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Designing a grounded theory-based model for talent management for future Iran

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Abstract

This research aims to design a Grounded Theory-based model for talent management for future Iran. Moving from the present to the future, the lack of human resources will become a serious problem for Iran. Therefore, to overcome the coming difficult days, it is necessary to identify and nurture the existing talent well, and since the best time to identify and develop talent is childhood, adolescence, and youth ages, and people are in school and university, at this age, so the education cycle is the best cycle for talent management. This research was conducted to compensate for the lack of human resources through optimal control of talent. The research method is sequential mixed (the qualitative section is preferred to the quantitative section). In the quantitative section, 10 expert professors were interviewed, and the results were analyzed through the Grounded Theory method and 122 codes were obtained as 6 axial categories. Then, the model was designed. The designed model was tested using a sample including 400 people and finally, suggestions were presented.

Keywords: talent, talent management, education, university
2020 MSC: 97B60

1 Introduction

A look at the stages of human civilization shows that the role of man in it has evolved from simple labor (physical work) to human capital (knowledge and skills), which is considered one of the important factors of production, in such a way that nations always seek to improve quality. are their human resources because more production depends on skilled and trained labor. Many thinkers of development economics believe that developed countries have achieved high productivity rates in their industrial production process through increased investment and attention to training programs for employees and managers [14]. This theory is in line with the War for Talents that McKinsey and Company proposed in 1990 and has a good overlap.

The third goal of the strategic document of the Ministry of Science, Research and Technology (Iran) is to take care of the human and intellectual capital of the country, and according to the statistics of the Ministry of Science,

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Research and Technology (Iran), about one million people from the centers every year They graduate from higher education, and many of them either do not find a suitable job, or they turn to their non-specialized jobs, or they join the country's many unemployed people. All these indicate the lack of a comprehensive talent management program in the country and the lack of a single and responsible institution to prepare and implement this program.

Also, the public perception and understanding of talents in the Islamic Republic of Iran is only focused on brilliant talents and elites, which are planned for them by the National Organization for Development of Exceptional Talents and Iran's National Elites Foundation, respectively, and the talents It is hidden in working children and the student population of the country due to reasons such as the lack of talent survey and talent acquisition or the deprivation of education in schools and universities; while according to the existing trends; The Islamic Republic of Iran will face many problems in the future, especially in 2040 and after, in providing skilled labor.

In addition to the above, the research concern of the researcher is that according to the information available in the Iranian Research Institute for Information Science and Technology and the National Library, so far, applied research has not been done at the national level for talent management in the country. Until now, the appropriate scientific model has not been done. If it is not prepared and presented, it will not be possible in human capital management and hidden talent management in this capital. Another problem that has become a research concern is that numerous searches in Persian and Latin texts showed that the existing theories about talent management have been proposed in the field of organization. There is a theoretical vacuum in the field of talent management in the national territory. The lack of a comprehensive theory and model in this field and the lack of necessary research in this field will intensify scientific and practical surprises in the future and threaten important areas such as the economy, national security, etc.

Finally, the researcher's main and specific concern is that, even though the basic challenges ahead are clear, there is no written national plan and model for the efficient and effective management of talents to face the challenges ahead. It is the case that the platform for dealing with this important issue can be provided by paying more attention to educational systems. In order to draw attention to the problem of national talent management, the researcher designed and validated the national model for talent management while expressing the current and future challenges of this field and the effective role of two important educational institutions of the country (Ministry of Education (Iran) and Ministry of Science, Research and Technology (Iran)).

2 Theoretical foundations of research

2.1 Characteristics and indicators of talent

Boudreau and Ramstad [4] argued that talent includes "the potential and realized capacities of individuals and groups and how they are organized, including within the organization and those who can join the organization." From the above statement, they provided more details about talent acquisition, which talent has the following formula:

$$\text{Competence} \times \text{Commitment} \times \text{Contribution}.$$

The three qualities described in the above formula are as follows:

- Competence refers to knowledge, skills, abilities, and unique values that a person gives to his role in his work. It is suggested that talent capabilities should be aligned with the business strategy and the current and future needs of the organization. They believe that the formula "right skills + right place + right job + right time" should be taken into consideration. However, competence can only exist without commitment to doing something independently, and thus, both of these main elements are considered talents. In addition, competencies should be compatible with organizational needs [6].
- Commitment: It means that people tend to apply their abilities in the best way in the organization [1]. Therefore, talented employees should not only have competence and capability but also use their knowledge in the best way to contribute to organizational success. This commitment depends on the individual's interest, motivation, values, and attitudes.
- Contribution: It refers to the personal and value output of the person from the competence and commitment that the person has put into his role. Talent participation is the same value brought to the organization that is created through hiring people with the right qualifications and combining abilities in the right position at the right time [6]. It is also reminded that talent is specific and different for different organizations under the influence of the type of industry and nature of work [4].

While these characteristics are discussed separately, it should be noted that the "talent" formula presented by Al Ariss et al. [2] shows that the combined effect of these characteristics is important. It is more than individual characteristics. Therefore, competence and commitment without real meaning in organizational success do not have a sense that "Gerhardt and Karsan" [9] consider as the output of employees' performance. At the same time, employees should conclude that the work they do is meaningful and valuable for them.

