Identifying the factors affecting the professional development of faculty members of Farhangiān University

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Abstract

One of the important processes of human resource management in educational organizations is the professional development of teachers. Professional development can help the University professors to achieve the goals and effectiveness of the teaching and learning process. Therefore, the present study has addressed this important issue with the aim of identifying the factors affecting the professional development of the faculty members of Farhangiān University. In this research, a mixed method (qualitative-quantitative) with a sequential exploratory approach were used. The research population of the qualitative section included all experts, professors and elites in the field of human resources at Farhangiān University. The sample consisted of ۱۸ experts who were selected using targeted snowball sampling and they were interviewed. The research population of the quantitative section included all professors and lecturers of Farhangiān University, from among whom, ۲۵۱ persons were selected as the sample using cluster sampling method. The research tool was a semi-structured interview in the qualitative section and a researcher-made questionnaire in the quantitative section of the study. To analyze the data, open and axial coding methods were used in the qualitative section and the methods of descriptive analysis, correlational analysis and structural equation analysis (second-order confirmatory factor analysis) were used in the quantitative section of the study. The results showed that the factors influential on the professional development of faculty members of Farhangiān University are: educational strategies and programs, development of creativity and innovation, strategies for improving human resources, career development, development of knowledge management, tendency to research and networking. In the quantitative section, the results of the second-order confirmatory factor analysis and the structural equation model analysis with the partial least squares approach confirmed the validity of the model.

Keywords: Professional Development, Faculty Member, Farhangiān University, Mixed Methods Research

Introduction

The importance of higher education in shaping civilized nations cannot be denied. Higher education plays an important role in educating and preparing leaders in various areas of life, including government jobs and other matters (Nawab, ۲۰۲۰). The economic growth of any country is closely related to the higher education system because of educated manpower. And trains skills for the national economy (Dilshad et al. ۲۰۱۹). Higher education is also one of the influential factors in achieving any country's economic, social, and cultural development (Hoveida and Yadali, ۲۰۱۸; Mirjalili, ۲۰۱۸). Universities and higher education centers are responsible for training specialized and experienced human resources, producing knowledge, researching, and providing technical services (Mirjalili, ۲۰۱۸), and play a very important role in creating knowledge-based societies (Hoveida and Yadali, ۲۰۱۸).

What is clear is that to meet the needs of higher education in the ۲۱st century, institutions must discover and develop new patterns of professional development that support

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professors in the evolving field of learning and teaching (Karminejad et al. ۲۰۲۰). The higher education system is one of the influential factors in improving the quality of faculty members because they are responsible for helping students build knowledge, create insight, and develop employable skills within the goal. Higher education systems also have an essential role (Ardalan and Beheshti Rad, ۲۰۱٦). Because of the increasingly defensible correlation between teaching quality and student achievement, universities are increasingly seeking to hire faculty members based on content/industry expertise, pedagogical skills, and knowledge that are qualifications. Formal education is obtained (Weuffen et al. ۲۰۲۰).

Therefore, given that higher education institutions have to fulfill their missions and visions; Faculty members are the most central pillar and the most important source of any institution, including higher education institutions (Dilshad et al. ۲۰۱۹; Mirjalili, ۲۰۱۸) and one of the basic factors that play a key role in the quality of its outputs. Because faculty members have to help, students build knowledge and help them develop insights, and develop employable skills within the goals of the higher education system (Zahedi and Bazargan, ۲۰۱۳).

Faculty members are the heart of any university. A university or college is mainly due to the type of faculty members, good or bad, effective or ineffective. The effectiveness of higher education institutions depends on the performance of teachers. For this reason, teachers must be trained and developed to perform their duties effectively and efficiently (Qaroneh and Sanaipour, ۲۰۲۰). Moreover, the mission of universities today is to cultivate the best human resources and increase the quantity and quality of educational services. In this regard, the professional development of faculty members has a constructive role in achieving the stated goals (Gholami and Shirbegi, ۲۰۱۸; Salimi et al., ۲۰۱۸). In general, with the increase of social pressure for change in the quality of higher education outputs, the professional development program of faculty members has found a special place (Zahedi and Bazargan, ۲۰۱۳).

Today, the professionalism of university professors is based on a set of values (including self-sacrifice), behaviors (including honesty, continuous learning), competency retention (including re-validation of one's skills and knowledge), and relationships (Including joint work or service to others) refers to the foundation of public trust in higher education institutions (Hou et al. ۲۰۱٦). For this reason, the professional development of faculty members should be considered as a key element in cultivating and supporting this valuable resource. The more the ability of faculty members' increases, the better the quality of teaching will improve, and faculty members will perform better in performing their duties and professional activities (Mirjalili, ۲۰۱۸).

Investing in appropriate strategies and methods for the development and skills of teachers/faculty is one of the most important steps towards achieving education far from international standards (Aljassar & Altammar, ۲۰۲۰). However, professional development is an important tool to address the shortage of teacher/faculty training (Howlett & Penner-Williams, ۲۰۲۰). In addition, the availability of collaboration, the time factor, long-term commitment, and the availability of resources for the successful implementation of professional development are important (Maria & García, ۲۰۱۶). Because teachers'/faculty members know that their education can directly impact students' learning outcomes, they are often motivated to strive to improve their education. This motivation, which improves the quality of their teaching, leads to the wider progress of students (Gupta & Lee, ۲۰۲۰). Numerous studies have shown many challenges associated with the effective implementation of professional development (Badri et al., ۲۰۱۶). But for any period of continuing professional

development, policymakers must support strategies and programs that better fit the needs of teachers'/faculty members (Tabatabai et al., ۲۰۱۸).

