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Validation of the Structural Model of the Third Generation University based on Distance Education

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Research Paper

Abstract

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Purpose: The university is an effective institution for the growth and excellence of society and the present study was conducted with the aim of validating the structural model of the third generation university based on distance education.

Methodology: This study in terms of purpose was applied and in terms of implementation method was quantitative with a structural model approach. The research population was the faculty members of Payame Noor University in the academic year 2020-21. The research sample in the preliminary stage to study the psychometric indices of the model was 72 people and in the main stage were 232 people who were selected by multi stage cluster sampling method. The research instrument was a 58-item researcher-made questionnaire in seven components of organizational infrastructure, interventionist conditions, prevailing atmosphere on university, third generation university, autonomy, globalization and effective interaction, whose its formal and content validity by experts was confirmed and its reliability by Cronbach's alpha method was obtain 0.88. Data were analyzed by structural equation modeling in SPSS-22 and AMOS-22 software.

Findings: The results showed that the structural model of the third generation university based on distance education had 18 sub-components in seven components of organizational infrastructure (with two sub-components of hard bedding and soft bedding), intervening conditions (with three sub-components of autonomy, globalization and effective interaction), prevailing atmosphere on university (with four sub-components of creativity and brainstorming, organizational commitment, innovative motivation and innovative attitude), third generation university (with two sub-components of entrepreneurial university and wealth-creating university), autonomy (with three sub-components of independent policy-making, financial dependence reduction and independent content production), globalization (with two sub-components of global look and global action) and effective interaction (with two sub-components of intra-organizational communication and extra-organizational communication). Other findings showed that the structural model of the third generation university based on distance education had a good fit and in this model organizational infrastructure, interventionist conditions and prevailing atmosphere on university had a significant direct effect on third generation university and organizational infrastructure had a significant indirect effect on the third generation university through interventionist conditions ($P < 0.001$).

Conclusion: According to the findings the structural model of the third generation university based on distance education had a good validation and to improve the third generation university based on distance education using from the components of globalization, effective interaction, autonomy, interventionist conditions, organizational infrastructure and prevailing atmosphere on university can be effective.



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Detailed abstract

Purpose: Universities, as centers of science, thinking, skill and innovation, have important tasks and responsibilities in the direction of growth, development and excellence of human resources and society, and without a doubt, universities are the center of development and driving engine of transformation in society and the only main center of training of specialized human resources. There are those who can accelerate the growth and development of society by having innovative thoughts and ideas. With the growth of societies and environmental changes, universities created a special adaptation in them and adopted new strategies for this purpose and changed their structure according to technological developments. In recent decades, various activities have been carried out at the world level with the approach of establishing, accelerating and facilitating effective communication between universities and industry, and various scientists have emphasized the importance and necessity of this communication, and in this regard, attention has been paid to the commercialization of academic research, academic entrepreneurship and university communication. And the industry among pundits has grown dramatically. Nevertheless, despite the importance of the issue of university-industry connection and considering the movement of the world's university systems towards third-generation universities in the interaction between industry and university, the higher education system in the country has always been criticized. Since the mid-1980s, the traditional and conservative role of the university as the creator of pure science has declined to some extent, so the institution and organization of the university had to accept important adjustments to respond to the demands of the society more than before. The university's strategic and creative responses to such a situation required the formation of a new form of university under the title of entrepreneurial university or third-generation University, a model of communication between the university, society and other stakeholders. The university is an effective institution in the direction of the growth and excellence of the society, and the present research was conducted with the aim of validating the structural model of the third generation university based on distance education.