The required characteristics of "talented employees" vary from industry to industry. For example, the key attributes of talented employees required by securities companies are honesty, optimism, enthusiasm, and tolerance because they have to work under the pressure of the nature of work and external factors. Michaels et al. [11] listed the inherent qualities of talents that correspond to the characteristics of "A" players (according to the example mentioned earlier) and listed in Table 1:

Table 1: Talent quality - "A" players [11]

Dimension, size	**Indicator**
Overall talent level	10% of top/potential employees.
Vision	Facilitates the creation and communication of competitive and strategic visuals.
Intelligence	IQ 130 and above; In 'a quick study', it can perform complex analysis quickly.
Leadership	Initiates changes; Very adaptable and able to sell organizational changes.
Resourcefulness	Remarkable ability to make way over, under, around, and obstacles; It has new paradigms.
Customer focus	It is very sensitive and adaptable to the needs of unstable customers.
Coaching	Successfully consulting teachers and coaches turns each team member into a "turbo performance" and strengthens personal/professional growth.
Team building	Creates focused, collaborative, and driven teams.
Record	Exceeding the expectations of employees, customers, and shareholders
Integrity	Hard and armored
Connections	Excellent writing/listening skills

According to the table above, it should be determined whether the organization needs talent or not; the talent requirement should be directly related to the organization's strategy. Therefore, the organization should be able to identify the talents that meet the organizational needs.

2.2 Talent management

In early 1997, McKinsey and Company coined the term "War for Talents" to describe the challenges faced by employers in finding highly skilled individuals or candidates. It stated that organizations all over the world are competing with others to obtain talent. Therefore, businesses, organizations, and governments must have the ability to recognize talented people, provide them with the necessary training, and maintain valuable employees.

The concept of talent management suffers from both practical and theoretical limitations because the science of terminology does not provide clear and consistent theoretical support for it in the existing literature. In all previous research and articles, the definition of talent management is different, in most cases, the differences are in understanding the broad purposes of talent management [12]. In reviewing the history of talent management, it can be seen that despite the works, articles, and practical research in this field, there is no consensus on a clear and unified definition of talent management, its scope, dimensions, and general goals. And this indicates the gap and distance that exists among the researchers. Table 2 shows the different definitions of talent management, and each of the researchers reflects a specific point of view.

As can be seen in Table 2, sometimes talent management is used as a managerial function, or as one of the tasks of the human resources management department, and in some cases as the task of the organization's leadership, and sometimes the joint effort of organization management and human resource management has been proposed, each of which is affected by a specific approach.

3 Research methodology

Mixed methods research was applied in this study. In the qualitative part of the research, the grounded theory method was used to identify the research variables and their dimensions since the theoretical foundations of the research on the subject do not have the necessary richness. In qualitative research, the main research tool is semi-structured interviews with experts. The study population of the research is university professors with expertise in educational management, higher education, human resources, sociology, and management. The "snowball sampling" method was used. This method is based on the subjective judgment of the researcher. Especially where the resources are limited,

Table 2: A summary of the definitions of talent management

Researchers	Definition	The main axis of the definition
[5]	Talent management deals with the strategic management of the existing flow of talent in the organization to ensure that the right people are working and active in the organization at the right time and in the right jobs to achieve the strategic goals of the organization.	Strategic management talent
[13]	Talent management is based on coordinating and integrating the activities of talent acquisition, talent attraction, talent development, talent maintenance, talent management, succession planning, changing the organizational culture to a culture appropriate to the talent management approach, and talent surveying in the organization.	Management of talented people through human resources functions
[10]	It is said to be a set of activities that the employer uses to hire, train, develop, and generally manage those employees who hold the executive and important jobs of the organization.	
[8]	Talent management has five components: attracting, identifying, developing, employing, and engaging, which helps to manage talented employees.	
[17]	Talent management is a positive and useful action for the best people in business and a kind of investment for their growth. It is also the flourishing of people's potential talents and helping them to take advantage of their strengths and improve their weaknesses.	Development of talented people
[3]	Talent management is strategic management that deals with the systematic identification of key positions, which are considered to be the key to the organization's stability and competitive advantage. Developing the organization's talent pool to fill these key positions is one of the main responsibilities of this type of management.	Key positions in the organization
[7]	Talent management is the implementation of integrated strategies or systems designed to increase the organization's productivity through attracting, developing, retaining, and using people with the necessary skills and talents to achieve future business goals.	Strategies to increase the productivity of human resources
[15]	Talent management is the systematic identification, attraction, development, employment, and maintenance of those people with potential who have special value for the organization.	People with special value

or it is not possible to specify the sampling frame, the techniques related to "non-random sampling" can be used. To reach the pattern emerging from the qualitative method, after 10 interviews with different people, data saturation was achieved in terms of sampling adequacy. Through semi-structured interviews with experts, the concepts and key points obtained were first examined and listed. In the second stage, the phrases, concepts, and items extracted from the process of interviews were assimilated with detailed analysis (choosing more correct words and removing common concepts), and 122 items were obtained in this section. The accepted codes were prepared as a checklist for conducting interviews, and some of the obtained items were removed and modified by conducting interviews with experts. After constant comparison of the answers obtained from the interview, similar responses were arranged, and similar concepts were extracted from them. In addition, related items were merged and categorized into six main categories. In the final stage, the categories of the fourth levels (axial categories) and the third levels were screened and selected to extract the final paradigm model. The main dimensions and components were determined in an exploratory manner based on the process of open and axial coding on the data obtained from the in-depth interviews. The method of refining the conceptual codes was carried out, and the priority of each factor was determined based on the frequency of the concepts mentioned in the interviews. Concepts were categorized through coding directly from the interview transcripts of the participants or according to the common items of the codes. The transcripts of the interviews were regularly reviewed to find the axial category and sub-categories and the importance and priority of these categories. Finally, the obtained codes were used to confirm the validity and reliability of the codes. Inter-coder reliability was used to determine the quality of qualitative analysis, and the codes were verified. In the quantitative section, the codes obtained from the qualitative section were analyzed by confirmatory factor analysis. The minimum sample size for confirmatory factor analysis is 200 people. The statistical population of this research in the quantitative section includes professors in the fields of educational management, higher education, human resources, and sociology at Islamic Azad University, Science and Research Branch, and Islamic Azad University, North Tehran branch, Shahid Beheshti University, and Farabi University. The sampling method is stratified random sampling. In this research, a survey was conducted with 400 people through a questionnaire. The tool in the quantitative part was a researcher-made questionnaire. Its validity was confirmed using experts' opinions, while the reliability was confirmed using Cronbach's alpha test. The alpha value of the questionnaire was 0.77, which indicates the appropriate reliability of the tool. After collecting data, data analysis was done at two descriptive-inferential levels using confirmatory factor analysis methods and Amos software.