At present, after a period of a quantitative growth in the country's higher education sector, the issue of improving the quality of education has become a goal and a demand. Even though a lot of attention has been paid to the professional development of faculty members, which plays an important role in their professional development and academic status and is related to their educational vitality (Qaroneh and Sanaeipour, ۲۰۲۰); But it is obvious that the discourse of teacher professional identity in Iran is still influenced by the general policies of the country's education system and the control of social institutions with historical and cultural backgrounds and is influenced by economic perspectives and has not been able to move towards liberation. Slow to move (Khandel et al., ۲۰۱۸). Given the prevailing centralized political system in Iran, this is also true of higher education. Still, it is undeniable that faculty members play an important and influential role in improving the performance of the higher education system and the development of any country. Therefore, the country's universities must have capable members aware of the latest developments in modern science and technology. Each faculty member's enthusiasm and quality of work in teaching, research, and services have a significant impact on university productivity (Gholami and Shirbegi, ۲۰۱۸).

Professional development for teachers/faculty should include opportunities to engage more deeply and may be implemented differently through the content teachers/faculty provide for teaching (Lee et al. ۲۰۲۰). Therefore, believing that a strong teacher breeds a strong student, developing the faculty members' professions is necessary (Ercan, ۲۰۲۰). In any case, students need effective and quality teachers/professors to help them develop the types of skills emphasized in the ۲۱st century. Also, the professional development of teachers'/faculty members must be effective in maintaining the development conditions of students. The teacher/faculty member should play an important role in providing professional development for teachers / other faculty members; Professional development addresses students' growing educational needs. (Yaakob et al. ۲۰۲۰). Powell et al. (۲۰۱۸) noted that professional development has both medium and long-term effects. Also, the study of the models and models presented for the professional development of educators and teachers shows that most of these models have addressed various aspects of professional development (Jafari et al., ۲۰۱۸).

According to (۱۹۹۹) Day, the development of a profession contains natural learning experiences and planned awareness and activities designed to, directly and indirectly, impact the individual, group, and school. Vocational development is a process that helps change practice and thinking and improves the quality of teaching and learning (Kalinowski et al., ۲۰۱۹). Professional development is an effort to increase the ability to teach effectively and to develop up-to-date skills, expertise, and knowledge (Ercan, ۲۰۲۰; Dilshad et al., ۲۰۱۹; Dopson et al., ۲۰۱۸). And also, as a process, it promotes strategic vision and the creation of leadership training networks (Dopson et al., ۲۰۱۸).

But what has replaced professional development today is vocational learning that focuses on the process and improvement of inclusive education (Levin, ۲۰۱٤). Continuing professional development is a term used to describe all the professors' interventions throughout their careers. The goal of continuous professional development is to improve the professional performance of teachers in the classroom and increase the academic achievement of learners (Dilshad et al., ۲۰۱۹). Overall, continuous professional development is defined as all the learning activities of professionals involved in the better promotion of their professional practices and skills (Ercan, ۲۰۲۰). It should be noted that professional activity progresses through four stages: ۱- Familiarity with basic skills ۲- Creating professional competence ۳-

Changing practice from self-centered to central references ٤- Developing a continuous interest in the profession (Hou et al. ٢٠١٦).

Professional development in various subjects, including the acquisition of knowledge and skills, the acquisition of information, the improvement of fundamental ideas and skills, the development of individual competence, guidance, and guidance such as workshops and skills training. Performing activities that improve the skills of coaches, regular effort to make changes in the classroom, developing a positive attitude, a continuous process/continuous learning, thinking about one's activities, learning from others, observing others, and includes planned and unplanned activities (Nawab, ٢٠٢٠). Professional development is also classified into traditional types versus breeding types (Garet et al., ٢٠٠١) or conventional models versus innovative models (Kooy & van Veen, ٢٠١٢). Conventional types of professional development, such as workshops, usually take place outside of the classroom or classroom, while corrective models take the form of study or mentoring groups and coaching. Usually occur in the context of work (Nawab, ٢٠٢٠).

Examining the definitions of the presentation shows that professional development is a broad concept that has many dimensions. As mentioned, professional development can be formal or informal, or in other words, planned or natural. Formal learning, such as workshops, mentoring and coaching, etc., is planned and informed. Conversely, natural or informal learning occurs at any time and through any source such as observation, thinking, informal speech, trial, and error, etc. (Mesick & Watkins, ٢٠١٥). Unlike top-down and bottom-up professional development models; Both focus on the end of the career development continuum, an interactive career development model can help professors to play more active roles in their own career development (Richards, ٢٠١٥).

However, interactive career development programs involve teachers in continuous learning and reflective practice (Lindberg & Olofsson, ٢٠١٠). Traditional approaches to the professional development of university faculty members tend to focus on the individual. Reciprocal learning in professional learning communities is based on collaborative effort and community. Participants are invited to discuss how the social, cultural, and psychological structures at the university stabilize and change educational practices. Teachers work, get involved (Feldman, ٢٠٢٠).

The focus and emphasis on the development of the faculty members' professions in this article are since in recent years, professional development in higher education has been doubly important; Effective management and leadership in higher education and professional development in this field is a binding strategy in the twenty-first century (Sherick, ٢٠١٤). Paying attention to the development of professors' professions can also affect the development and empowerment of other higher education groups. Human resource development is a kind of investment in social capital that creates leadership capacity at all levels and promotes the individual capability and competence of the organization's human capital (Swanwick & Mckimm, ٢٠١٤).

