

Designing an Educational Mentoring Model in Line with the Professional Development of Female Primary School Teachers with a Fuzzy Logic Approach

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Abstract

The teacher is one of the most important elements known to have a close relationship with students and develop their various talents. If a teacher steps into the education scene with a new, creative and well-equipped attitude, he will naturally deliver capable, creative and new-thinking students to face life wisely and solve the problems of the human world. Therefore, the main goal of this research is to design an educational mentoring model in line with the professional development of female primary school teachers with the help of fuzzy logic. Since the current research seeks to design an educational mentoring model in line with the professional development of female primary school teachers and wants to provide reliable guidelines to policy makers to take corrective measures, it is considered applied research. However, this research also has a fundamental orientation given the knowledge gained from designing the educational mentoring model in accordance with the professional development of female primary school teachers and studying the effects of its effective variables. Because the research implementation technique is qualitative in nature, this essay takes an inductive approach to its analysis. Since the current research is among qualitative research, qualitative research strategies have been used in its conduct. The qualitative strategy used in the first stage of the research is grounded theory. The participants in this research were selected from experienced teachers, retired teachers, officials and managers of the field of education in the country. Snowball sampling was utilized in the initial phase of the study to conduct sampling. Finally, according to the use of foundation data method and finally fuzzy logic analysis, a paradigm model on teachers' educational mentoring has been designed.

Keywords: Educational mentoring, professional development, teachers. Fuzzy Logic.

INTRODUCTION

The presence of instructors with professional qualities and competencies is essential for the education system to achieve its goals, as human resources, particularly teachers, are seen as the primary pillar and vital ingredient in the educational process. The process of hiring, training, and engaging human resources should be methodical and focused on clear, predetermined objectives for the nation's educational system to have access to these teachers. One of the most important and prominent factors of the teaching-learning process, the success and academic progress of students in education depends on the existence of teachers who have the necessary theoretical and practical abilities. Therefore, teachers' professional and career development plays a very important role in this field, and any professional deficiency of teachers can directly affect the failure of the educational system. According to the researchers, there are many factors

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such as not being qualified to teach, ineffective classroom and student management, teachers' interactions with each other in the work environment, organizational hierarchy and regulations governing schools are among the most important factors that cause the professional development of teachers may be faced with deficiency. The lack of a suitable model for the training of education teachers has caused chaos and confusion in the way of training and provision of human resources in the education system, which is a significant decrease in their efficiency and effectiveness, and it is feared that this gap In the coming years, the quality of teachers and human resources, which is considered the main factor in the process of educating students, has caused a sharp and sudden drop, and as a result, the problems of education will intensify. Teachers, relying on the knowledge and skills required for teaching and having competence and professional qualifications, always seek to provide a final opportunity to create learning among students. In other words, the set of teacher's activities leads to students' learning, and in this way, improves the quality of their learning. Due to the mentioned reasons, in many countries, special justification programs have been considered for the professional development of teachers, among which it is possible to benefit from the approaches of more experienced teachers, under the title of mentor. According to the definition in mentoring, the mentor, who is a senior, productive and experienced employee (teacher), develops a less experienced employee called a mentee or trainee. In addition to transferring knowledge, developing attitudes and building relationships, mentors will also work on strengthening valuable behavioral skills (Hu and Wang, 2021) [1]. There are various definitions of mentoring in literature, one of the commonly accepted definitions in the literature is "a process in which an experienced, reliable and interested person guides another person in the development and revision of ideas." It guides personal and professional learning and development" (Stapley E et al., 2021) [2]. Many trainings in organizations today are done in a compact and short way. For this reason, the importance of mentoring can be felt in advance. Due to the intensive nature of the programs, employees alone are not able to apply new skills in complex and different environments (Jyoti & Rani, 2019) [3]. Mentoring is one of the very important strategies for better understanding of organizational behavior and work environment. Mentoring is an educational strategy, an interprofessional partnership, and a type of advanced and helpful personal communication between two people, one of whom has more knowledge and experience, and the other has less knowledge and experience (Gozukara, 2017) [4]. In general, mentoring refers to the ability of an organization to achieve the dissemination of knowledge throughout the organization by maintaining the organizational culture in order to continuously improve and adapt to organizational processes. Organizational learning is directly related to the rapid cycle of quality improvement at individual levels and organizational learning systems. The benefits of mentoring for an organization can include rapid development of talented employees, development of a large pool of talent, discovery of individual talent, investment in future successors, and acquisition of professional identity. New employees need to learn about what it means to be professional in It's a work environment, help. The mentor plays a key role in determining professional behavior and delineating job values for new employees. Mentors create an environment that fosters the personal and professional growth of individuals through training skills, attitudes and behaviors (Vasilevski et al., 2021) [5]. The second axis in the design of the mentoring method model is the dimension of organizational development. Organizations achieve success in the long term if they can develop their human resources correctly and in principle, and along with strengthening the necessary knowledge and skills, from it. make productive and diligent people. Failure to pay attention to mentoring in the educational portfolio of organizations can derail the organization's train of success, which is one of the challenges of human resource development. Despite the fact that the subject of mentoring has seen the presentation of many models and ideas, it appears that three fundamental problems can be identified in this area. First, these models are often very fragmented, and for this reason, they have not addressed the various aspects of mentoring in a coherent manner. The second issue is that these models were created and put forth in other nations, which might not adequately supply us with the relevant local components in Iran because these components' significance may vary among nations. The third problem is that education needs a model to measure and operationalize mentoring, which this research seeks to design. Therefore, this research seeks to find out whether it is possible to design an educational mentoring model in line with the professional development of female primary school teachers in Gilan province?