3.1 General structural equation modeling

This model is a combination of two measurement and structural models. In it, both the relationships between latent variables and obvious variables (measurement model) and the relationships between latent variables (structural model) are considered.

An example of a general structural equation model and its solution:

The relationship between three latent variables, m, p, and g is investigated as follows.

The exogenous latent variable g, p, and m is the independent variable that affects the endogenous latent variable n.

To measure variable m, three obvious index variables, X_1, X_2, and X_3, have been used.

To measure the p variable, three obvious index variables, Y_1, Y_2, and Y_3, have been used.

To measure the latent variable g, three obvious index variables, Y_4, Y_5, and Y_6, are used.

The path coefficient between two dependent latent variables is denoted by β, and the coefficient between the independent and dependent latent variables is represented by γ.

The relationship between each latent variable and the corresponding obvious variables is indicated by the letter λ, which is called factor loading.

ε represents the error (residual) for the endogenous latent variable

δ represents the error (residual) for the exogenous manifest variable

ζ represents the error variance (residual) for the endogenous latent variable used to fit the model.

$$n_t = \beta_1 + \beta_2 m_t + \beta_3 g_t + \varepsilon_{1t}. \tag{3.1}$$

The model should be named according to the number of parameters of the model and the parameters should be entered into the model (Eqs. (3.2)–7):

$$n_t = \beta_{11} + \beta_{12} m_t + \beta_{13} p_t + \varepsilon_{2t}, \tag{3.2}$$

$$n_t = \frac{\{(\beta_1\beta_{13} - \beta_{11}\beta_3) + \beta_{13}\beta_2 g t^{-} \beta_3\beta_{12} m_t - \beta_3\beta_{14} n_{t-1} + (\beta_{13}\varepsilon_{1t} - \beta_3\varepsilon_{2t})\}}{\beta_{13} - \beta_3} \tag{3.3}$$

$$p_t = \frac{\{(\beta_1 - \beta_{11}) + \beta_2 g t^{-} \beta_{12}\beta_{12} m_t - \beta_{14} n_{t-1} + (\varepsilon_{1t} - \varepsilon_{2t})\}}{\beta_{13} - \beta_3} \tag{3.4}$$

$$(x) = \frac{2}{\sqrt{\pi}} \int_0^x e^{-t^2} dt.$$
$$n = (n_1, n_2) \tag{3.5}$$

where:

$$n_1 = \left\lceil 50 \left(\frac{j}{k}\right)^2 - 450 \left(\frac{j}{k}\right) + 1100 \right\rceil$$
$$n_2 = \left\lceil \frac{2}{2H} \left(A\left(\frac{\pi}{6} - B + D\right) + H + \sqrt{\left(A\left(\frac{\pi}{6} - B + D\right) + H\right)^2 + 4AH\left(\frac{\pi}{6} + \sqrt{A} + 2B - C - 2D\right)} \right) \right\rceil \tag{3.6}$$

where:

$$A = 1 - p^2$$
$$B = parcsin\left(\frac{p}{2}\right)$$
$$C = parcsin(p)$$
$$D = \left(\frac{\delta}{z_1 - \alpha/2 - z_1 - \beta}\right)^2$$

where j is the number of observed variables, k is the number of latent variables, ρ is the estimated Gini correlation for a normal random vector of variables, δ is the predicted effect size, α is the corrected type I error rate, β is the type II error rate, and z is a standard score.

$$F(x;\mu,\sigma^2)\frac{1}{2}\left[1+erf\left(\frac{x-\mu}{\sigma\sqrt{2}}\right)\right] \tag{3.7}$$

where μ is the mean, σ is the standard deviation, and erf is the error function. Now the same steps can be done using the software.

3.2 The Goodness-of-fit tests

As their name suggests, goodness-of-fit tests determine whether a particular distribution is well-fitted. Calculating goodness-of-fit statistics also helps to rank the fitted distributions according to how well they fit the data.

- The first index- RMESA

$$RMESA=\frac{\sqrt{(X^2-df)}}{\sqrt{[df(N-1)]}} \tag{3.8}$$

- The second index- GFI

$$GFI=1-\frac{F(S,\sum(\acute{\theta}))}{F(S,\sum(.))} \tag{3.9}$$

- The third index – AGFI

$$AGFI=1-\frac{k(k+1)}{2d}(1-GFI) \tag{3.10}$$

4 Findings

4.1 Open, axial and selective coding

At first, the concepts and key points were listed from the interview process. The phrases, concepts, and items extracted from the process of interviews were assimilated with detailed analysis (choosing more correct words and removing common concepts), and 122 items were obtained in this section. The obtained codes were prepared as a checklist for conducting interviews, and some of the acquired items were removed and modified by conducting interviews with experts.

