

# Identifying and Ranking the Effective Factors on the Successful Implementation of the National SHAHAB Program, in Iranian Schools

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**Abstract**— *The purpose of this research is to identify and rank the factors affecting the successful implementation of the SHAHAB National Program. The current research is practical in terms of purpose and has a descriptive-exploratory nature. Out of 18 cities implementing the national SHAHAB program in Guilan, 10 cities were selected according to their active participation in the national program. Based on the sample selection criteria, interviews with the experts of the National Elite Foundation, members of provincial council of national plan and executive staff of the Shahab National Program committee in Guilan were conducted. A survey study using 300 teachers responsible for assessing and teaching learners using a researcher-made questionnaire was carried out based on the objectives of the Shahab National Program. Qualitative analysis of the conducted interviews identified three themes of intra-personal, intra-school and extra-school factors. Structural equation modeling confirmed the three-dimensional model of intra-personal, intra-school and extra-school factors. In order to rank indicators and sub-indicators of themes, TOPSIS multi criteria -decision making technique showed that personal factors, extra-school factors and intra-school factors with weights of 0.731, 0.198 and 0.081 ranked first to third respectively.*

**Index Terms**— Talent management, SHAHAB national program, educational program success.

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## I. INTRODUCTION

The difference of learners in educational systems in terms of mental abilities, learning style, speed of learning, mental preparation, interest and motivation towards acquiring knowledge and doing academic activities has made talent identification one of the main challenges of academic systems (Moayeri.2021). Talent, due to its capital nature has a great impact on the formation of capable scientific personalities, balanced and effective professional development, and strengthening of mental abilities (Meyer, 2021). Armstrong states that every learner is a genius, and an educator's most important job is to discover and nurture the "genius qualities" that all students were born with but that may never be revealed (Armstrong, 1991). Therefore, the unique nature of talent in learners has made their discovery and cultivating an undeniable reality and important challenge in educational systems (Seif, 2009).

The plan of establishing gifted schools and separate talents from other classmates in another place with outstanding teachers has not been successful in Iran. The failure of intelligent students in national comprehensive exams shows the ineffectiveness of this plan in creating academic success. Despite such important facts, Iran's education system, with a new attitude towards individual differences, has turned to formulating and implementing a national project called Identifying and Guiding Top Talents (SHAHAB). In this

regard, in order to nurture, strengthen and maintain the talents of learners, especially in the primary school ages, the SHAHAB National Plan as the newest approach in Iran's education system has been implemented (Majdafari et al., 2014). The important point of this plan is to pay attention to the educational coexistence of students with each other, without separating them, and pay attention to the interactive space in a diverse and talent-based atmosphere. In the implementation phase, the Shahab project identifies and guides the best talents, promotes the hidden talents and abilities, and encourages learning and doing, based on the individual curriculum (National Elite Foundation report, 2013). Studies showed that evaluating the factors affecting the success of educational plan, has an important impact on its sustainability and effectiveness (Vienett and Pont, 2017).

In the analysis of the challenges of the implementation phase of Shahab national program, it is very important to pay attention to factors such as the reasons related to the teacher, the performance of the implementation work group of the project in the school, the conditions and situation of the implementation of the project in the region, the participation of parents and the reasons related to the learners (Seif, 2010; Ayati, 2017). Hence one-sided approach to implementation and neglecting the evaluation of success factors will increase the probability of project failure. Considering the aforementioned challenges and considering the importance of the talent development approach in the education system, the

main question of the present research can be raised as follows: What are the effective factors in the successful implementation of the Shahab national program in Guilan?