In higher education and teacher training, there are important issues such as evaluating and improving the quality of graduates, curricula, professional ethics, academic research, meritocracy, and talent management, many of which improve significantly. It is, directly and indirectly, related to the development of the professions of professors and departments of the university (Abili et al., ٢٠٢٠). This issue is less considered in Iranian higher education, especially in teacher training, and little research has been done in the context and context of the development of professors' professions. What has been considered in the present study is that the professional development of the faculty members of Farhangiān University is different from the professional development of teachers or faculty members of other universities, and this group of professionals should follow the path of professional development. The best

reference for recognizing the needs of this profession are the teachers and experts who have been involved with the challenges of this profession for years (Zojaji et al., ۲۰۱۷).

Based on what has been said, professional development is one of the most important and influential categories in educational institutions, significantly higher education institutions, and Farhangiān University. Because professional development; In particular, continuous professional development has positive and lasting effects on the educational and research processes of higher education institutions and improves the academic, research, and scientific-professional productivity of these institutions. We can point out a few points with a brief look at the empirical studies of recent years, domestic and foreign, of professional development mentioned in the above articles. First, most studies have been conducted in education and on teachers, and research related to higher education institutions is less visible, at least in the country.

Therefore, this type of research has been done much less in the context of Farhangiān University as a mother university in training efficient, specialized, experienced, and adequate personnel for the education system. Second, and a very vital and thought-provoking issue in professional development, depends on the context of this important organizational category. Therefore, the components of professional development of educational contexts, especially the context of education, can be different from higher education. Therefore, considering that the components in each context of higher education are likely to be unique and specific to that context, the professional development components of Farhangiān University's context will be different from other contexts of higher education.

Third point, some research, especially internal research, has pointed out the factors affecting professional development in a case-by-case and general manner. The results of this type of research are more general and refer to its specific components. The domain (for example, social) is not mentioned. Finally, most professional development studies have had a positivist-post-positivist and quantitative methodological approach and rarely studies with a constructivist or pragmatic approach and a qualitative or mixed methodology. Eats. Given these characteristics, a mixed study based on the current exploratory strategy to identify and explore the factors affecting the professional development of faculty members of Farhangiān University seeks to answer this question from the perspective of experts, specialists, and experts. Who has experience and presence in Farhangiān University; What factors affect the professional development of Farhangiān University faculty members?

Research methodology

In terms of purpose, this research is applied research. Since this research method was mixed (qualitative-quantitative), first, the qualitative method was used for exploratory study and extraction of categories related to factors affecting the professional development of faculty members of Farhangiān University. In the second stage, based on the data collected from the qualitative stage, quantitative studies were performed to confirm the findings obtained from the qualitative phase. This research method is descriptive (non-experimental), and the correlational research design is structural equation analysis. In terms of purpose, this research is applied research.

The research community in the qualitative department was all experts, professors, and experts in human resources at Farhangiān University. In the qualitative section, using targeted snowball-based sampling, ۱۸ people were selected as the research sample. The research tool at this stage was semi-structured interviews. In this method, it is impossible to determine how many people should be selected in our study to fully identify the phenomenon of interest in the qualitative study. So we continued to gather information until we reached the theoretical saturation point. The newly collected data was no different from the data we had previously collected. It was the same. The statistical population consisted of all professors and lecturers

of Farhangiān University. Using the cluster sampling method (basis of clusters: academic areas), ۲۵۱ people were estimated for sampling based on Morgan's table.

Table ۲: Number of samples by gender and education

Gender	Number	
	Qualitative stage	**Quantitative stage**
Male	۱۱	۳۲۰
Female	۷	۱٤۲
Education	Qualitative stage	Quantitative stage
Bachelor	۰	۱
Master	۱	۷٦
PhD	۱۷	۱۷٤

A semi-structured interview was used to collect qualitative data, and a researcher-made questionnaire (۵۰ items) was used for quantitative data. The questionnaire items were taken from the results of the analysis of the interviews and the Delphi method in the first stage, which is graded from ۱ very low to ۵ very high based on the Likert scale. The reliability of the interview data was confirmed by the participatory feedback method and the validation of the interviews by the agreement coefficient and retest method. In the quantitative part, face validity was used to assess the validity of the questionnaire, which had good validity. Cronbach's alpha coefficient (۹۱٪), which is an acceptable coefficient for reliability, was also used to assess the reliability of the questionnaire.

To analyze the data in the qualitative part, open and axial coding methods and quantitative methods of descriptive analysis, correlation analysis, and structural equation analysis (second-order confirmatory factor analysis) were used using PLS software.

Findings

Given that the present study includes both the collection and analysis of qualitative and quantitative data, each analysis is presented below. Initially, in this qualitative section, the interviewees were selected from professors and elites in the field of human resources at Farhangiān University. The sample consisted of ۱۸ people who were selected using targeted sampling, and they were interviewed.

Table ۳: Categories obtained from the qualitative section (Factors influential on the professional development of faculty members)

	Main categories	Subcategories	Interview number
Factors influential on the professional development of	**Educational strategies and programs**	Development of in-service training programs and courses	۱,۲,۳,٤,٥,٦,۷,۸,۹,۱۰,۱۱,۱,۱۳,۱٤,۱٥,۱۸
		Development of training, teaching, and evaluation skills	
		Organizational Learning	
		Transformational, intelligent, and dynamic teaching and learning	
		Participate in educational and extracurricular events	
		Team and network learning	
	Development of creativity and innovation	Development of ideas and creativity	۱, ٤, ٥, ٦,۷, ۸, ۹, ۱۰,۱۱, ۱۲, ۱٦, ۱۷
		Developing the spirit of exploration	
		Innovation in teaching and learning	
		Appropriate organizational atmosphere for innovation	