During the open coding stage, the data was carefully examined, suitable terms and concepts were chosen, and specific related categories were selected. Their dimensions and characteristics were determined, and the pattern was examined. The main unit of analysis for open coding and axial coding is the concepts extracted from the interview. The researcher titled the concepts, and were directly obtained from the interview transcript, and items were achieved from interviews. The codes were obtained in the axial coding stage, and then they were examined in the open coding stage, and related and similar codes were grouped into larger categories. After preparing and adjusting the tables as part of the qualitative analysis of the interview data, the resulting concepts were grouped at a higher and more abstract level to achieve categories to complete the analysis based on open coding. Categorization is the process by which concepts are grouped; otherwise, they will lead to confusion. Therefore, once again, using the constant comparison of concepts with each other, each concept was compared with the concepts before or after it or with all the existing concepts to extract general categories. Hence, after reaching the extracted concepts, the related concepts were categorized in a general category. General titles were considered for the categories based on the titles in related theories or the concepts obtained from the research. Thus, after constant comparison of the answers obtained from the interview, similar responses were arranged, and similar concepts were extracted from them. In addition, related items were merged and categorized into six main categories.

The purpose of selective coding is to create a relationship between the generated categories (in the axial coding stage). This action is usually done based on the paradigm model and helps the theoretician to carry out the theorizing process easily. The basis of connecting in axial coding is based on the expansion of one of the categories. In the selective coding stage of the current research, the relationship of the main category with other categories was determined. At this stage, the primary and secondary classes were connected to produce theoretical concepts in order to present a design model and validate the national talent management model (emphasizing the role of educational institutions). These actions allowed the researcher to integrate the concepts obtained in the open and axial coding stages and use them to provide a model. For this purpose, using a qualitative research method, we identified the role of the extracted categories in the form of a paradigm model using the paradigm presented by Corbin and Strauss [16] (see Figure 1).

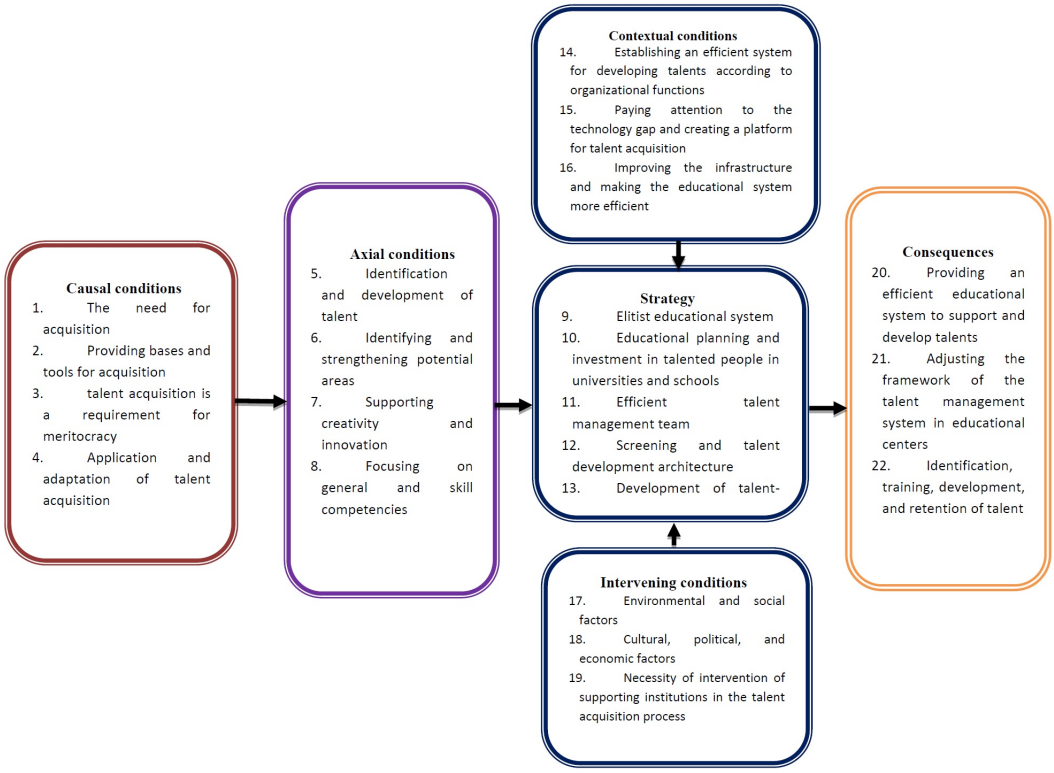

Figure 1: Selective coding based on the paradigm model

4.2 Analysis of the quantitative section of the research

In this chapter, the PLS algorithm was used to check the reliability and validity as well as to test research hypotheses, factor loadings, Cronbach's alpha tests, composite reliability, and average variance extracted (AVE). The desired data was used as a basis for analysis using a questionnaire tool and through a collected sample size of 400 people. SMART PLS software was used for data analysis.

- Confirmatory factor analysis of causal conditions

  Confirmatory factor analysis was used to determine the validity of the second category. The output of AMOS software shows that all factor loadings are higher than 0.3. According to the output of AMOS, the calculated value of $|2/df$ is 1.8, the value of $|2/df$ smaller than 5 indicates the appropriate fit of the model, and the root mean square error of approximation (RMSEA) estimate should be less than 0.08. This value in the model is equal to 0.057. The GFI, AGFI, CFI, and NFI indicators should be more than 0.9, higher than the set value in the investigated model. Therefore, the data of this research fits well with the factor structure of this scale, and this indicates the alignment of the questions with the variables of the causal conditions.