## **II. THEORETICAL FOUNDATIONS OF SHAHAB NATIONAL PROGRAM**

SHAHAB national program is a justice-oriented program in Iran's educational system. The aim of this national plan is the flourishing of talents and the growth of the abilities of the top talents in all parts of the country (Zorrapour, 2017). According to Howard's Gardner multiple intelligence theory, there are several different intelligences operating in relative neurobiological isolation. These intelligences are: linguistic, musical, logical-mathematical, spatial, bodily-kinesthetic, intrapersonal, and interpersonal. In 2009, he also suggested two additional types of intelligence, namely, existential and moral. By further studying and exploring these intelligences, it may be possible to indicate a child's intellectual strengths and weaknesses which will in turn help educators better foster their talents. The theory posits that an understanding of which type(s) of intelligence a student may possess can help teachers adjust learning styles, and suggest certain career paths for learners. The theory has come under discussion from both psychologists and educators, where many of them believe that the various 'intelligences' represent innate talents and abilities (Gurdner, 2011).

Studies and theoretical foundations have emphasized the discovery and promotion of talents in the elementary school. Armstrang (2011) applied multiple intelligent theory to curriculum development, lesson planning, assessment, special education, cognitive skills, career development and educational policy. Freeman (2017) investigated the talent and potential of children based on multiple intelligences and concluded that developing talent is associated with satisfaction with education and increasing motivation for academic achievement. Studies and theoretical foundations have emphasized the discovery and promotion of talents in the elementary school. Freeman 2017 investigated the talent and potential of children based on multiple intelligences and concluded that developing talent is associated with satisfaction with education and increasing motivation for academic achievement. Que et al. (2010) by presenting enrichment programs for gifted learners in primary and preschool in a three-year time period based on multiple intelligences showed that the effective implementation of these programs leads to the improvement of problem-solving ability in different dimensions. Renanti and Darmavan (2022) in their study showed that XP method on designing an application based on multiple intelligent, can determine and predict interests and talents in children (Renanti and Darmavan, 2022). In SHAHAB national program, the discovery and identifying of talents starts from elementary school and the support of the talents, continues from elementary to university (Nastuh, 2014). Based on technical committee of Shahab national program: "talent is the ability

and high performance to perform a specific skill and having dominant intelligent in one of the ten domains, can predict the emergence of specific talent" (Majdfaru et al., 2014). For example if ones possesses a profile of intelligence, high in spatial intelligence, however might reasonably predict his or her high performance (talent) in architecture, sculpture and geometry (Zarei, et, al., 2017) in In this regard, the goals of this project are: to identifying and cultivating the talents by providing a cultural and protective (a willing instructor and time for practicing) background for talented students. SHAHAB national program is carried out for all students with any characteristics and features, and no student is excluded from this plan because all human beings need guidance or guidance throughout their life and no human being at any time does not need guidance (Majdfar, et,al. ,2015).

## **III. THE IMPLEMENTATION PROCESS OF SHAHAB NATIONAL PROGRAM**

The policies related to Shahab National Plan are formulated in the Strategic Council of the National Elite Foundation and communicated to the central executive headquarters in the Ministry of Education's headquarters. The task of the central headquarters is to manage project-related matters and the allocation of resources within the framework of the policies and plans approved by the strategic council (Majdfar et al., 2015). At the provincial levels, the Executive Headquarters of the National Shahab Program determines and communicates the regulations and the description of the duties of the Shahab Committee in primary schools of subordinate cities, such as, selection and training of teachers. School principals of each city are required to select qualified and applicant teachers and introduce them to the provincial headquarters for specialized training courses. The selected and experienced teachers are obliged to evaluate the talent in eight areas intelligent, by using the students' talent assessment scales, for all fourth and fifth grade students in terms of, verbal mathematics, artistic, spatial, movement-sports, social, cultural-religious and experimental sciences (National Elites Foundation report, 2013). The talent selection process was shown in a three-stage process that includes both objective and subjective evaluations, consists of checklists, interviews, evaluation portfolios, group intelligence tests, observation in the game corner, individual information intelligence tests. Based on the obtained score. The talented individuals are introduced to the National Elite Foundation and undergo professional and educational training in their field of talent with an annual evaluation. This continuous training will continue until the end of the general education period of the learners and along with the national curriculum. After school ages, the talented students will be introduced to the brilliant talent headquarters of the Ministry of Science, to start professional or academic courses (Majdfar,et al.2015) (fig.1).

