – knowledge) branch in the new education system at high schools is a clear example of such efforts. In the branch of technical and vocational studies and kar-o-danesh (work and knowledge) studies of the new high school education system, it is tried to establish this relationship by mechanisms such as signing agreements between the ministry of education and other ministries, as well as identifying educational standards and founding near-factory technical-schools. In the field of curriculum development, efforts take place to coordinate and balance the training content with industrial needs with the help of analysis method of the occupation and inviting the related industry experts to the curriculum development committee meetings. However, the available witnesses and some carried-out researches show that there is differences between the employers' expectations and the learnt skills in technical schools.

Researches show that there has still not been an interactive and active relationship between the VET system and the industry ad services sector. It seems that this deficiency is due to the unavailability of middle organizations that would relate training and workplace and would aloe connecting these two systems through a relationship bridge. In advanced countries, these organizations are established through civil non-governmental organizations, such as workers unions, employers unions, and trade unions. In these, there are representatives from the vocational education and training organization, the government, and the mentioned unions. Such organizations provide the ground for collaboration between education centers and production and

industrial centers and plan for adjusting with the industrial needs and improving the training quality by conducting applied researches in the field of vocational education and training. The final point is that, in order to make the vocational education and training in Iran productive and in order to respond to the employers' needs, the necessary works should take place. This work is in fact the establishment of a more compete relationship with the workplace and by taking advantage of all models of combination of work and training.

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