		Creating a competitive environment for change, creativity, and innovation	
		Professors' participation in change programs	
		Developing and promoting values that support creativity and innovation	
		Developing teachers' competencies for creativity	
		change management	
	Human resource improvement and development strategies	Replacement	٣, ٤, ٦, ٧, ٨, ٩, ١٣, ١٥, ١٨
		Meritocracy and headhunting	
		Manage the development, acquisition, and retention of talent	
		Job, educational, scientific, and technological needs assessment of professors	
		Efficient and purposeful training and improvement	
		Specialization in all matters	
		Eliminating the consideration in selecting and promoting professors	
		Developing lifelong learning skills	
		Coaching and guidance	
	Career path development	Performance-based evaluation system	١, ٢, ٣, ٤, ٥, ٧, ٨, ٩, ١٠, ١١, ١٢, ١٥, ١٦
		Appropriate and comprehensive career path	
		Strategic monitoring of activities	
		Opportunities for promotion and advancement	
		Establishment of teacher evaluation centers	
	Development of knowledge management	Sharing knowledge	٣, ٥, ٦, ٧, ٨, ٩, ١٠, ١١, ١٢, ١٣, ١٤, ١٥, ١٦, ١٨
		Transfer and dissemination of knowledge	
		Knowledge acquisition skills	
		Knowledge enhancement skills	
		Development of team and partnership work (guidance)	
		Pivotal learner of the organization	
		Continuity of communication with valid academic and scientific environments	
		Interaction and scientific and educational communication	
	tendency to research	Supporting scientific and research projects	٢, ٤, ٥, ٧, ٨, ١٠, ٩, ١١, ١٣, ١٤, ١٦, ١٧
		Evaluate research findings	
		Development of research action	
		Strengthening and empowering the spirit of research	
		Strengthen research management skills	
		Scientific and research involvement of professors with universities and fields	
		Developing the quality of applied research	

	Networking	Intra-university networking of professors	١, ٣, ٥, ٦, ٧, ٨, ١٠, ٩, ١١, ١٢, ١٤, ١٥, ١٨
		Extracurricular networking of professors	
		Professors' professional connections with scientific societies	
		E-learning networks	
		Communication with teacher training centers and specialists in other countries	

As shown in Table ٣, the factors affecting the professional development of the faculty members of Farhangiān University can be classified into seven main categories, each of which also includes other subcategories stated in the table. In Table ٤, descriptive indicators of research variables (mean and standard deviation) are reported.

Table ٤: Descriptive indicators of research variables

Variable	Mean	Standard deviation
Educational strategies and programs	٣,٥١	٠,٨٤٥
Development of creativity and innovation	٣,٢٤	٠,٨١٤
Strategies for improving and developing human resources	٢,٨٩	٠,٧٩٦
Career development	٢,٩٢	٠,٨٠٧
Development of knowledge management	٢,٩٤	٠,٩٥٨
Tendency to research	٢,٩٠	٠,٨٥٧
Networking	٢,٩٧	٠,٧٩٤

In the present study, the partial least squares approach has been used to analyze the second-order confirmatory factor. The PLS method has been used in the present study due to its advantages over the covariance-based approach. In the confirmatory factor analysis, it is first necessary to study the validity of the structure to determine that the selected indicators have the necessary accuracy in measuring their desired structures. Table ٥ shows the values of factor load and t-statistic for the indicators of research variables.

Table ٥: Factor load values for indicators of research variables

Variable (competency)	Item	Factor load	t-statistics	result
Educational strategies and programs	١	٠,٦٤	١٢,٣٧	Indicator confirmation
	٢	٠,٦٤	١٢,٦١	Indicator confirmation
	٣	٠,٧٨	٢٦,٥٩	Indicator confirmation
	٤	٠,٦٩	١٢,٠٨	Indicator confirmation
	٥	٠,٨٠	٣٥,١٢	Indicator confirmation
	٦	٠,٧٥	٣١,٧١	Indicator confirmation
	١	٠,٨٠	٤٠,٦٦	Indicator confirmation

	۲	۰,۷۸	۲۵,۸۳	Indicator confirmation
	۳	۰,۸۳	۳۹,۳۲	Indicator confirmation
	۴	۰,۷۱	۲۱,۵۸	Indicator confirmation
	۵	۰,۷۲	۲۰,۰۲	Indicator confirmation
Development of creativity and innovation	۶	۰,۶۲	۱۳,۲۶	Indicator confirmation
	۷	۰,۷۱	۱۸,۴۳	Indicator confirmation
	۸	۰,۶۵	۱۷,۷۶	Indicator confirmation
	۹	۰,۶۸	۱۷,۵۴	Indicator confirmation
	۱	۰,۶۸	۱۹,۰۵	Indicator confirmation
	۲	۰,۷۶	۲۰,۳۸	Indicator confirmation
	۳	۰,۷۳	۲۰,۱۸	Indicator confirmation
	۴	۰,۷۴	۲۱,۱۳	Indicator confirmation
Strategies for improving and developing human resources	۵	۰,۷۷	۲۳,۱۹	Indicator confirmation
	۶	۰,۶۸	۲۶,۷۰	Indicator confirmation
	۷	۰,۶۹	۱۶,۵۳	Indicator confirmation
	۸	۰,۷۲	۲۲,۴۵	Indicator confirmation
	۹	۰,۶۶	۱۲,۳۷	Indicator confirmation
Career development	۱	۰,۶۷	۱۷,۲۲	Indicator confirmation
	۲	۰,۷۰	۱۲,۷۱	Indicator confirmation
	۳	۰,۸۱	۳۳,۷۱	Indicator confirmation
	۴	۰,۸۳	۳۷,۰۹	Indicator confirmation