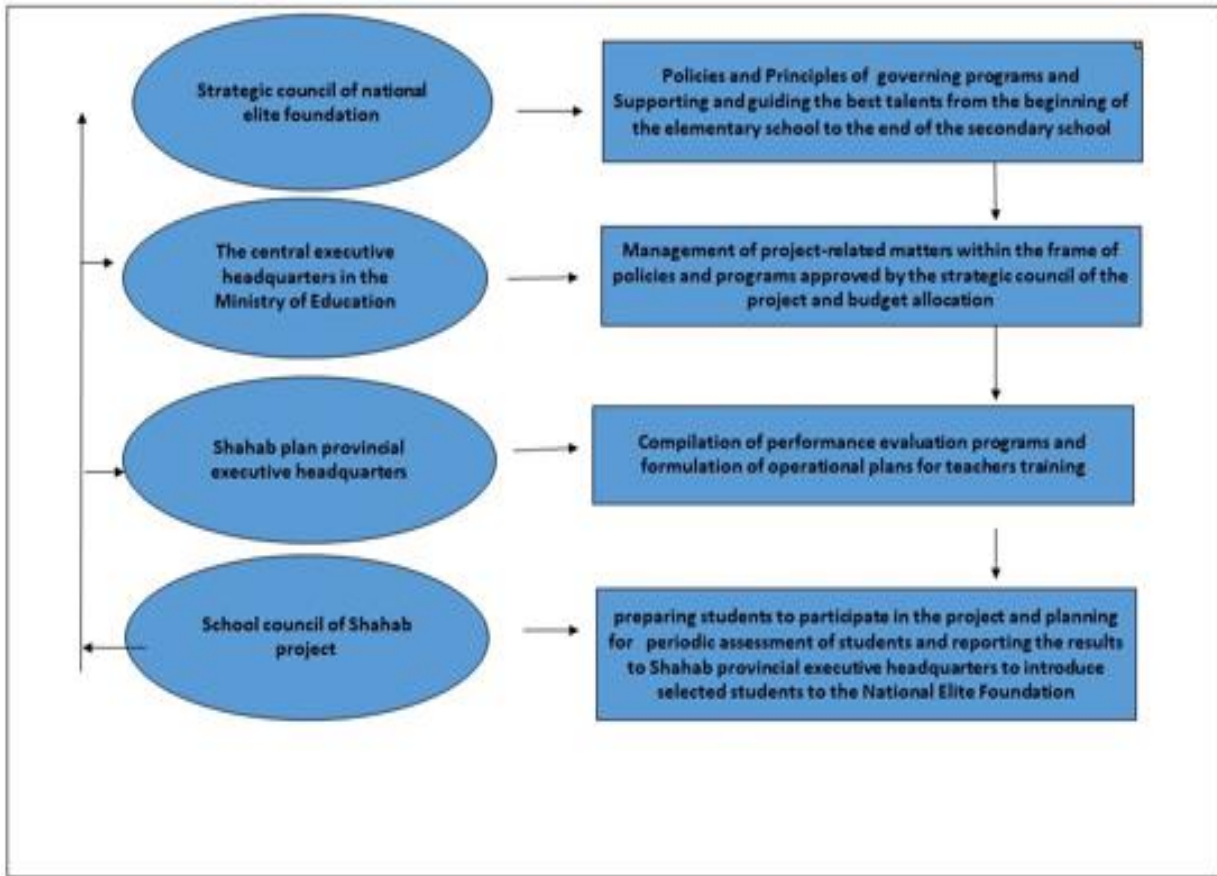


Fig1. The implementation of SHAHAB National Plan

A major part of the process of guiding those with superior talent is also done in the form of introducing them to active centers and collections in their talent field or connecting them to active experts in the field under the supervision of the National Elite Foundation and the Ministry of Education. This project is within the framework of the National Elite Foundation's statutes and the concerned regulations and to fulfill the mission of that foundation is implemented in the field of students, regarding to the necessity of developing the talents of learners as national reserves and considering the importance, role and status of superior and elite people in the development of the country, especially in the field of science, art and technology production. The support and guidance of the best talents from the beginning of the elementary school to the end of the secondary school should be done in such a way that environmental, economic, social and educational restrictions and deprivations do not hinder the development of their abilities and talents. The primary discovery and identification of students with superior talent begins based on the continuous, and documented evaluation of teachers from the students of their class throughout the year and without the need for their participation in exams and tests and competitions outside the school. In order to identify and select the participants of the project, based on their creativity, talents and abilities, as well as their personality traits, the evaluation of the academic and educational factors of the

students is done and it does not necessarily lead to the select of a studious student with full memory. The education and flourishing of the students included in the project is carried out with an emphasis on promoting creativity, talent and different abilities, and mainly under the guidance and special training of their regular teachers and without separating the students from their classes and schools. The education and training of the students with superior talents and their programs should be formulated and implemented in such a way that their balanced growth is realized in the school environment. Appetizing the attitude and emotions of the students included in the plan in the stages of education and nurturing their artistic creations should be considered according to their talent. Appropriate methods should be implemented and continued in all stages of education with the focus of teachers, their usual class and school for the academic guidance of those with superior talents. The education and training of those with superior talent should be in the same direction in terms of goals, principles and programs in the courses of general education and higher education and the necessary coordination should be normalized. The beneficiaries of the plan do not enjoy special material and academic privileges and priority, except that they are under special scientific and spiritual guidance and training. In the implementation of this project, inappropriate and negative advertisements should be avoided. The mental