INTERNAL AND EXTERNAL RESEARCH RECORDS

Mohammadi (2018) conducted a research entitled “The role of mentoring of experienced teachers on the professional development of less experienced teachers in the elementary schools of Qain city: a phenomenological study”. One of the most effective methods of human resource development is the mentoring method, which has many effects on the professional development of less experienced teachers. The present study was conducted with the aim of investigating the lived perceptions of less experienced teachers on the mentoring of experienced teachers on their professional development. The research method is qualitative and phenomenological. According to the theoretical saturation, the research sample was formed by 13 less experienced teachers in the elementary school of Qain city. A semi-structured interview was used to gather the necessary data, which was then analyzed using Strauss and Corbin's systematic method. Based on the findings of the research, less experienced teachers use mentoring to improve their job skills and solve problems, and this use has positive results, including “developing professional skills”, “job satisfaction”, “increasing learning motivation”, “getting motivated towards work”, “stress reduction”, “constructive guidance” and “benefits for both parties participating in the mentoring process” in the individual field, “saving time and money”, “information exchange” and “students' educational progress” in the organizational field and It brings negative results including “demotivation towards work and learning”, “not increasing job skills” and “harmful instructions”. By examining the results, it can be concluded that according to the perception of the interviewees, the mentoring of experienced teachers generally has a positive effect on the professional development of less experienced teachers; Meanwhile, by removing the negative consequences of mentoring, it can be more effective. Taghvi et al. (2018) [6] conducted research entitled “Investigation of the role of Islamic mentoring in the development of research competencies of graduate students in the field of information science and epistemology”. Considering the important role of information and scientific agents in surveying and assessing the quality of science development at different institutional and individual levels, one of the necessary qualifications for them is research competence. Determining the function of Islamic mentorship in the growth of graduate students' research competencies in information science and epistemology was the goal of the current study. Descriptive survey of correlation type methodology is used in this study. The data of the study was collected from 102 postgraduate students of information science and epistemology in Tehran universities by stratified sampling method, including master's and doctorate degrees. The subscales of the student development questionnaire's skills of conducting and managing research as well as of interpreting and transferring knowledge were used to measure research skills, and the Islamic mentoring questionnaire was used to gather information about mentoring. Results: The overall average for Islamic mentoring was 3.78, and the average for research competence was 3.84, indicating that students were in a suitable position. The results of the correlation test show that all the nine components of Islamic mentoring, except for challenging, counseling and scientific association, have a significant relationship with students' research qualifications. The results of the regression analysis also show the significance of the model and show that a significant amount of the variance of students' research qualification is explained by the components of Islamic mentoring. Originality/value: Based on an educational strategy that is in line with the dominant cultural conditions, the current study has looked at the status of aspiring information science and epistemology experts and its predictability. A study titled “Human resource management and the effects of mentoring on employee retention in the construction sector” was carried out by Nkomo et al. (2017) [7]. This article examines human resource management and the effects of mentoring on employee retention in the construction sector. The goal of the current study is applied research, and it uses a descriptive and correlational research methodology. South African construction companies made up the statistical population for this study. This study used random sampling as its sampling technique, and the sample size under study consisted of 178 employees. In this field study, a questionnaire serves as both the data collecting tool and the data gathering method. In this article, Cronbach's alpha coefficient is used to measure content validity and also to measure reliability, the values of which are higher than 7.0 for all model variables. 0 has been obtained. All data analysis was done through SPSS software. The findings obtained through the questionnaire were analyzed using Kolmogorov-Smirnov tests, Pearson's correlation coefficient, simple linear regression and Friedman's ranking test. The results of research hypotheses indicated that the freedom and independence of action