	۵	۰,۷۱	۲۴,۰۵	Indicator confirmation
	۱	۰,۶۸	۱۳,۹۵	Indicator confirmation
	۲	۰,۷۳	۲۴,۱۶	Indicator confirmation
	۳	۰,۸۳	۴۲,۷۲	Indicator confirmation
	۴	۰,۸۴	۴۱,۶۵	Indicator confirmation
Development of knowledge management	۵	۰,۸۰	۳۱,۴۳	Indicator confirmation
	۶	۰,۸۶	۴۵,۲۷	Indicator confirmation
	۷	۰,۸۶	۴۱,۶۶	Indicator confirmation
	۸	۰,۸۷	۵۸,۱۹	Indicator confirmation
	۱	۰,۷۹	۲۱,۱۴	Indicator confirmation
	۲	۰,۸۵	۴۰,۸۶	Indicator confirmation
	۳	۰,۸۶	۵۳,۴۲	Indicator confirmation
	۴	۰,۸۹	۷۶,۸۵	Indicator confirmation
tendency to research	۵	۰,۷۸	۳۱,۰۳	Indicator confirmation
	۶	۰,۶۲	۱۴,۰۷	Indicator confirmation
	۷	۰,۷۷	۱۸,۴۵	Indicator confirmation
	۱	۰,۸۵	۱۷,۲۲	Indicator confirmation
	۲	۰,۸۷	۱۲,۷۱	Indicator confirmation
	۳	۰,۸۷	۳۳,۷۱	Indicator confirmation
Networking	۴	۰,۹۱	۳۷,۰۹	Indicator confirmation
	۵	۰,۷۵	۲۴,۰۵	Indicator confirmation

The results of Table ٥ show that items with t higher than ١,٩٦ remain in the analysis process. Therefore, the validity of the structure, which was performed to evaluate the accuracy and importance of the selected indicators for measuring structures, shows that the indicators of research variables provide appropriate factor structures for measuring the dimensions studied in the research model. In addition to structural validity, which is used to examine the importance of selected indicators for measuring structures, convergent validity is also considered in the structural equation model. Convergent validity examines the degree of correlation of each structure with its questions (characteristics). To calculate convergent validity, Fornell Larcker has proposed the use of the AVE criterion. In this method, if the AVE=٠.٥, the indices have good convergent validity. In addition, the combined reliability index was used to evaluate the reliability, the results of which are shown in Table ٦.

Table ٦: The mean values of the extracted variance

Variable	Mean value of average variance extracted (AVE)	Acceptable level	Composite reliability	Acceptable level
Educational strategies and programs	٠,٥٢٥	٠,٥	٠,٨٦٨	٠,٧
Development of creativity and innovation	٠,٥٣٢	٠,٥	٠,٩١	٠,٧
Strategies for improving and developing human resources	٠,٥١٨	٠,٥	٠,٩٠٦	٠,٧
Career development	٠,٥٦١	٠,٥	٠,٨٦٤	٠,٧
Development of knowledge management	٠,٦٥٤	٠,٥	٠,٩٣٧	٠,٧
tendency to research	٠,٦٣١	٠,٥	٠,٩٢٢	٠,٧
Networking	٠,٧٢٩	٠,٥	٠,٩٣	٠,٧

In addition to the convergent validity, in this study, divergent validity has also been used. The cross-factor loading and the Fornell-Larcker method were used to investigate this issue. Divergent validity is acceptable when the amount of AVE for each structure is higher than the common variance between it and other structures (squared value of correlation coefficients among structures) in the model. Accordingly, the divergent validity of the variables was confirmed. Each of the components of educational strategies and programs, creativity and innovation development, strategies for improving and developing human resources, career development, knowledge management development, research tendency, and networking work as indicators of development of the faculty members of Farhangiān University, so the second-factor analysis have been studied to test the measurement model as well as the validity of the components of strategies and educational programs, creativity and innovation development, strategies for improving and developing human resources, career development, knowledge management development, research tendency, and networking.

Table ٧: Factor load values for indicators of each structure in the form of the measurement model

Structure	Component	factor load	t statistic	Result
Factors influential on the professional development	Educational strategies and programs	٠,٧٨٢	٢٢,١٣	Confirmed
	Development of creativity and innovation	٠,٨٨٩	٥٤,٨٥	Confirmed

of faculty members of Farhangiān University	Strategies for improving and developing human resources	۰,۸۵۹	۳۸,۵٦	Confirmed
	Career development	۰,۷۷۵	۲۵,۲٤	Confirmed
	Development of knowledge management	۰,۸۸۸	٦۲,۱٦	Confirmed
	tendency to research	۰,۸۹۳	٦٤,۲۰	Confirmed
	Networking	۰,۸۷۱	۵٦,۱۲	Confirmed

Table ۷ shows that the t-value of all indicators of the studied structures is higher than ۱,۹٦. Therefore, the validity of the structure, which was performed to evaluate the accuracy and importance of the indicators selected for measuring the structures, shows that the indicators of each structure provide suitable factor structures for measuring the dimensions studied in the research model. Testing the theoretical research model and research hypotheses in the PLS method is possible by examining the path coefficients (factor loads) and R۲ values. Also, the Bootstrap method (with ۵۰۰ subsamples) was used to calculate t-values to determine the significance of factor loads. In addition, the Stone-Geiser Q۲ coefficient was used to evaluate the ability to predict dependent variables from independent variables. The results of Table ۸ show that the amount of variance explained in educational strategies and programs (٦۱٪), creativity and innovation development (۷۹٪), human resource improvement strategies (۷۳٪), career development (۵۹٪), knowledge management development (۷۸٪), research tendency (۷۹٪) and networking (۷۵٪) and all are at a remarkable level. The positive Q۲ values for all variables also show that these variables significantly affect the professional development of Farhangiān University faculty members. Figures ۱ and ۲ show the software output for the test model of the research.