and psychological aspects of the top talents should be paid attention based on the principles of psychological science and the foundations and methods of Islamic education and training, so that they remain safe from common injuries in the course of elitism. Since the identification and guidance of talented students is carried out in their usual educational environment, teachers and other academic and educational factors of the school must have the necessary academic and professional qualifications and benefit from special trainings and consultations before and after the cooperation. The matters related to the plan should be institutionalized in the framework of the main and ongoing missions, tasks, structures and mechanisms of the country's education and it should not be used as extra and side activities.

**IV. METHODOLOGY**

The current study is exploratory in nature and applied in terms of objective. In terms of data collection method, it is a combination of two qualitative and quantitative methods. The study population consists of all managers, teachers, experts and specialists who have participated in implementation of the Shahab National Program or have participated in the decision-making for its implementation or policy making. The sample for the qualitative part of the study was 10 experts in the field of talent management, child psychology, education planning and policy making of national education programs. It should be noted that ten people were selected by snowball method and subjected to in-depth interviews. The quantitative part consists of two separate stages. In the first stage, 15 experts answered the paired comparison questionnaire. In the second stage, a sample of 300 teachers involved in the Shahab national program answered the questionnaire resulting from analysis of the extracted themes and the literature. Morgan table was used to determine this sample size. Validity and reliability of the instrument were confirmed through content validity, construct validity and Cronbach's reliability coefficient, respectively.

The present study used four questionnaires to collect data. The first is a semi-structured questionnaire regarding the effective factors on successful implementation of Shahab program (to conduct interviews with experts). The second questionnaire is the result of summarizing the variables extracted from the literature and opinions of experts in a qualitative study (to conduct a survey). The third is the paired comparisons questionnaire and the fourth is the questionnaire