as one of the dimensions of mentoring has a significant relationship with the retention of employees in the human resources department. Neneh (2018) [8] conducted a research entitled “Customer Orientation, Coaching and Performance of Small and Large Companies”. Investigating the mediating role in the relationship between customer orientation and business performance is the aim of this study. The statistical population of the research includes 251 participants from several companies in South Africa. Data analysis was done using regression analysis. The study's findings show a strong correlation between customer orientation, coaching, and organizational effectiveness. Bercu (2017) [9] conducted research entitled “Effect of employee training and coaching programs on job satisfaction”. This study looks at and evaluates the effects of staff training programs on job satisfaction. The number of the research sample included 227 employees of Southern Industries Company in Romania. Data analysis was evaluated using a Likert scale. The results of the research indicated that the use of training programs with high quality implementation had a positive effect on the job satisfaction of committed employees. Fleig-Palmer (2009) [10] conducted a research titled “The impact of mentoring on employee retention through knowledge transfer”. This article examined the impact of mentoring on employee retention through knowledge transfer. The goal of the current study is applied research, and it uses a descriptive and correlational research methodology. The private universities in Nigeria comprised the statistical population under investigation. Non-probability sampling was used in this study, and the sample size under investigation was 321 personnel. In this field study, a questionnaire is the data collecting tool and the method of data collection. In this article, Cronbach's alpha coefficient is used to measure the validity of the content and also to measure the reliability, the values of which are higher than 7.0 for all model variables. 0 has been obtained. All collected data analysis was done through SPSS software. The findings obtained through the questionnaire were analyzed using Kolmogorov-Smirnov tests, Pearson's correlation coefficient, simple linear regression and Friedman's ranking test. The results of research hypotheses indicated the existence of meaningful relationships between mentoring and retention of employees with the mediating role of participation in decision-making and consideration of appropriate salaries and wages. In other research, the following can be mentioned: Studying Tarverdizadeh et al. (2021) [11] use academic resilience as a mediator to predict students' academic success based on emotional intelligence, personality, demographics, and attitudes toward school and employment prospects. Rik and Taghipour (2024) investigated the connection between being in nature and a space that allows Talash Preschool children to feel happy and full of vitality as they grow as individuals. Taghipour et al.'s (2015) [12] research Risk analysis in urban construction project management: an employer's and a contractor's perspective. Occupational injuries are currently a key issue in job loss worldwide, according to Mahboobi et al. (2020) [13], who discussed “Assessing ergonomic risk factors using combined data envelopment analysis and conventional methods for an auto parts manufacturer.” A thorough evaluation of pre-school development prevention programs is conducted by Babaei and Taghipour (2023) in order to create a model of a child-friendly city. The impact of ICT on information sharing barriers in the knowledge management process (including case studies) was examined by Taghipour et al. (2016) [14]. A study by Mohammadi et al. (2021) [15] looked into the function and effects of employing ICT technologies when assessing service firms' performance. The study “Predicting entrepreneurial marketing through strategic planning (including case study)” was conducted by Abdi Hevelayi et al. in 2019 [16]. Baghipour Saramiet et al. (2016) [17] conducted a case study at the Imam Sajjad (As) Hospital in Ramsar to model nurses' shift work schedules in accordance with ergonomics. Project planning and control systems in multi-project organizations under fuzzy data approaches while taking resource constraints into consideration were explored by Taghipour et al. in 2020 [18] (Case Study: Wind Tunnel Construction Project). The effect of adopting inclusive quality management on organizational trust was examined by Azarian & Taghipour (2020) (case study: Education) [19]. Measuring the Impact of Teacher-Student Relationship Conflict on the Enjoyment of Lessons (Including a Case Study) was the subject of a 2024 study by Hadizadeh and Taghipour.[20]

ANALYSIS OF RESEARCH TYPE AND HYPOTHESES

Since the current study seeks to design an educational mentoring model in line with the professional development of female primary school teachers in the country and wants to provide reliable guidelines to policy makers to take corrective measures, it is considered applied research. However, this research

also has a fundamental orientation, given the knowledge gained from designing the educational mentoring model in accordance with the professional development of female primary school teachers and the examination of the effects of variables that are effective in it. Also, due to the fact that the research implementation strategy is qualitative, that is why the approach of this thesis is inductive. According to the examination of the theoretical framework of the research hypotheses, it is as follows:

- The organizational structure of education has an effect on educational mentoring.
- Mentoring education has an impact on strategy design in line with development and empowerment.
- Mentoring education has an effect on facilitating conditions.
- Education mentoring has an impact on the organizational policies of education.
- Facilitating conditions have an impact on strategy design in line with development and empowerment.
- Organizational policies of education have an impact on strategy design in line with development and empowerment.
- Designing a strategy in line with development and empowerment has an impact on the continuous improvement of education by changing the views of teachers and students.
- Facilitating conditions have an effect on the continuous improvement of education by changing the views of teachers and students.
- Organizational policies of education have an effect on the continuous improvement of education by changing the views of teachers and students.

MATERIALS AND METHODS

The First part

The data analysis stage is very important; Because it shows the many efforts and efforts of the past. At this stage, it has been tried to examine the information and data by using different methods and relying on the criterion of reason in order to present the model and evaluate it. The findings are the output of the research process and justify and prove the existence of the research. The findings of each research include a series of explanations about the current situation and some inferences based on differences and relationships. Therefore, according to the collected data, this research examines the research questions and aims to achieve the research goals. This part is designed in different sections that have been addressed. The first part, qualitative data analysis: In this research, the method of coding key points was used. In the first stage, qualitative data was collected through in-depth interviews with research participants. Participants in this study included managers, authorities, and retired educators as well as seasoned educators from across the nation. Snowball sampling was utilized to conduct samples in the initial phase of the study. Numerous themes emerged from the open coding procedure, and the gathering of these main qualitative data was narrowed down to a smaller number of categories during the back-and-forth data analysis process. Two techniques are used to extract information from the interviews: key point analysis and micro analysis. The key points coding method was applied in this study. An example of the open coding tables of an interview is given in Table 1.

The Second Part

Validation of the research paradigm model through the fuzzy hierarchical analysis process: the hierarchical analysis process has been widely used in multi-criteria decision-making and successfully in solving many scientific problems. In this method, the problem is structured in the form of a hierarchical structure with different levels, and each level contains a limited number of elements. The relative importance of the elements (including the weight of the factors and the ranking of the alternatives) is obtained indirectly by the subjective judgments of the decision makers.

First is the formation of the fuzzy matrix of criteria and sub-criteria. This matrix has M options and N indicators. Table 2 is used to form the fuzzy decision matrix using the (fuzzy triangulation) method and the fuzzy weight vector:

Table 1. Analysis of the key points of the interview with the first interviewee.

Open coding	Interview text (key points)	Indicator
Lack of forward-looking perspective	Currently, it is not possible to plan for the next few years in the country.	PA1
Lack of educational facilities	Educational facilities and technology are not easily accessible to teachers and students.	PA2
Low educational quality	Our country is at a lower level than other countries in terms of educational issues.	PA3
Lack of educational justice	Our students are not taught with the same facilities.	PA4
professional training	Teachers should receive the necessary training before entering the teaching profession	PA5
Economics of Education	Economic issues have greatly affected the performance of teachers	PA6
Lack of exchange of opinions and cooperation	In our schools, there is no space for teachers to cooperate, and teachers rarely exchange opinions on educational issues.	PA7
Relying on low-level goals in	Our parents focus on the lowest goals of education, which are the economy and employment, and pass through the entrance exam.	PA8

Table 2. Guide table of fuzzy numbers.