Table 3: Fit indices of causal conditions

Characteristic	Estimated Value	Criterion Value
Chi-Square to Degrees of Freedom Ratio ($\|2/df$)	2.07	$\|2/df < 5$
Root Mean Square Error of Approximation (RMSEA)	0.066	$RMSEA < 0.08$
Goodness of Fit Index (GFI)	0.93	$GFI > 0.9$
Adjusted Goodness of Fitness Index (AGFI)	0.91	$AGFI > 0.9$
Comparative Fitness Index (CFI)	0.96	$CFI > 0.9$
Normal Fitness Index (NFI)	0.94	$NFI > 0.9$

- Confirmatory factor analysis of strategies

  Confirmatory factor analysis was used to determine the validity of the strategies. The output of AMOS software shows that all factor loadings are higher than 0.3. According to the output of AMOS, the calculated value of $|2/df$ is 1.8, the value of $|2/df$ smaller than 5 indicates the appropriate fit of the model, and the root mean

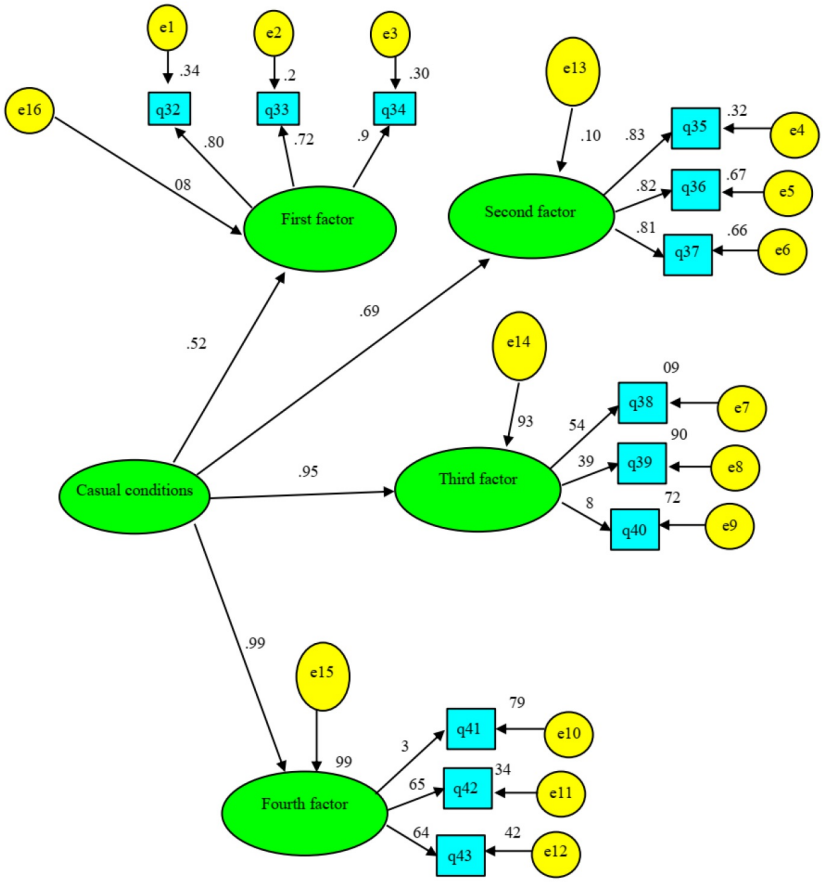

Figure 2: Path analysis of causal conditions

square error of approximation (RMSEA) estimate should be less than 0.08. This value in the model is equal to 0.057. The GFI, AGFI, CFI, and NFI indicators should be more than 0.9, higher than the set value in the investigated model. Therefore, the data of this research fits well with the factor structure of this scale, and this indicates the alignment of the questions with the variables of the strategies.

Table 4: Fit indices of strategies

Characteristic	**Estimated Value**	**Criterion Value**
Chi-Square to Degrees of Freedom Ratio ($\|2/df$)	1.8	$\|2/df < 5$
Root Mean Square Error of Approximation (RMSEA)	0.057	$RMSEA < 0.08$
Goodness of Fit Index (GFI)	0.94	$GFI > 0.9$
Adjusted Goodness of Fitness Index (AGFI)	0.92	$AGFI > 0.9$
Comparative Fitness Index (CFI)	0.98	$CFI > 0.9$
Normal Fitness Index (NFI)	0.97	$NFI > 0.9$

- Confirmatory factor analysis of contextual conditions

  The numbers on the paths are factor loadings; all factor loadings are higher than 0.3. According to the output of AMOS, the calculated value of $|2/df$ is 1.54, the value of $|2/df$ smaller than 5 indicates the appropriate fit of the model, and the root mean square error of approximation (RMSEA) estimate should be less than 0.08. This value in the model is equal to 0.047. The GFI, AGFI, CFI, and NFI indicators should be more than 0.9, higher than the set value in the investigated model. Therefore, the data of this research fits well with the factor structure of this scale, and this indicates the alignment of the questions with the variables of contextual conditions.

- Confirmatory factor analysis of intervening conditions

  Confirmatory factor analysis was used to determine the validity of the intervening conditions. The numbers on the paths are factor loadings, and all factor loadings are higher than 0.3. The findings related to the fit indices of the factors in Table 6 indicate that the CFI, GFI, NFI, RMR, and RMSEA indices have an acceptable level.