related to TOPSIS ranking. Data analysis was done in three stages. First, theme analysis was used to analyse qualitative data. In the next step, structural equations method was used in order to check validity of the variables extracted from the literature and qualitative study. Finally, the ranking of extracted variables was done in two stages. In the first stage, the main extracted dimensions in the field of effective factors on successful implementation of Shahab project were subjected to pairwise comparisons with AHP technique. Analytic hierarchy process or AHP is one of the most comprehensive systems designed for decision making with multiple criteria. This technique allows formulating the variables in a hierarchical manner and allows considering different quantitative and qualitative criteria in the problem. This technique involves different options in decision-making and enables sensitivity analysis on criteria and sub-criteria. In addition, it is based on a pairwise comparison that facilitates judgment and calculations and shows the degree of compatibility and incompatibility of the decision, which is one of the special advantages of this technique in multi-criteria decision-making. In the second stage, subscales of the main dimensions were ranked using TOPSIS technique. TOPSIS technique is one of the most accurate multi-criteria decision-making models. In this method, m options are evaluated by n indicators. This technique is based on the notion that the selected option should have the smallest distance with positive ideal solution (the best possible scenario) and the greatest distance with negative ideal solution (the worst possible scenario). In fact, the distance of a factor with positive or negative ideal factor is measured and this is the criterion for ranking and prioritizing the considered factors.

**V. RESULTS**

Question 1: What are the effective factors in successful implementation of SHAHAB national program?

To answer the above question, theme analysis and variables extracted from the literature were used. Analysis of qualitative interviews led to three themes of intra-personal, extra-school and intra- school factors which are effective on successful implementation of the Shahab program. The findings are summarized in Table 1.

Question 2: How valid is each of the dimensions (scales) and sub-scales which are effective on successful implementation of Shahab National Program?

**Table 1:** effective scales and subscales on successful implementation of SHAHAB National Program

| Scale          | Subscale  |
|----------------|---|
| Intra-personal | Order in implementation stages of Shahab program  |
|                | Mastery on implementation of the Shahab national program by the executor                              |
|                | Positive attitude of teachers towards implementation of Shahab program                                |
|                | Teacher motivation in identifying student talent  |
|                | Adaptation of teachers with implementation of Shahab program during the academic year with challenges |

| Scale  | Subscale   |
|--|--|
|  | Teacher awareness of student IQ based on standard tests  |
|  | Teacher awareness of the power and sequence of inclusive multiple intelligences  |
|  | Highlighting all 8 talent areas equally  |
|  | Positive change in teaching method and highlighting the discovery and identification of talents of each student              |
|  | Positive attitude of learners towards the effect of the Shahab program   |
|  | Identifying talented students in various talent areas in their educational area  |
|  | Participation of teachers in training courses out of necessity and force   |
| Extra-school   | Scheduling in order to identify talent areas of each student   |
|  | Forming detailed checklists to identify talents  |
|  | Complete coordination between the results of the checklists for identifying the program with descriptive evaluation          |
|  | Coordinating the implementation of plans by changing textbooks, implementing programs and various training courses           |
|  | Using active and workshop methods in holding Shahab training course classes  |
|  | Effectiveness of Shahab training course for justifying, persuading and improving the awareness of learners regarding talents |
|  | Positive attitude of the executors (the head and deputy directors and experts) towards the Shahab program                    |
|  | Effectiveness of applying Shahab program approaches in order to improve the quality of teaching-learning processes           |
|  | Success of Shahab national program in correct identification of talents  |
|  | Effectiveness of Shahab program training course content in better completion of talent identification checklists             |
|  | Mastery of future goals according to the existing routine in Shahab program  |
|  | Resistance of colleagues (teachers, managers and assistants) in their educational area                                       |
|  | Expanding the culture of talent cultivation among officials  |
|  | Positive effectiveness of Shahab program courses in their region compared to other taught courses                            |
|  | Participation of learners in training sessions   |
| Comments and views of learners in training sessions  |  |
| Hardware and software facilities to record information in the system                           |  |
| Supplementary tools and educational aids to discover and identify the talent areas of students |  |
| Intra-school   | Motivation, interest, participation and hope to continue the program implementation process in the coming years              |
|  | Appreciation of executive officers for your efforts to implement the Shahab program  |
|  | Necessary cooperation of managers and deputies in implementation of Shahab program   |
|  | Determining the necessary capacity in terms of space, facilities and human resources to identify talents in schools          |
|  | Using opinions, suggestions and information of parents in preparing detailed checklists for identifying talents              |
|  | Visiting and supervising and coordinating the responsible colleagues during the training course                              |