Table ۸: Results of the secondary confirmatory factor analysis of the factors influential on the professional development of faculty members

Structure	R۲	Q۲
Educational strategies and programs	۰,٦۱۱	۰,۳۲٤
Development of creativity and innovation	۰,۷۹	۰,۳۷۱
Strategies for improving and developing human resources	۰,۷۳۸	۰,۳۹۸
Career development	۰,۵۹۹	۰,۳۵۱
Development of knowledge management	۰,۷۸۹	۰,٤۷۸
tendency to research	۰,۷۹۷	۰,٤۹۸
Networking	۰,۷۵۷	۰,۵۱۱

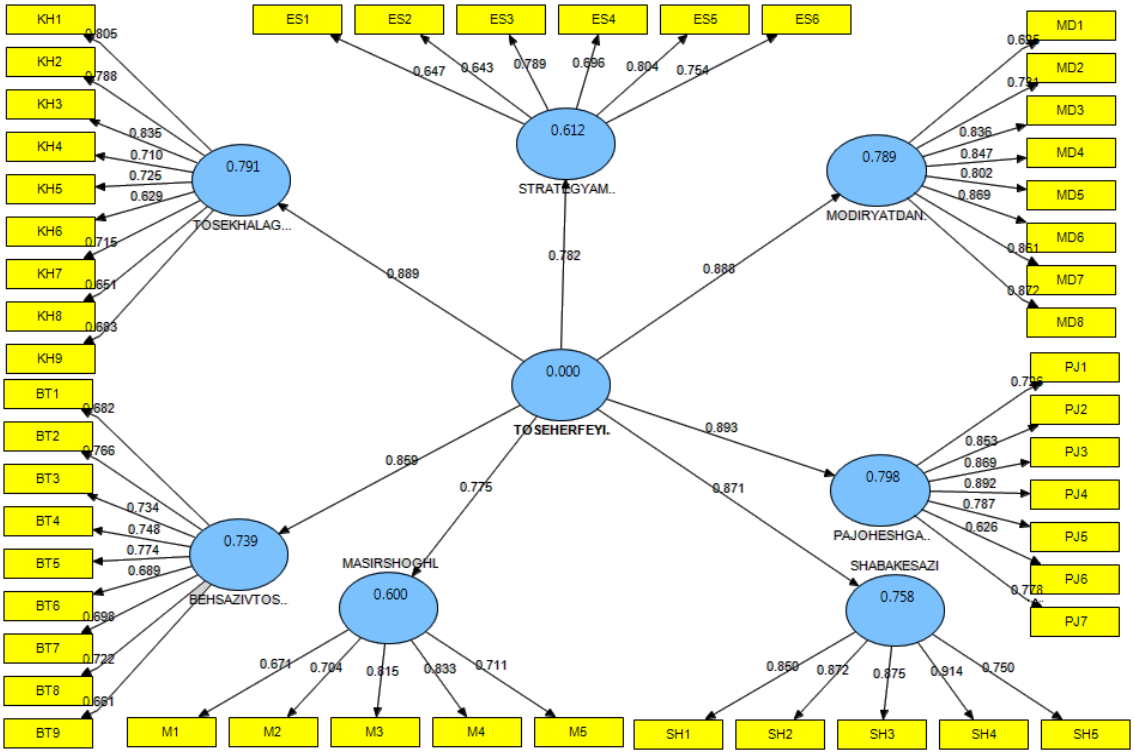

Figure ۱: Secondary research model (factor loads)