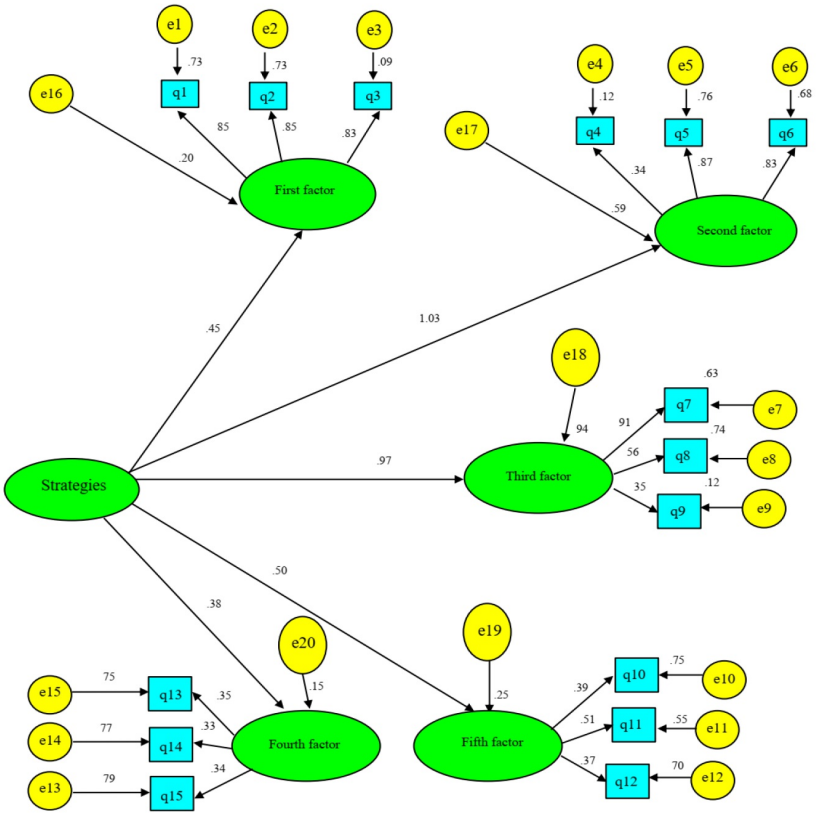

Figure 3: Path analysis of strategies

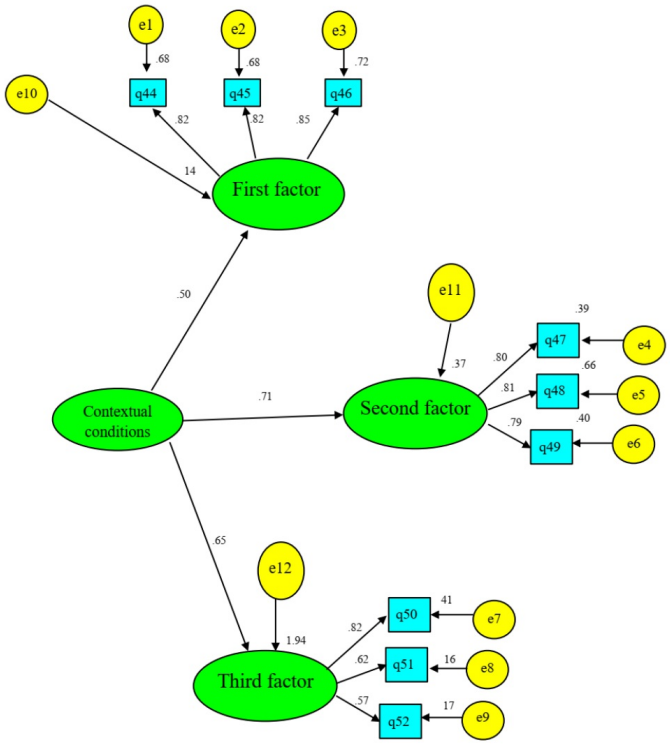

Figure 4: Path analysis of contextual conditions

Table 5: Fit indices of strategies

Characteristic	Estimated Value	Criterion Value
Chi-Square to Degrees of Freedom Ratio ($\|2/df$)	1.54	$\|2/df < 5$
Root Mean Square Error of Approximation (RMSEA)	0.047	$RMSEA < 0.08$
Goodness of Fit Index (GFI)	0.96	$GFI > 0.9$
Adjusted Goodness of Fitness Index (AGFI)	0.94	$AGFI > 0.9$
Comparative Fitness Index (CFI)	0.99	$CFI > 0.9$
Normal Fitness Index (NFI)	0.98	$NFI > 0.9$

These good fit characteristics show that the data of this research has a good fit with the factor structure of this scale., and this indicates the alignment of the questions with the variables of intervening conditions.