In order to answer this question, structural equation modeling was used by AMOS software. In order to measure validity of the extracted variables, and as a result validity of the instrument items, factor loading analysis was used. If the factor loadings of each item on the related construct are significant, it can be argued that the items have sufficient

validity. Factor loadings are presented in Table 2. Factor load values greater than 0.5 indicate sufficient validity of the items. The significance level value >1.96 at 95% confidence level indicates the significant relationship of each scale or subscale with its underlying factor.

**Table 2:** factor loading and significance values of intra-personal factors

| Variable<br>Items | Individual factors |        |       |           |
|-------------------|--------------------|--------|-------|-----------|
|                   | Factor load        | T      | P     | Sig.      |
| Q1                | 0.534              | 36.095 | 0.001 | Confirmed |
| Q2                | 0.506              | 32.679 | 0.001 | Confirmed |
| Q3                | 0.584              | 36.474 | 0.001 | Confirmed |
| Q4                | 0.536              | 38.737 | 0.001 | Confirmed |
| Q5                | 0.552              | 45.515 | 0.001 | Confirmed |
| Q6                | 0.537              | 39.993 | 0.001 | Confirmed |
| Q7                | 0.574              | 39.997 | 0.001 | Confirmed |
| Q8                | 0.518              | 34.919 | 0.001 | Confirmed |
| Q9                | 0.605              | 33.919 | 0.001 | Confirmed |
| Q10               | 0.621              | 31.729 | 0.001 | Confirmed |
| Q11               | 0.762              | 32.676 | 0.001 | Confirmed |
| Q12               | 0.564              | 37.621 | 0.001 | Confirmed |

As can be seen in Table 2, the factor loading of all items is significant at 0.001.

**Table 3:** factor loading and significance values of extra-school factors

| Variable<br>Item | Extracurricular |        |       |           |
|------------------|-----------------|--------|-------|-----------|
|                  | Factor load     | CR     | P     | Sig.      |
| Q13              | 0.690           | 35.094 | 0.001 | Confirmed |
| Q14              | 0.557           | 32.342 | 0.001 | Confirmed |
| Q15              | 0.510           | 36.161 | 0.001 | Confirmed |
| Q16              | 0.541           | 37.119 | 0.001 | Confirmed |
| Q17              | 0.568           | 38.455 | 0.001 | Confirmed |
| Q18              | 0.840           | 37.451 | 0.001 | Confirmed |
| Q19              | 0.882           | 38.340 | 0.001 | Confirmed |
| Q20              | 0.555           | 32.697 | 0.001 | Confirmed |
| Q21              | 0.757           | 34.808 | 0.001 | Confirmed |
| Q22              | 0.548           | 32.159 | 0.001 | Confirmed |
| Q23              | 0.945           | 41.614 | 0.001 | Confirmed |
| Q24              | 0.598           | 37.628 | 0.001 | Confirmed |
| Q25              | 0.979           | 39.730 | 0.001 | Confirmed |
| Q26              | 0.557           | 33.366 | 0.001 | Confirmed |
| Q27              | 0.522           | 37.584 | 0.001 | Confirmed |
| Q28              | 0.891           | 35.576 | 0.001 | Confirmed |
| Q29              | 0.546           | 37.584 | 0.001 | Confirmed |
| Q30              | 0.605           | 35.576 | 0.001 | Confirmed |

As can be seen in Table 3, the factor loading of all items is significant at 0.001.