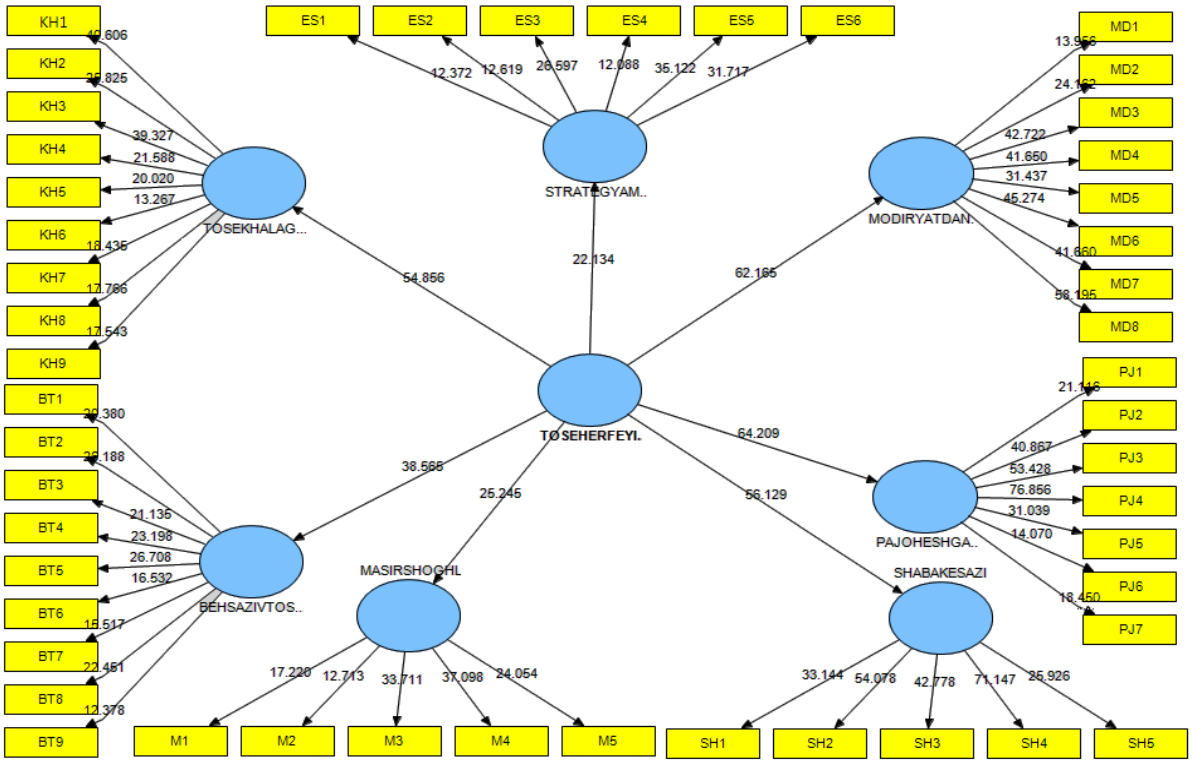

Figure ۲: T-coefficients of the tested research model

T-coefficients above ±۱,۹۶ to ±۲,۵۸ are significant at the ۰,۰۵ level, and T-coefficients above ±۲,۵۸ are significant at the ۰,۰۱ level. As shown in Figure ۲, the T-coefficients of all paths are

higher than ۲،۵۸, which indicates that all paths are significant at the ۰،۰۱ level. It should be noted that none of the indicators were removed in the analysis.

Finally, to show the validity of the findings of the research model, the fit indices of structural equation models by the least-squares method were used. The overall pattern fit index in PLS is the GOF index, and it can be used to check the validity or quality of the PLS pattern in general. In the present study, for the tested model, the absolute fit index of GOF was ۰،٦۱, which for this fit index indicates the appropriate fit of the tested model. Table ۹ shows the ranking of indicators based on factor loads. The components of research tendency, creativity and innovation development, and knowledge management development have the most impact. Among the other components, the most important ones are networking, human resource improvement strategies, training strategies and programs, and career development.

Table ۹: Ranking of variables based on factor loads

Variable	Factor loads
Research tendency	۰،۸۹۳
Development of creativity and innovation	۰،۸۸۹
Development of knowledge management	۰،۸۸۸
Networking	۰،۸۷۱
Development of knowledge management	۰،۸۵۹
Educational strategies and programs	۰،۷۸۲
Career development	۰،۷۷۵

Discussion and conclusion

In higher education, the university's success in achieving organizational goals and missions depends on the existence of qualified professors, and professional development is the key to increasing the quality of managers, coaches, and professors. Therefore, the professional development of professors deserves much attention (Yaakob et al. ۲۰۲۰). Accordingly, this study aimed to identify the factors influential on the professional development of the faculty members of Farhangiān University to improve the quality of teaching and training of the professors. Findings showed that the components and sub-components affecting the professional development of professors' included:

- Educational strategies and programs (development of in-service training programs and courses, development of training skills, teaching and evaluation, organizational learning, transformational, intelligent, and dynamic teaching and learning, participation and attendance in educational and extracurricular events, team and network learning).
- Development of creativity and innovation (development of ideas and creativity, developing the spirit of exploration, innovation in teaching and learning, appropriate organizational atmosphere for innovation, creating a competitive environment for change, creativity and innovation, participation of professors in change programs, promoting values that support creativity and innovation, developing teachers' competencies for creativity, change management).
- Human resource improvement strategies (succession, meritocracy and merit selection, development management, talent acquisition, and retention, job, educational, scientific,

and technological needs assessment of professors, efficient and purposeful training and improvement, specialization in all matters, eliminating consideration in selecting and promoting professors, developing lifelong learning skills, and coaching and mentoring)

- Career development (performance-oriented evaluation system, appropriate and comprehensive career path, strategic supervision of activities, promotion and advancement opportunities, and teacher evaluation centers).
- Development of knowledge management (knowledge sharing, knowledge transfers and dissemination, knowledge acquisition skills, knowledge enhancement skills, development of teamwork and participatory guidance, central learner of the organization, continuity and connection with prestigious academic and scientific environments, scientific and educational communication and interaction).
- Research tendency (supporting scientific projects, valuing research findings, developing research action, strengthening and empowering the spirit of research tendency, strengthening research management skills, scientific and research engagement of professors with universities and disciplines, and developing research quality applications).
- Networking (professors' inter-university networking, professors' extra-organizational networking, professors' professional connections with scientific societies, e-learning networks, and communication with teacher training centers and specialists in other countries).

Then, in the quantitative part and by confirmatory factor analysis, the validity of the designed model was analyzed. Therefore, the validity of the structure, which was performed to evaluate the accuracy and importance of the markers selected for measuring the structures, showed that the indicators of the research variables provided suitable factor structures for measuring the dimensions studied in the research model. Therefore, according to the proper fit of the model and the results obtained from the qualitative and quantitative results of the research, the finalized model can be seen schematically in the following figure:

Figure ۳: Graphic chart of factors affecting the professional development of faculty members of Farhangiān University

This model can be very effective and useful in developing professional competencies and improving the quality of education and human resource management and meritocracy in higher education, especially in Farhangiān University. Factors affecting the professional development of Farhangiān University faculty members are presented at two levels. These levels consist of dimensions, indicators, and markers. A review of the research background showed that most of the researchers such as Koşar (۲۰۲۰), Ercan (۲۰۲۰), Derakhshan et al. (۲۰۲۰), Tabatabai Yazdi et al. (۲۰۱۸), Hassanzadeh Kafshgar Kalayi et al. (۱۳۹۸), are more concerned with the professional development of the teachers; or like Howlett et al., (۲۰۲۰), Crawford et al., (۲۰۲۰), Klein, & Schwanenberg (۲۰۲۰), Naderibani et al. (۲۰۱۹), and Abili et al. (۲۰۱۹) have examined the professional development of managers of higher education organizations.