Corresponding fuzzy number for ranking		
<i>Inverse fuzzy equivalent</i>	<i>Fuzzy equivalent</i>	<i>Linguistic variables</i>
(1 و 1)	(1 و 1)	Same importance/priority
(1/4 و 1/2 و 1)	(1 و 2 و 4)	Intermediary importance/preference
(1/5 و 1/3 و 1)	(1 و 3 و 5)	slightly preferred
(1/6 و 1/4 و 1/2)	(2 و 4 و 6)	Intermediary importance/preference
(1/7 و 1/5 و 1/3)	(3 و 5 و 7)	very preferred
(1/8 و 1/6 و 1/4)	(4 و 6 و 8)	Intermediary importance/preference
(1/9 و 1/7 و 1/5)	(5 و 7 و 9)	Very much preferred
(1/10 و 1/8 و 1/6)	(6 و 8 و 10)	Intermediary importance/preference
(1/11 و 1/9 و 1/7)	(7 و 9 و 11)	Absolutely preferred

Based on this, the matrix of paired comparison between the criteria according to the opinions of experts and experts in the form of validating the concepts and categories of causal conditions (including sections: the absence of a forward-looking perspective in education, the category of inflexible educational system with traditional structures, The category of the existence of traditional selection indicators without considering merit, lack of interaction and connection between educational systems and causal conditions), validation of the concepts and categories of the main phenomenon (including sections: the category of creating conditions for comprehensive development and improvement teachers, the category of creating conditions for the development and expansion of learning in education, the category of creating conditions for sharing professional and occupational knowledge in education, the category of attention to the organizational excellence of education, the category of attention to human capital through education and the phenomenon is central.), validation of the concepts and categories of the strategy (including sections: the category of focusing on the future of teacher training, the category of teaching the use of information technology for teachers, the category of strengthening and improving the skills of teachers in line with the dimensions of professional development and strategies.), validating the concepts and categories of intervening conditions (including sections: the type of expectations of departments involved in education, the category of designing the future educational system based on a learning-oriented approach, the category of welfare and financial system in accordance with the dignity of teachers and the intervening conditions), validating the concepts and categories of contextual conditions (including sections: the category of macro and effective policy making for the future, the category of changing the attitude towards the role and position of the teacher in the educational system, the category of not allocating enough budget to

education, The category of lack of space for cooperation and interaction between teachers is the category of lack of justice in educational facilities and contextual conditions), validation of concepts and outcome categories (including sections: the category of the position of the teacher as a model of a creative and capable teacher, the category of education Creative, knowledgeable and idea-creating students with appropriate skills, the category of education orientation with regard to cultural diversity and consequences) and the validation of research dimensions are formed. In this section, validation has been done through a pairwise comparison between the dimensions of the research as shown in Table 3 and Table 4.

Table 3. Pairwise comparison matrix between research dimensions

$\sum_{j=1}^m M_{gi}^j$	Strategies	Background conditions	Intervening conditions	Strategies	A central phenomenon	Causal conditions	Research dimensions
(6.2,9.33,15)	(1,1,1)	(3,5,7)	(2,4,6)	(0.2,0.33,1)	(3,5,7)	(1,1,1)	Causal conditions
(2.45,2.67,3.53)	(0.14,0.2,0.33)	(1,1,1)	(0.2,0.33,1)	(0.11,0.14,0.2)	(1,1,1)	(0.14,0.2,0.33)	A central phenomenon
(15,23,31)	(1,3,5)	(5,7,9)	(3,5,7)	(1,1,1)	(5,7,9)	(1,3,5)	Strategies
(3.3,7.45,11.88)	(0.16,0.25,0.5)	(1,3,5)	(1,1,1)	(0.14,0.2,0.33)	(1,3,5)	(0.16,0.25,0.5)	Intervening conditions
(2.45,2.67,3.53)	(0.14,0.2,0.33)	(1,1,1)	(0.2,0.33,1)	(0.11,0.14,0.2)	(1,1,1)	(0.14,0.2,0.33)	Background conditions
(6.2,9.33,15)	(1,1,1)	(3,5,7)	(2,4,6)	(0.2,0.33,1)	(3,5,7)	(1,1,1)	Strategies
$\sum_{i=1}^n \sum_{j=1}^m M_{gi}^j = (29.4,42.12,64.94)$							
$\left[\sum_{i=1}^n \sum_{j=1}^m M_{gi}^j \right]^{-1} = (0.015,0.023,0.034)$							

Also, the degree of magnitude (Si) should be calculated in relation to each other and on this basis, the weights of each of the sub-criteria should be obtained. For this step, according to the fuzzy triangle method, the following equation 1 is used:

$$v(M_2 \geq M_1) = hgr(M_1 \cap M_2) = \mu_{M_2}(d) = \begin{cases} 1 & \text{if } m_2 \geq m_1 \\ 0 & \text{if } l_1 \geq u_2 \\ \frac{l_1 - u_2}{(m_2 - u_2) - (m_1 - l_1)} & \text{otherwise} \end{cases} \quad (1)$$