**Table 4:** factor loading and significance values of intra-school factors

| Variable<br>Item | Intra-school |        |       |           |
|------------------|--------------|--------|-------|-----------|
|                  | Factor load  | CR     | P     | Sig.      |
| Q31              | 0.732        | 41.05  | 0.001 | Confirmed |
| Q32              | 0.647        | 35.103 | 0.001 | Confirmed |
| Q33              | 0.602        | 35.868 | 0.001 | Confirmed |
| Q34              | 0.759        | 39.231 | 0.001 | Confirmed |
| Q35              | 0.535        | 29.231 | 0.001 | Confirmed |
| Q36              | 0.520        | 39.813 | 0.001 | Confirmed |

As can be seen in Table 4, the factor loading of all items is significant at 0.001.

Question 3: How effective scales on successful implementation of SHAHAB national program are ranked?

AHP decision making technique was used to answer this question. In this method, the distance of each option from positive ideal and negative ideal is obtained. The results of pairwise comparisons are presented in Table 5.

**Table 5:** Matrix of paired comparisons of effective factors on successful implementation of Shahab national program

| Matrix         | Intra-personal | Extra-school | Intra-school |
|----------------|----------------|--------------|--------------|
| Intra-personal |                | 5            | 7            |
| Extra-school   | 1.5            |              | 3            |
| Intra-school   | 1.7            | 1.3          |              |

After pairwise comparisons of the factors in relation to objective of the study, it was shown that intra-personal factor (weight ratio of 0.731) has the highest priority in successful implementation of the Shahab program in Gilan province, followed by extra-school factor (weight ratio of 0.198) and intra-school factor (weight ratio of 0.081). The calculated consistency rate (CR) is equal to 0.06, and since it is less than 0.1, consistency of the variables with objective of the study is acceptable.

Question 4: How effective subscales on successful implementation of SHAHAB national program are ranked?

In order to answer the fourth question, TOPSIS technique was used. The results are presented in Table 6.

**Table 6:** closeness coefficient and ranking of effective subscales on successful implementation of SHAHAB national program

