

Identification of the Components of Open and Distance Education and Human Resource Development in Iranian Universities

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Abstract

The purpose of the present research was to examine the role of open and distance education on human resource development in Payame Noor University (PNU). The population consisted of 1082 PhD students of PNU in the period 2011-2012, of whom 321 students were selected as the sample using stratified random sampling. The instrument was a questionnaire developed by the researcher with high validity and reliability (Cronbach's alpha of 0.898 for open and distance education and 0.972 for human resource development). The data were analyzed using descriptive and inferential statistics (path analysis). Technology, interaction, and facilities were identified as the components of open and distance education (with 22 indices), knowledge, attitude, skill, and behavior were identified as the components of human resource development (with 29 indices). By prioritizing the components and indices of open and distance education and human resource development using LISREL 8.53 (path analysis), a conceptual model is developed which shows that proper design, implementation, and evaluation of distance education in universities can develop the knowledge, attitude, skill, and behavior of its human resources. Since PNU is one of the administrators of Iran's distance education system, it must train its human resources accordingly. Hence it will be of great help in promoting and developing distance education and human resource development.

Keywords: Open and distance education, human resources development, components, conceptual model

1. Introduction

In the age of information and communications, educational institutions have greatly evolved (Ebadi, 2004). With the coming of this age and the increasing number of higher education programs, conventional education can no longer respond to the increasing demand of the current generation. Thus, there has been a trend toward new educational approaches, including distance education.

Distance education supplements conventional education with its focus on individual differences and equal learning opportunities in terms of age, gender, and socioeconomic status—hence the motto, “education for everyone, everywhere” (Najafi, 2012). Moreover, distance education has a dynamic, state-of-the-art, and participative environment which enables access to content in the shortest time possible (Ebrahimzadeh, 2006), thus playing a significant role in human development (McMillian, 2010).

Human resource development encompasses all the aspects of human existence (intellect, attitude, behavior, and skill). In order to train empathetic, committed, empowered, thoughtful, and creative individuals, these four aspects must be developed. Indeed this development must be done with the aid of knowledge-based education—i.e. distance education. Thus, it appears that there is a close link between human resource development and distance education (Gaba, 2004).

Distance education is the most efficient and least costly way of development of human resources (Panda, Mishra, and Murthy, 2006). Iran, as a developing country with its special socioeconomic and cultural characteristics, has sustainable development and knowledge as its vision. To achieve this, it must develop its human resources. Therefore, the present research seeks to answer these questions:

- What are the components of distance education in Payame Noor University?
- What are the components of human resource development in Payame Noor University?

- Can we provide a conceptual model for human resource development in Payame Noor University as the leader in distance education in Iran?

Review of the Literature

Distance education

Education has a pivotal role in human resource development, both in terms of efficiency and effectiveness (Najafi, 2012). That is because all the other aspects of development—including economic, political, cultural, and even technological development—depend on education. UNESCO considers education as the basis for all kinds of development (UNESCO, 2002). In addition, the World Bank (2007) argues that the necessary condition for scientific and technological advancement of a country is new education systems that, if implemented correctly, can help the human resource development by improving knowledge, skill, and attitude of individuals. In the age of information which is characterized by fast changes in knowledge and technology, traditional education systems can no longer meet the needs of the new generations. Thus, there is an increasing trend toward new educational methods, including distance education (Ebrahimabadi, 2004). Distance education is the organization of the teaching-learning process by an educational institution using multimedia and information and communications technology, in order to facilitate learning and create new forms of interaction between instructors and learners (Ebrahimzadeh, 2006).

Human resource development

Human resource development was popularized in the works of Nadler in the late 19th century as one of the major components of economic development (Asadollah, 2005; Lashkari, 2009). Developing human resources entails changes in individuals' behavior, skill, knowledge, and attitude (Faqih-Mirzayi, 2007). Human resources are the most valuable asset of organizations and the only conscious one (Lashkari, 2009). The main components of human resource development are knowledge, attitude, skill, and behavior (Asadollah, 2005; Faqih-Mirzayi, 2007).

Conceptual model of the research

After reviewing the literature and surveying experts, the components of distance education and human resource development were identified (Figure 1).

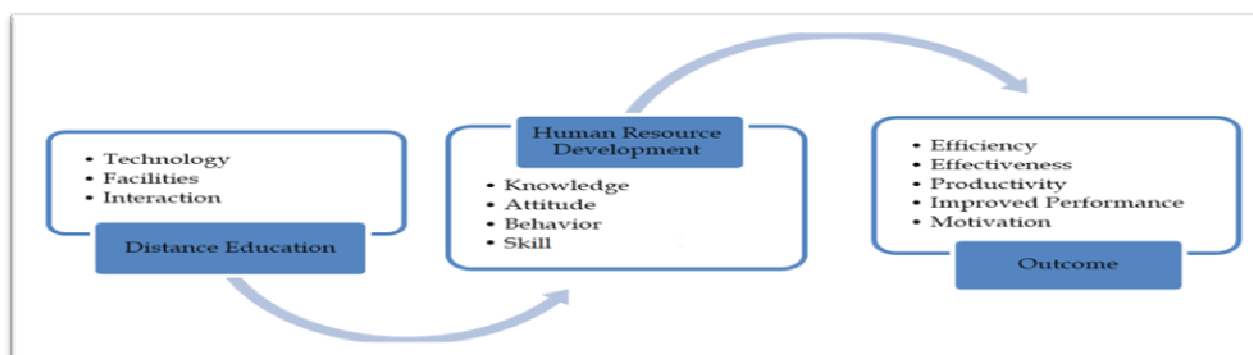


Figure 1. The conceptual model of the research.

As shown in Figure 1, the main components of distance education are technology, interaction, and facilities, and the main components of human resource development are knowledge, attitude, behavior, and skill. The indices of each of these components are provided in Table 1.