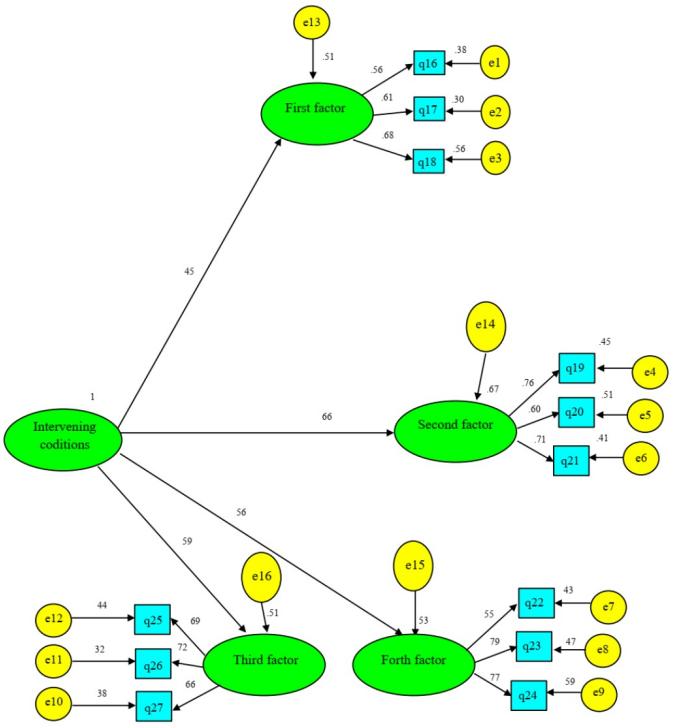

Figure 5: Path analysis of intervening conditions

Table 6: Fit indices of intervening conditions

Characteristic	Estimated Value	Criterion Value
Chi-Square to Degrees of Freedom Ratio ($\|2/df$)	1.45	$\|2/df < 5$
Root Mean Square Error of Approximation (RMSEA)	0.043	$RMSEA < 0.08$
Goodness of Fit Index (GFI)	0.97	$GFI > 0.9$
Adjusted Goodness of Fitness Index (AGFI)	0.96	$AGFI > 0.9$
Comparative Fitness Index (CFI)	1	$CFI > 0.9$
Normal Fitness Index (NFI)	0.99	$NFI > 0.9$

- Confirmatory factor analysis of consequences

  Confirmatory factor analysis was used to determine the validity of the consequences. The numbers on the paths are factor loadings, and all factor loadings are higher than 0.3. The findings related to the fit indices of the factors in Table 7 indicate that the CFI, GFI, NFI, RMR, and RMSEA indices have an acceptable level. These good fit characteristics show that the data of this research has a good fit with the factor structure of this scale., and this indicates the alignment of the questions with the variables of consequences.

- Confirmatory factor analysis of axial conditions

  Confirmatory factor analysis was used to determine the validity of the axial conditions. The numbers on the paths are factor loadings, and all factor loadings are higher than 0.3. The findings related to the fit indices of

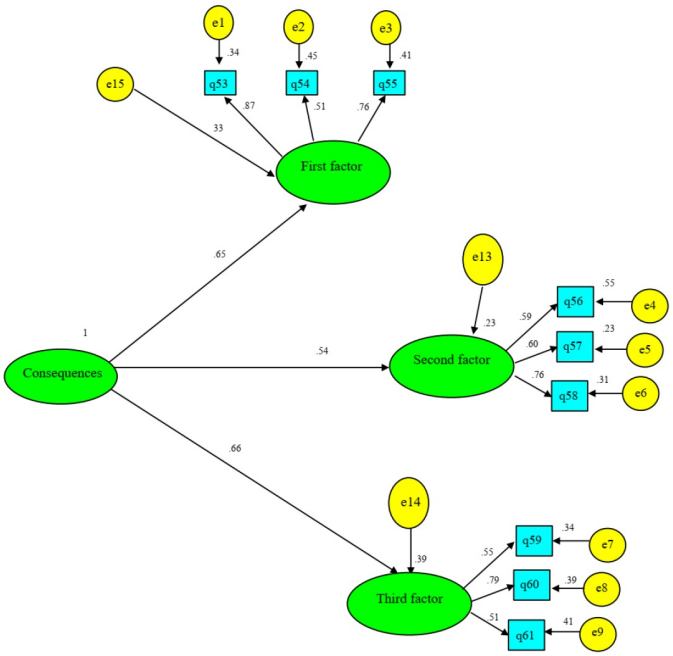

Figure 6: Path analysis of the consequences

Table 7: Fit indices of consequences

Characteristic	**Estimated Value**	**Criterion Value**
Chi-Square to Degrees of Freedom Ratio ($\|2/df$)	1.65	$\|2/df < 5$
Root Mean Square Error of Approximation (RMSEA)	0.051	$RMSEA < 0.08$
Goodness of Fit Index (GFI)	0.95	$GFI > 0.9$
Adjusted Goodness of Fitness Index (AGFI)	0.93	$AGFI > 0.9$
Comparative Fitness Index (CFI)	0.99	$CFI > 0.9$
Normal Fitness Index (NFI)	0.98	$NFI > 0.9$

the factors in Table 8 indicate that the CFI, GFI, NFI, RMR, and RMSEA indices have an acceptable level. These good fit characteristics show that the data of this research has a good fit with the factor structure of this scale., and this indicates the alignment of the questions with the variables of axial conditions.

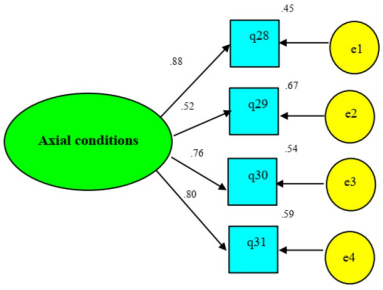

Figure 7: Path analysis of the axial conditions

Table 8: Fit indices of consequences

Characteristic	**Estimated Value**	**Criterion Value**
Chi-Square to Degrees of Freedom Ratio ($\|2/df$)	1.75	$\|2/df < 5$
Root Mean Square Error of Approximation (RMSEA)	0.065	$RMSEA < 0.08$
Goodness of Fit Index (GFI)	0.98	$GFI > 0.9$
Adjusted Goodness of Fitness Index (AGFI)	0.96	$AGFI > 0.9$
Comparative Fitness Index (CFI)	0.95	$CFI > 0.9$
Normal Fitness Index (NFI)	0.93	$NFI > 0.9$

4.3 Analyzing the model and checking the fit of the proposed research model

In this section, using the information collected through a questionnaire designed based on the indicators identified in the qualitative section and distributed among a statistical sample of the studied community, the indicators related to the components were quantitatively analyzed statistically, and the results are given below. Fit criteria are one of the most important steps in structural equation modeling analysis. These criteria are to answer whether the model represented by the data confirms the measurement model of the research. Many fit standards have been introduced in structural equation modeling methodology to answer this question. Table 9 shows the status of these indicators.