Methodology: This study was applied in terms of purpose and quantitative in terms of execution method with a structural model approach. The research community was the faculty members of Payam Noor University in the 2020-21 academic years. The reason for choosing Payam Noor University was that this university is widely considered as a higher education system in the country. The sample of the research was 72 people in the preliminary stage to examine the psychometric indicators of the model and 232 people in the main stage, who were selected by multi-stage cluster sampling method. The reason for using the multi-stage cluster sampling method was the high dispersion of the research community and the impossibility of reaching each and every member of the community. In this sampling method, first, several provinces were randomly selected as samples, and then a number of university units were randomly selected from each province, and all their faculty members were selected as samples. It should be noted that sampling was done twice in this research; So, in the first or preliminary stage, 90 people were selected as a sample in order to check the psychometric indicators of the model and tools, and because of 18 people, the analysis was done for 72 people. In the second or main stage, in order to test and fit the proposed research model, 250 people were selected as a sample, and because of 18 people, the analyzes were performed for 232 people. The tool of the current research is a 58-item researcher-made questionnaire in 18 sub-components and seven components of organizational infrastructure (with two sub-components of hard infrastructure and soft infrastructure), intervening conditions (with three sub-components of autonomy, globalization and effective interaction), the atmosphere prevailing in the university (with four sub-components of creativity and idea generation, organizational commitment, innovative motivation and innovative attitude), third generation university (with two sub-components of entrepreneurial university and wealth-creating university), autonomy (with three sub-components of independent policy making, reduction of financial dependence and independent content production), globalization (with two sub-components of global outlook and global action) and effective interaction (with two sub-components of intra-organizational communication and extra-organizational communication). Each of the items in the researcher-made questionnaire is scored on a four-point Likert scale from completely disagree with one, somewhat disagree with two, somewhat agree with three, and completely agree with four. Its formal and content validity was confirmed by the opinion of experts and its reliability was obtained by Cronbach's alpha method of 0.88. For this purpose, in order to check the conceptual relationship of the items with the subject evaluated by the questionnaire and the ability of each item to measure the issue and the clarity and fluidity of the appearance of each item, the questionnaire was created by five faculty members of the Department of Educational Sciences and four PhD students of Payam Noor University. was investigated. In this way, the formal and content validity was confirmed by the faculty members and evaluation students after making corrections in the text of some items. In addition, the results of the exploratory factor analysis indicated the existence of seven factors for the third-generation university researcher-made

questionnaire based on distance education, including organizational infrastructure, Intervening conditions, the atmosphere governing the university, the third generation university, autonomy, globalization and interaction were effective. After collecting the data with the researcher-made questionnaire of the Third Generation University based on distance learning, the data were analyzed with the structural equation modeling method in SPSS-22 and AMOS-22 software.

Findings: The findings showed that the structural model of the third generation university based on distance education has 18 sub-components in seven organizational infrastructure components (with two sub-components of hard infrastructure and soft infrastructure), intervening conditions (with three sub-components of autonomy, globalization and effective interaction), space Governing the university (with four sub-components of creativity and idea generation, organizational commitment, innovative motivation and innovative attitude), the third generation university (with two sub-components of entrepreneurial university and wealth-creating university), autonomy (with three sub-components of independent policy making, reducing financial dependence and producing independent content), globalization (with two sub-components of global view and global action) and effective interaction (with two sub-components of intra-organizational communication and extra-organizational communication). Other findings showed that the structural model of the third generation university based on distance education had a good fit, and in this model, the organizational infrastructure, intervening conditions and the atmosphere governing the university had a significant direct effect on the third generation university and organizational infrastructure through the intervening conditions on the first generation university. The third had a significant indirect effect ($P < 0.001$). According to the findings, the structural model of the third generation university based on distance education had a suitable validity, and for the improvement of the third generation university based on distance education, using the components of globalization, effective interaction, autonomy, intervening conditions, organizational infrastructure and the atmosphere governing the university can be effective..

Conclusion: In general, it can be said that the model of the third generation university based on distance education had a good fit and in this model, organizational infrastructures, intervening conditions and the atmosphere governing the university have a significant direct effect on the third generation university based on distance education and organizational infrastructures through Intervening conditions had a significant indirect effect on the third generation university based on distance education, therefore, to transform Payam Noor University into a third generation or entrepreneurial university, we can trust the current research model and make the necessary plans based on it. Although the fourth and fifth generation universities are discussed in the world today, many Iranian universities have preserved their traditional nature and considering that many Iranian universities are state-owned, most of them are within the scope of the first and second generation universities. The term is education-oriented or research-oriented. Therefore, many universities in Iran are far from the third generation or entrepreneurs, and necessary measures and planning should be done for this important goal, that is, to reach the universities of the third generation or entrepreneurs. Paying attention to this means that the realization of third generation universities in Payam Noor University is more important due to its special way of education and in addition due to its comprehensiveness and extent in the country, and this university prioritizes the components and sub-components identified in the current research. And trying to improve them can take an important and effective step in the path of third generation universities.

Keywords: Validation, Structural Model, Third Generation University, Distance Education