Table 1. The components and indices of distance education and human resource development in PNU

Components	Indices
Technology	The use of multimedia, e-books, learning content management systems, SCORM, the Internet, Intranet, and Extranet, e-mail, and information and communications technology
Facilities	Attention to individual differences, attention to educational quality and quantity, easy and timely access to educational contents, attraction of working with computers and multimedia, greater effort in the Web-based environment, accurate planning and needs assessment, use of education support organizations, learner autonomy, equal yet varied learning opportunities, the ability to transcend time and space, application of learning, lower education costs, investment in human resources, learners' self-assessment, comprehensive and up-to-date content
Interaction	Instructor-learner, instructor-instructor, instructor-content, learner-learner, learner-content, content-content, and learner-interface interactions
Knowledge	Acquisition of knowledge, understanding of knowledge, organization of knowledge, dissemination of knowledge, creation of knowledge, development of knowledge, application of knowledge, and assessment of knowledge
Attitude	Satisfaction with distance education, commitment to distance education, affiliation and involvement in distance education, acceptance of the policies and guidelines of distance education, interest in performing assignments in distance education, attraction of working with multimedia in distance education
Skill	Communication skills (personal, social, hyperpersonal), technical skills, people skills, verbal, non-verbal, and conceptual skills
Behavior	Improved performance, innovation and group participation, motivation, individual activity, doing the tasks right, and using educational technology

2. Methodology

The present research is a descriptive survey study. The instrument is a questionnaire developed by the researcher based on a review of the literature and the conceptual model of the research. This questionnaire consists of the components of distance education—i.e. technology, interaction, and facilities (22 indices)—and the components of human resource development—i.e. knowledge, attitude, skill, and behavior (29 indices).

3. Findings

Structural equation modeling was applied to create a structural model based on the conceptual model of the research and to verify the relationship between distance education and human resource development (Figure 2).

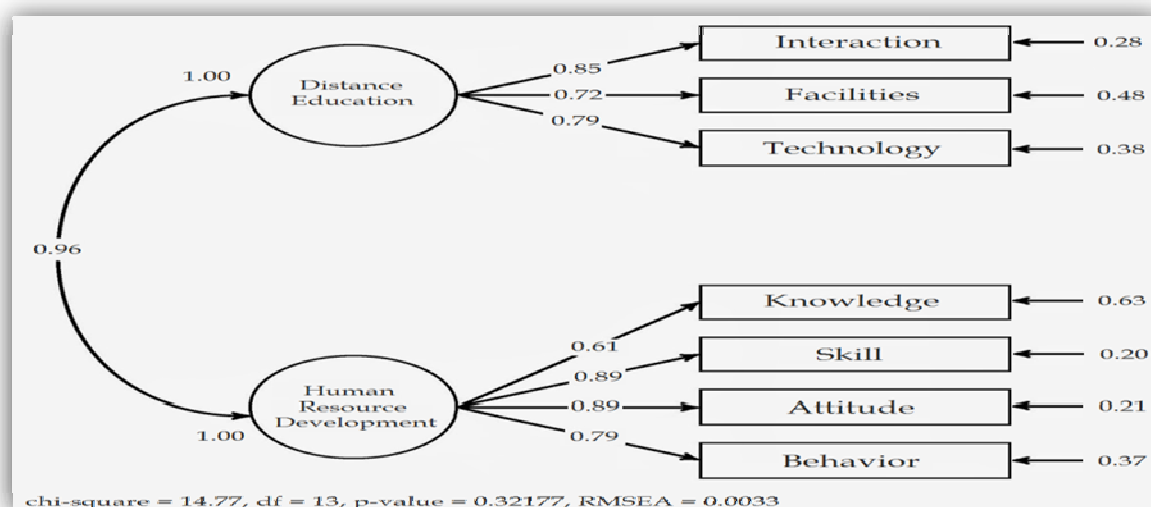


Figure 2. Structural equation modeling of the relationship between the components of distance education and human resource development.

Based on the above figure, the ratio of chi-square to degree of freedom (χ^2/df) is 1.13, which is less than 3. The goodness-of-fit index is 0.97 and the adjusted goodness-of-fit index is 0.93, both of which are greater than the standard value (0.90). The root mean square error of approximation (RMSEA) is 0.0033, which is less than the standard value ($\alpha = 0.01$), and the p-value (0.32177) is less than the significance level ($\alpha = 0.05$).

4. Discussion and Conclusion

The 21st century is the age of information and communications, and knowledge is the most important asset in this age. This knowledge can be brought about by education. But traditional education systems can no longer keep up with fast scientific and technological advancements. Thus, the current trend is toward new educational methods, including distance education.

The present research aimed to study the relationship between distance education and human resource development. Distance education was defined as the organization of the teaching-learning process by an educational institution using multimedia and information and communications technology, in order to facilitate learning and create new forms of interaction between instructors and learners. Using the Delphi method and a survey of 30 education experts at Payame Noor University (PNU), the components of distance education—i.e. technology, facilities, and interaction (22 indices)—and the components of human resource development—i.e. knowledge, attitude, skill, and behavior (29 indices)—were identified (Figure 1).

Then, structural equation modeling was applied in LISREL 8.53 to examine the relationship between distance education and human resource development. The results suggested the good fit of the structural model and indicated the causal relationship between distance education and human resource development and ($\chi^2/df = 1.13$; $GFI = 0.97$; $AGFI = 0.93$; $RMSEA = 0.0033$; and $p = 0.32177$). Thus, in order to develop the knowledge, attitude, skill, and behavior of students, PNU must conduct a needs assessment and implement and control the components of distance education—i.e. technology, facilities, and interaction along with all their indices.

5. Resource

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