Dilshad et al. ۹۲۰۱۹), Zojaji et al. (۲۰۱۷), Qaroneh and Sanaeipour (۲۰۲۰) have studied the professional development of the faculty members. Also, Santos (۲۰۲۰), Weuffen (۲۰۲۰) and Lee, et al. (۲۰۲۰), and Hamedinsab and Ayati (۲۰۱۹) have been emphasized the learning and teaching of the professional development of professors. In the country, research has been conducted in the field of professional development that is somewhat in line with the results of this research, including Salimi et al. (۲۰۲۰), Morshedi Tonekaboni (۲۰۲۰۹), Karami Nejad et al. (۲۰۱۵), Mohammadi, and Hassani (۲۰۱۵), Mirkamali et al. (۲۰۱۵) and Zahedi and Bazargan (۲۰۱۳). However, it is noteworthy that a comprehensive study emphasizing the factors affecting the professional development of faculty members of Farhangiān University has not been conducted in the country so far. This model can be efficient and useful in developing the professions of Farhangiān University professors.

Continuous development and rapid change in the economy and society, and socio-economic affairs are inevitable for everyone to expand their adaptation to these changes that are the focus of lifelong learning. Academic staff at universities and higher education institutions recognize that change is a constant feature of life that requires professional development. Professional development helps change the practice and thinking of teachers'/faculty members and is useful for students if certain parts are considered in its design and implementation (Kalinowski et al., ۲۰۱۹). To improve the quality of education provided at all stages of learning, attention should be paid to developing vocational training programs for teachers/faculty. The program should be comprehensive and include elements of applied research, scientific findings, and recent global trends (Aljassar & Altammar, ۲۰۲۰). Professional development should also be in line with the strengths and weaknesses of teachers'/faculty members to enhance leadership, strengthen their potential, and address aspects of pedagogical practice that hinder quality from achieving the ultimate goal. Students' success can be reduced, and then a qualitative educational system can be created in the face of changing circumstances (Yaakob et al., ۲۰۲۰).

Moreover, the university management should continuously encourage professors to participate in professional development activities and facilitate their participation. To help professors improve their academic and research skills, workshops and seminars should be regularly designed and organized by the university (Dilshad et al., ۲۰۱۹). In some countries, such as the United Kingdom, Australia, and the Netherlands, professional development is considered a high-level activity for university educators to guarantee and control the quality of education to achieve the learning outcomes of the programs offered and guide students in research (Ercan, ۲۰۲۰). Increasing the effectiveness of continuing professional development programs is an important issue, and education systems cannot avoid it. As professionally active learners, professors need to develop themselves, and qualified education can only be talked about when professors, managers, and policymakers feel this responsibility (Ercan, ۲۰۲۰). At the same time, teacher/faculty involvement in research is essential for the continuous development of the teacher/faculty profession (Derakhshan et al., ۲۰۲۰). Professional development that includes achievable, personalized, and self-directed elements can provide enhanced opportunities for sustainable practice based on collaborative and rewarding collaboration among faculty so that they can influence their knowledge, beliefs, and performance (Nawab, ۲۰۲۰). Professional development improves teachers' attitudes, skills, and behaviors toward competence and greater effectiveness in meeting the needs of the individual, students, and the university. Therefore, professional development makes employees' tasks more important to

them; they have more confidence in their ability to do things and feel effective in the organization (Mirjalili, ۲۰۱۸).

Finally, it should be said that university faculty members are one of the most important pillars of promoting and ensuring the quality of higher education. They increasingly need a deeper understanding of scientific and technological developments, the growing social demand for higher education, and a new picture of their university's scientific, educational, research, and cultural activities. Answering these new and growing needs requires planning and managing faculty development activities (Qaroneh, Sanaeipour, ۲۰۲۰).

However, international experience shows that the professional development services of faculty members are provided in the form of sectoral activities or a centralized form in a unit such as the Center for the Development of Teaching and Learning Professions or the Center for Excellence of Faculty Members with an independent and defined structure within the company or in the form of outsourcing. In line with the importance of this issue, it should be noted that although constructive activities have started in Farhangiān University in connection with the knowledge enhancement of faculty members, it seems that due to professional development, these efforts must continue on an ongoing basis.

Presenting the two concepts of professional development of professors and factors affecting professional development can play an important role in talent management and meritocracy and directing future research at Farhangiān University. Achieving the concept of factors affecting professional development in Farhangiān University can have several applications in both theoretical and practical dimensions. If organizations want to attract, retain and develop talents, they have to differentiate their human resource management to develop professionalism at different levels according to professional, scientific, and organizational competencies. This concept shows that professional development requires basic measures by the university's human resource management.

Practical suggestions

- Establish evaluation centers in Farhangiān University to identify talents for attracting, selecting, appointing, and promoting capable faculty members.
- Familiarize the stakeholders with the concepts of the professional development system and introduce them to the goals of professional development.
- Basing the model presented in this study to identify the needs related to the professional development of professors at Farhangiān University.
- Basing the model presented in this study to develop programs and professional development activities for professors at Farhangiān University.
- Provide a knowledge-based and research-oriented space for Farhangiān University professors to develop their careers.

Research suggestions

- As mentioned, the present study was conducted among professors and experts at Farhangiān University. It is suggested that the model presented in this research be implemented in other universities, and the related results be compared with the results of this research.
- There is a need to discuss the differences among merit-taking measures, talent management, succession breeding, human resource development, and human resource professional development more precisely and comprehensively.

Research limitations

- The present study's findings are the result of a mixed study in a limited structural and cultural situation in Farhangiān University as an organization. Therefore, the generalization of its results requires attention to the fields, especially the disciplinary, cultural, economic, and religious contexts.
- The adoption of interview tools has placed numerous limitations on the collection of information. Many of these experts held significant and key positions at Farhangiān University and did not have the opportunity to work with the researcher due to their busy schedules.
- The research results are related to the period when the information has been collected, and over time there may be changes in the results.

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