Table 4. Pairwise comparison matrix between research dimensions

Normalized weight	Weight is not normalized	Result (Si)	$\left[\sum_{i=1}^n \sum_{j=1}^m M_{gi}^j \right]^{-1}$	$\sum_{j=1}^m M_{gi}^j$	Research dimensions
0/22	0/47	(0/09,0/21,0/51)	(0/015,0/023,0/034)	(6/2,9/33,15)	Causal conditions
0/075	0/16	(0/03,0/06,0/12)	(0/015,0/023,0/034)	(2/45,2/67,3/53)	A central phenomenon
0/47	1	(0/22,0/53,1/05)	(0/015,0/023,0/034)	(15,23,31)	Strategies
0/15	0/33	(0/05,0/17,0/4)	(0/015,0/023,0/034)	(3/3,7/45,11/88)	Intervening conditions
0/075	0/16	(0/03,0/06,0/12)	(0/015,0/023,0/034)	(2/45,2/67,3/53)	Background conditions
0/19	0/42	(0/09,0/21,0/51)	(0/015,0/023,0/034)	(6/2,9/33,15)	Strategies

The Third Part

Descriptive indicators of the research paradigm model: In this part, the statistical description of the variables of the research model is presented. In fact, the average obtained for the variables of causal conditions, central phenomenon, strategies, intervening conditions, background conditions and consequences is higher than the expected average (score 3) and also the lowest score related to the variable of causal conditions according to the respondents is equal to 0/03 and the highest score is equal to 5, the central phenomenon variable according to the respondents is equal to 2 and the highest score

is equal to 5, the central phenomenon variable is equal to 2 and the highest score is equal to 5 according to the respondents, the strategies variable is equal to 1.67 and The highest score is equal to 5, the variable of intervening conditions is equal to 2.25 and the highest score is equal to 4.92, the variable of background conditions is equal to 1.8 and the highest score is equal to 4.85 and the lowest score is According to the respondents, the outcome variable is equal to 1.19 and the highest score is equal to 4.94. According to Table 5, the average score of the variables according to the respondents, standard deviation, skewness variance and kurtosis are presented.

Table 5. Statistical description and structures of variables

Elongation	Crookedness	Variance	Standard deviation	Average	the most	the least	Number	Variable
0/882	-0/842	0/476	0/69015	4/1122	5	1/63	210	Causal conditions
-0/613	0/033	0/436	0/66011	3/6888	5	2	210	A central phenomenon
-0/275	-0/33	0/743	0/86209	3/5591	5	1/67	210	Strategies
0/504	-0/379	0/272	0/52126	3/6381	4/92	2/25	210	Intervening conditions
-0/275	-0/33	0/373	0/61077	3/7093	4/85	1/8	210	Background conditions
1/433	-0/891	0/382	0/61778	3/5281	4/94	1/19	210	consequences

The Fourth Part

Evaluation of measurement models: This step is required to determine whether the exogenous and endogenous variable measurement models, which were created using first- and second-order confirmatory factor analysis, are accurate. The conventional estimation mode measurement models illustrate how each item or variable affects the variance of the major factor scores or variable, and since all of these values were more than 0.5, it is preferable to use this model. Also, the model in the mode of significant numbers, all the significant numbers are outside the range of +1.96 and -1.96, therefore, the variable measurement model is confirmed in the mode of significance. The fit indices of the variable measurement model according to Table 6 show that the model or the data collected from the statistical sample of the research has a good fit.

Table 6. Fit indices of the variable measurement model.

IFI	CFI	NNFI	NFI	GFI	RFI	AGFI	RMSEA	χ^2/df	
≥0/9	≥0/9	≥0/9	≥0/9	≥0/9	≥0/8	≥0/8	≤0/1	≤ 3	Standard value
0/97	0/97	0/97	0/97	0/94	0/83	0/86	0/013	2/46	Values of the first order model of causal conditions
0/95	0/95	0/95	0/95	0/92	0/82	0/85	0/013	2/52	Values of the second order model of causal conditions
0/98	0/98	0/98	0/98	0/95	0/85	0/87	0/088	2/61	The values of the first order model of the main phenomenon
0/97	0/97	0/97	0/97	0/94	0/83	0/86	0/076	2/93	The values of the second order model of the main phenomenon
0/99	0/99	0/99	0/99	0/98	0/86	0/88	0/014	2/92	Values of the first order model of strategies
0/97	0/97	0/97	0/97	0/95	0/84	0/85	0/026	2/92	Values of the second order model of strategies
0/99	0/99	0/99	0/99	0/96	0/86	0/88	0/058	2/68	The values of the first order model of the ruling bed
0/98	0/98	0/98	0/98	0/96	0/86	0/87	0/061	2/68	The values of the second order model of the ruling bed
0/96	0/96	0/96	0/96	0/95	0/84	0/82	0/089	2/64	Values of the first order model of the intervention
0/97	0/97	0/97	0/97	0/95	0/82	0/81	0/096	2/92	The values of the second order model of the intervention
0/99	0/99	0/99	0/99	0/96	0/87	0/88	0/068	2/64	The values of the first order model of the outcomes
0/98	0/98	0/98	0/98	0/95	0/86	0/89	0/079	2/65	Values of the second-order model of outcomes

The Fifth Part

Analyzing the partial least squares approach research paradigm model's fit indices:

The three components of the partial least squares analysis are typically the measurement model, the structural model, and the general model. The variables of the model are divided into two categories: hidden and obvious variables, and hidden variables are also used at different levels. Model fitting was done using SmartPLS software. Actually, the measurement model's fit was assessed using divergent validity, convergent validity, and index reliability. Three measurements of factor loading coefficients, Cronbach's alpha, and composite reliability are included in the reliability index, which is used to assess internal reliability. Convergent validity shows the degree of correlation of a structure with its indicators, and divergent validity is the degree of relationship of a structure with its indicators compared to the relationship of that structure with other structures. In addition, in the research, factor loadings have been reported along with the Cross Loading test.