Table 9: The results of the fit indices of the research model

$\|2/df$	**GFI**	**AGFI**	**NFI**	**CFI**	**RMR**	**RMSEA**
2.858	0.835	0.841	0.887	0.845	0.133	0.090

The results show the appropriate fit of the proposed model. After testing the measurement models, it is necessary to provide a structural model that shows the relationship between the latent variables of the research. Using the structural model, the paths of the model can be investigated.

According to Table 10 and the number of significant coefficients, since the CR value (critical ratio) must be greater than 1.96 or less than -1.96 to reject or confirm the relationship, the parameter value between the model's two domains is not considered important. Also, the values between these two values indicate no significant difference in the value calculated for the regression weights with a zero value at the 95% level. The results of the model test are presented in Table 10:

Table 10: The results of the implementation of the structural model for presenting a design model and validating the national talent management model (emphasizing the role of educational institutions), ($^*P \leq 0.05$)

Relationships	**Standard estimate**	**Standard error**	**Critical ratio**	**Significance level**
Consequences → Presenting a design model and validating the national talent management model (emphasizing the role of educational institutions)	0.420	0.056	4.018	0.000*
Causal conditions → Presenting a design model and validating the national talent management model (emphasizing the role of educational institutions)	0.26	0.077	2.798	0.010*
Axial conditions → Presenting a design model and validating the national talent management model (emphasizing the role of educational institutions)	0.42	0.066	3.142	0.000*
Contextual conditions → Presenting a design model and validating the national talent management model (emphasizing the role of educational institutions)	0.68	0.045	3.813	0.000*
Intervening conditions → Presenting a design model and validating the national talent management model (emphasizing the role of educational institutions)	0.44	0.042	2.958	0.000*
Strategies → Presenting a design model and validating the national talent management model (emphasizing the role of educational institutions)	0.11	0.033	2.362	0.000*

Based on this, the research model was evaluated using Amos software. As can be seen, all the relationships, according to the value of the path coefficients, are confirmed at the 95% confidence level. The model related to casual conditions has been represented in the above table to present a design model and validate the national talent management model (emphasizing the role of educational institutions). Based on the obtained results, the causal conditions, strategies, contextual conditions, intervening conditions, and consequences components have been effective in the final model of the research.

5 Conclusion and suggestions

The current research provided a model for scientific talent management in the university system, which deepens knowledge and uses it in more effective policy-making and planning. It provides a comprehensive and coherent framework for developing the official talent management program to guide the activities and actions related to scientific talents in the university system. It seems that most of the current emphasis is on designing people's interests.

The current research has stated several characteristics of the talent developer educational system, such as having a critical, indomitable educational system, replacing the theory of strengths instead of the theory of weaknesses, an

educational system with Socratic logic (breaking the norm), creating equal opportunities, meaningful, aware of the talents of gifted children and...knows that in the meantime, managers involved in the talent management program should also be identified and nurtured. What is important is to have supportive and encouraging laws for talent search, talent development, and talent retention. In addition, the findings of our studies indicate that during the process of talent acquisition to talent retention, it is necessary to level talents. Brilliant talents will also be separated from the rest of the people in this stratification. This research considers it the duty of the universities to find the elite and believes that general competencies should be paid attention to in schools. Technical and skill competencies should be paid attention to in universities. Besides, it is clearly stated that not all people have all talents, and not all people have the same number of talents.

While paying attention to the inherent dimension of talent, the current research considers it as acquired, which means that during talent management processes, innate talents are identified and then nurtured. The second part is the developed part. In the following, we concluded that the growth of skills becomes possible and dynamic by sharing them, so we consider the term exchange of talents as an alternative to the escape of talents.

In the conducted study, attention to the international environment and the close relationship between the Ministry of Education (Iran) and the Higher Education Institutions, as well as the relationship between the industry and the university, have been identified as undeniable necessities.

6 Practical suggestions

1. The talent acquisition to talent retention program in the country should be prepared in the form of a codified plan by the Supreme Council of the Cultural Revolution in cooperation with the Vice President for Planning and Development of Human Resources and other relevant institutions and ministries, and its implementation should be guaranteed.
2. The education system of the country should consider all the dimensions and components related to talent management together and not be limited only to the part of attracting talent. Attracting talent and employing talented people are the beginning of the talent management process.
3. The approach of the country's education system should be changed from focusing on weak points to concentrating on strong points.
4. The management department needs to attract talented human resources more than any other department. Therefore, it is suggested that in this department, people with managerial abilities and competencies should be selected with stricter selections, and the performance of managers should be evaluated every year, and according to new needs, after acquiring the required skills, re-evaluate.
5. The creation of opportunities in various professional fields according to the interests and abilities of the talents is another recommendation of the present research.
6. In designing jobs for scientific talents, Independence, work flexibility, and forming a work group culture and interaction should be a priority.
7. In order to involve the scientific talents, it is suggested to tie the interests of the organization with the values of the scientific skills to design important activities according to the interests and abilities.
8. The heterogeneity of individual characteristics, values, and the incompatibility of attitudes of scientific talents lead to the formation of heterogeneity of people, which requires innovative plans for alignment.
9. Encouraging educational centers to conceptualize and develop talent management philosophy and adopt approaches according to academic findings is in line with the strategic direction of the next recommendation.

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