Convergent validity, which assesses the relationship between each construct and its questions, is the next criterion for evaluating the fit of measurement models. Convergence validity shows the high correlation of indicators of a structure compared to the correlation of indicators of other structures, which should be evaluated in reflective models. In order to evaluate the validity of the convergence, the mean of the extracted variance is used. This coefficient has a range of values from 0 to 1, with values greater than 0.4 being allowed. Of course, values greater than 0.3 should be used with prudence. Additionally, the Cronbach's alpha coefficients (whose values likewise range from 0 to 1) are calculated and reported in accordance with the PLS method's data analysis algorithm after the factor loadings of the questions have been measured. Values greater than 0.7 are deemed acceptable, while values less than 0.6 are deemed unfavorable. It should be noted that for variables with a small number of questions, the Cronbach's alpha coefficient has been set at 0.6. It is a variable that values higher than 0.7 are accepted and values lower than 0.60 are considered unfavorable.) It is important that Table 7 shows the results.

Divergent validity is the next criterion for examining the fit of measurement models, which covers two issues: A: comparing the correlation between the indicators of one construct with that construct and the correlation of those indices with other constructs; b) Comparing the correlation of a structure with its indicators in contrast to the correlation of that structure with other structures. There are two methods for calculating divergent validity in the PLS technique: the Fronel and Larcker method and the reciprocal factor loading method. This study employs the second approach. Method of Fronel and Larcker. A structure's degree of association with its indicators is contrasted with its relationship with other structures. When a structure interacts with its indicators more than other structures, it is said to have divergent validity (i.e., the number in the matrix's diameter must be greater than the other numbers in its column). Based on the above table, it can be seen that the correlation of the items of each research variable with its structure is higher than the correlation of these items with other structures (they are larger than other numbers of the same row); Then the Fronel and Larcker matrix is examined. Based on this matrix, if the main diameter of the matrix is greater than the numbers on the left and bottom, considering that all the variables have this state, we can enter the other steps of fitting the structural model. Based on this matrix, if the main diameter of the matrix is greater than the numbers on the left and bottom, considering that all the variables have this state, we can enter the other steps of fitting the structural model.

Evaluation of the structural model: the links between the underlying variables are used to investigate the structural model after the measurement model's validity and reliability have been determined. Additionally, the structural model in the current study was fitted using the most popular criteria. They are the significant coefficient (T-Values), determination coefficient (R²) and predictive power coefficient (Q²). The relationship between the structures in the model (structural portion) is measured using significant numbers as the first and most fundamental criterion. At the 95% confidence level with

regard to the significant coefficient values (T-Values), the study hypotheses are validated if the values of these numbers surpass 1.96, indicating the validity of the link between the constructs as shown Table 8.

Table 7. Average variance extracted

Research model variables	Mean variance extracted	Final Cronbakh alpha	Composite reliability coefficient
	<i>Average Variance Extracted (AVE)</i>	<i>Cronbach's Alpha</i>	<i>Composite Reliability</i>
Teaching the use of information technology	0/613	0/771	0/858
Creating conditions for expansion	0/610	0/768	0/856
Creating conditions for sharing professional knowledge	0/580	0/761	0/847
Creating conditions for development and improvement	0/792	0/912	0/938
Continuous improvement of education measures and curriculum planning	0/684	0/838	0/894
Improving the educational path by changing the perspective of the teacher and student	0/474	0/915	0/929
Education of creative students	0/618	0/780	0/861
Change of attitude	0/622	0/783	0/864
Strengthening and improving the skills of teachers	0/611	0/790	0/863
Focusing on the future of teacher education	0/787	0.910	0/936
Attention to organizational excellence	0/662	0/815	0/883
Attention to human capital	0/455	0/695	0/761
The position of the teacher as a model of a creative teacher	0/587	0/773	0/850
Orientation of education according to cultural diversity	0/791	0/912	0/938
Organizational structure of education	0/441	0/915	0/926
Organizational policies of education	0/398	0/907	0/920
Macro and effective policy for the future	0/795	0/914	0/939
Compatible welfare and financial system	0/586	0/769	0/849
Traditional selection indicators	0/599	0/768	0/854
Facilitating conditions	0/460	0/881	0/903
Strategy design in line with development and empowerment	0/453	0/880	0.901
Designing the future education system	0/609	0/768	0/856
Failure to allocate sufficient funds	0/599	0/780	0/856
Lack of interaction and communication between educational systems	0/637	0/802	0/874
Lack of a forward-looking perspective	0/735	0/879	0/917
Lack of justice in facilities	0/439	0/673	0/750
Educational mentoring	0/392	0/906	0/920
Lack of collaboration space	0/686	0/840	0/895
Inflexible education system	0/593	0/767	0/853
The type of expectations of departments involved in education	0/798	0/916	0/941

Table 8. The significance coefficient of the relationships of each of the main factors with secondary

factors

Examining the relationships between variables with sub-factors	T	The significance level	Result
Improving the educational path by changing the perspective of the teacher and the student -> continuous improvement of teaching and planning actions	83/620	0/000	confirmation
Improving the educational path by changing the perspective of the teacher and student -> training creative students	82/609	0/000	confirmation
Improving the educational path by changing the perspective of the teacher and student -> the position of the teacher as a model of a creative teacher	6/275	0/000	confirmation
Improving the educational path by changing the perspective of the teacher and the student -> orientation of education according to cultural diversity	94/553	0/000	confirmation
Organizational structure of education -> traditional selection indicators	39/231	0/000	confirmation
Organizational structure of education -> lack of interaction and communication between educational systems	33/249	0/000	confirmation
Organizational structure of education -> lack of future perspective	24/640	0/000	confirmation
Organizational structure of education -> inflexible education system	44/465	0/000	confirmation
Organizational policies of education -> attitude change	67/797	0/000	confirmation
Organizational policies of education -> macro and effective policies for the future	61/233	0/000	confirmation
Organizational policies of education -> insufficient budget allocation	7/212	0/000	confirmation
Organizational policies of education -> lack of justice in facilities	6/589	0/000	confirmation
Organizational policies of education -> lack of space for cooperation	73/076	0/000	confirmation
Facilitating conditions -> compatible welfare and financial system	7/618	0/000	confirmation
Facilitating conditions -> designing the future education system	83/714	0/000	confirmation
Facilitating conditions -> type of expectations of departments involved in education	72/953	0/000	confirmation
Designing a strategy in line with development and empowerment -> training in the use of information technology	77/816	0/000	confirmation
Designing a strategy in line with development and empowerment -> focusing on the future of teacher training	72/237	0/000	confirmation
Educational mentoring -> creating conditions for expansion	74/119	0/000	confirmation
Educational mentoring -> creating conditions for sharing professional knowledge	9/777	0/000	confirmation
Educational mentoring -> creating conditions for development and improvement	59/208	0/000	confirmation
Educational mentoring -> attention to organizational excellence	66/145	0/000	confirmation
Educational mentoring -> attention to human capital	7/228	0/000	confirmation

R2 coefficients: The R2 coefficients pertaining to the endogenous (dependent) hidden variables of the model serve as the second criterion for assessing how well the structural model fits the data in a study. These coefficients represent the impact of an external variable on an internal variable, and their three values—0.19, 0.33, and 0.67—are regarded as the thresholds for weak, medium, and strong R2 values, respectively. According to the obtained results, it can be said that the coefficients of determination of mediator and dependent variables are higher than 0.67, hence the coefficient of determination obtained is strong.

The Coefficient of Determination

The fit of the structural model in a study is evaluated using the R2 coefficients associated with the endogenous (dependent) hidden variables in the model. As mentioned earlier, these coefficients are a measure that shows the effect of an exogenous variable on an endogenous variable, and three values of 0.19, 0.33, and 0.67 are used as criteria values for weak, medium, and R2 is considered strong.

According to the obtained results, it can be said that the coefficients of determination of mediator and dependent variables are higher than 0.67, hence the coefficient of determination obtained is strong as shown in Table 9.

Table 9. Determination coefficients and adjusted determination coefficients.

Mediating and dependent variables	The coefficient of determination	Adjusted coefficient of determination
	<i>R Square</i>	<i>R Square Adjusted</i>
Teaching the use of information technology	0/860	0.859
Creating conditions for expansion	0/824	0.823
Creating conditions for sharing professional knowledge	0/327	0.324
Creating conditions for development and improvement	0/774	0.773
Continuous improvement of education measures and curriculum planning	0/844	0.843
Improving the educational path by changing the perspective of the teacher and student	0/141	0.138
Education of creative students	0/862	0.862
Change of attitude	0/829	0.829
Strengthening and improving the skills of teachers	0/279	0.276
Focusing on the future of teacher education	0/848	0.847
Attention to organizational excellence	0/813	0.812
Attention to human capital	0/272	0.268
The position of the teacher as a model of a creative teacher	0/229	0.226
Orientation of education according to cultural diversity	0/835	0/834
Organizational policies of education	0/365	0/334
Macro and effective policy for the future	0/799	0/798
Compatible welfare and financial system	0/308	0/305
Traditional selection indicators	0/715	0/714
Facilitating conditions	0/003	-/002
Strategy design in line with development and empowerment	0/019	0/005
Designing the future education system	0/874	0/873
Failure to allocate sufficient funds	0/270	0/266
Lack of interaction and communication between educational systems	0/708	0/707
Lack of a forward-looking perspective	0/599	0/597
Lack of justice in facilities	0/250	0/246
Educational mentoring	0/001	0/003
Lack of collaboration space	0/839	0/838
Inflexible education system	0/768	0/767
The type of expectations of departments involved in education	0/844	0/844

The Sixth Part

Explanation of the research hypotheses based on the paradigmatic model and their statistical test: In the following, the research hypotheses will be tested. In this, partial least squares approach was used using SmartPLS software. To test the research hypotheses, two models are employed in this method: the model in the meaningful mode and the model in the standard estimation mode. The value of the estimation coefficient is between zero to positive one and zero to negative one, and if the estimation coefficient is in the positive range, the variables have a positive, direct and significant effect on each other, and if it is in the negative range, the variables have a negative, inverse effect on each other. And it is meaningful.

Table 10. Examining the results of research hypotheses.

Hypothesis	Path coefficient	T	The significance level	Result
The organizational structure of education has an effect on educational mentoring.	-0/651	19/568	Sig<0/05	confirmation
Mentoring education has an impact on strategy design in line with development and empowerment.	0/368	10/628	Sig<0/05	confirmation
Mentoring education has an effect on facilitating conditions.	0/711	24/361	Sig<0/05	confirmation
Education mentoring has an impact on the organizational policies of education.	0/532	17/319	Sig<0/05	confirmation
Facilitating conditions have an impact on strategy design in line with development and empowerment.	0/431	13/397	Sig<0/05	confirmation
Organizational policies of education have an impact on strategy design in line with development and empowerment.	0/509	15/613	Sig<0/05	confirmation
Designing a strategy in line with development and empowerment has an impact on the continuous improvement of education by changing the views of teachers and students.	0/812	31/209	Sig<0/05	confirmation
Facilitating conditions have an effect on the continuous improvement of education by changing the views of teachers and students.	0/356	11/319	Sig<0/05	confirmation
Organizational policies of education have an impact on the continuous improvement of education by changing the views of teachers and students.	0/267	8/209	Sig<0/05	confirmation

Research hypotheses have been tested in the remaining sections of this section using the following methodology: two models are employed to test research hypotheses: the model in significance mode and the model in standard estimation mode. According to the paradigmatic model of the research, five hypotheses were developed, and the results obtained indicate the approval of all the hypotheses developed in this research. In this approach, according to the model in the standard estimation mode and the model in the mode of significant numbers for each hypothesis, two indices of standard estimation coefficient (beta coefficient) and significant numbers (t-statistic) were extracted. The standard estimation coefficient shows the intensity of the impact of the variables on each other, and the closer it is to one, the stronger the impact. Significant numbers are also the basis for rejecting or accepting research hypotheses. Considering that the t-statistic in all the hypotheses is greater than 2.58, all the research hypotheses are confirmed at the confidence level of 99% and the relationship between the variables is direct, positive and significant. The results obtained shown in Table 10:

CONCLUSION

The goal of every research is to achieve results through which specific goals can be achieved. In addition, it should be noted that these results can provide a foundation for other researches and researchers. This research, like other researches, seeks to achieve specific goals and results. The fruitful role of the public education system, including primary education, on the one hand, is to transform them into culturally and socially advanced people, and on the other hand, it provides the general knowledge needed by manpower in various economic, social and service sectors. It is safe to say that the future of nations depends on the ability of the educational system and the empowerment of managers and teachers in educating the children of that country. Therefore, the first priority to increase productivity in schools is to pay full attention to the empowerment of managers and teachers in schools. Changing the vision, attitude and behavior of teachers is one of the basic elements of educational mentoring. On the other hand, change is always faced with many obstacles and challenges for which suitable and practical solutions should be defined. In this research, an educational mentoring model was presented in line with the professional development of female primary school teachers in the country, and it provided reliable guidelines for taking corrective measures to policy makers, the most important of which are mentioned below:

In order to improve the organizational structure and the problems caused by the faulty structure of

education, the following suggestions have been made:

Paying attention to the importance of educational supervision and guidance in improving the teaching-learning process, it is necessary to employ capable and experienced people in this important role.

- The level of professional knowledge of teachers in the field of curriculum content, teaching models and methods, educational evaluation methods, production and use of educational materials, educational psychology, student growth characteristics, learning theories, etc.

It is mentioned to strengthen the professional skills of employees, which is done with the purpose of creating changes in the vision, attitude and behavior of employees, strengthening the professional skills of employees and increasing the self-confidence of employees. In this regard, suggestions for improving educational mentoring are presented as follows:

- *Self-efficacy*: a person's belief in his own success
- *Meaningfulness*: a sense of personal and social responsibility to achieve career goals
- *Autonomy*: independence and freedom of action of a person in performing his job duties
- *Influence and effectiveness*: the feeling of influence and effectiveness of a person on strategic activities
- *Trust*: the feeling of security and honest behavior of the person towards the employees

On the other hand, strategic solutions at the school level should also be implemented, and in this regard, the following suggestions have been made:

- Formation of homogeneous working groups at the level of neighboring schools to exchange experiences
- The participation of educational managers and assistants in in-service courses and programs
- Empowering managers in the field of leadership, human relations and group relations
- Acquainting the principals of elementary schools with the principles of psychology, sociology and education
- Holding continuous training workshops for managers
- Promoting the culture of reading and reading among managers and assistants

Research Problems and Obstacles

Before introducing the problems and obstacles of the research, it should be mentioned that most of the problems of the research were already known according to the feasibility study that was done before the thesis. The researcher had entered the field of research knowing these limitations and problems. Therefore, the problems and obstacles of the research are as follows:

- Lack of available and usable scientific resources: the field of educational mentoring is considered as a new topic and in many cases of education and empowerment researchers use teacher-student relationships as synonymous with mentoring, which considering this Synonymy is fundamentally wrong, so it is difficult to find scientific sources in this field. Therefore, available scientific sources are one of the serious limitations of this research.
- Difficulty in obtaining similar research: the lack of similar work in this field and the lack of research done, despite a lot of effort, the researcher did not succeed in finding a research that directly addressed this issue.
- Another issue was related to the lack of familiarity of the interviewees with the topic of educational mentoring, which in some cases caused problems in this connection.

Author Contributions

Conceptualization, MH and SL; methodology, MH and MT; software, SL and MT; validation, MH and SL; formal analysis, SL and MT; investigation, MH and MT; resources, MH and SL; data curation, SL and MT; writing—original draft preparation, MH and SL; writing—review and editing, SL and MT; visualization, MH and MT; supervision, MH and MT; project administration, MSLM and MT. All

authors have read and agreed to the published version of the manuscript.

Conflict of Interest

The authors declare no conflict of interest.

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