| Subscale  | D+     | D-     | Closeness | Rank |
|---|--------|--------|-----------|------|
| Mastery on implementation of the Shahab national program by the executor  | 0.0035 | 0.0359 | 0.9117    | 1    |
| Positive attitude of executors  | 0.0036 | 0.0358 | 0.9094    | 2    |
| Using active and workshop methods in holding Shahab training course classes   | 0.0068 | 0.0314 | 0.8223    | 3    |
| Effectiveness of Shahab program training course content in better completion of talent identification checklists    | 0.0074 | 0.0324 | 0.8139    | 4    |
| Order   | 0.0094 | 0.0309 | 0.7658    | 5    |
| Determining the necessary capacity in terms of space, facilities and human resources to identify talents in schools | 0.0118 | 0.0309 | 0.7228    | 6    |
| Coordinating the implementation of plans by changing textbooks, implementing programs and various training courses  | 0.0122 | 0.0306 | 0.7145    | 7    |
| Identifying talented students in various talent areas in their educational area                                     | 0.011  | 0.0272 | 0.7124    | 8    |
| Teacher motivation in identifying student talent  | 0.012  | 0.0277 | 0.6966    | 9    |
| Effectiveness of applying Shahab program approaches in order to improve the quality of teaching-learning processes  | 0.0124 | 0.0267 | 0.6834    | 10   |
| Forming detailed checklists to identify talents   | 0.0141 | 0.0287 | 0.6697    | 11   |
| Teacher awareness of student IQ based on standard tests   | 0.0133 | 0.0263 | 0.6646    | 12   |
| Positive change in teaching method  | 0.0136 | 0.243  | 0.6402    | 13   |
| Positive attitude of teachers   | 0.0142 | 0.0235 | 0.6234    | 14   |
| Success of Shahab national program in correct identification of talents   | 0.0152 | 0.0246 | 0.6187    | 15   |
| Expanding the culture of talent cultivation among officials   | 0.0173 | 0.0267 | 0.6069    | 16   |
| Highlighting all 8 talent areas equally   | 0.0149 | 0.0224 | 0.6       | 17   |
| Visiting and supervising and coordinating the responsible colleagues during the training course                     | 0.0182 | 0.024  | 0.5681    | 18   |
| Using opinions, suggestions and information of parents in preparing detailed checklists for identifying talents     | 0.0199 | 0.0253 | 0.5593    | 19   |
| Positive attitude of learners   | 0.0171 | 0.0208 | 0.5493    | 20   |
| Adaptation of teachers with the program   | 0.0174 | 0.0206 | 0.5414    | 21   |
| Teacher awareness of the power and sequence of learners   | 0.0177 | 0.0203 | 0.5333    | 22   |
| Appreciation of executive officers for efforts to implement the Shahab program                                      | 0.0219 | 0.0247 | 0.5308    | 23   |
| Scheduling in order to identify talent areas of each student  | 0.0215 | 0.0223 | 0.5087    | 24   |
| Comments and views of learners in training sessions   | 0.0229 | 0.0237 | 0.5086    | 25   |
| Necessary cooperation of managers and deputies in implementation of Shahab program                                  | 0.0216 | 0.021  | 0.4928    | 26   |
| Motivation, interest, participation and hope to continue the program implementation process in the coming years     | 0.0225 | 0.0211 | 0.4836    | 27   |
| Hardware and software facilities to record information in the system  | 0.0229 | 0.0203 | 0.4702    | 28   |
| Effectiveness of Shahab training course for justifying  | 0.0244 | 0.0215 | 0.4686    | 29   |
| Participation of learners in training sessions  | 0.022  | 0.0185 | 0.4574    | 30   |
| Participation of teachers in training courses out of necessity and force  | 0.0213 | 0.0173 | 0.4486    | 31   |
| Complete coordination between the results of the checklists for identifying the program with descriptive evaluation | 0.0231 | 0.0184 | 0.4434    | 32   |
| Mastery of future goals according to the existing routine in Shahab program   | 0.0242 | 0.0191 | 0.4413    | 33   |
| Resistance of colleagues (teachers, managers and assistants) in their educational area                              | 0.026  | 0.02   | 0.4346    | 34   |
| Positive effectiveness of Shahab program courses in their region compared to other regions                          | 0.0269 | 0.0144 | 0.3481    | 35   |
| Supplementary tools and educational aids to discover and identify the talent areas of students                      | 0.0272 | 0.0127 | 0.3176    | 36   |



The above table shows that "Mastery on successful implementation of SHAHAB national program by the executor" (weighted score of 0.911) has the highest rank in successful implementation of this program in Guilan province, followed by "Positive attitude of executors" (0.909) and "Using active and workshop methods in holding Shahab training course classes" (0.822).

**Table 7:** importance and priority of effective factors on successful implementation of the SHAHAB national program

| Factor         | Importance | Priority        |
|----------------|------------|-----------------|
| Intra-personal | 0.731      | 1 <sup>st</sup> |
| Extra-school   | 0.198      | 2 <sup>nd</sup> |
| Intra-school   | 0.081      | 3 <sup>rd</sup> |

### VI. CONCLUSION

This study tended to identify and rank effective factors on successful implementation of the Shahab national program in Guilan province. A review of theoretical studies and models of talent identification led to the extraction of thirty-six items to evaluate, identify and ranking the successful implementation of the SHAHAB National Program. The results of multiple decision-making techniques, AHP and TOPSIS showed that intra-personal, extra-school and intra-school factors each have an effect on success of the SHAHAB National Program implementation. For the first question, the results obtained from TOPSIS model showed that the greatest effect of personal factors is related to "Mastery on successful implementation of SHAHAB national program" (0.911); followed by "Order" (0.765) and "Identifying talented students" (0.712); positive attitude of teachers; motivation of students in identification of talents of students; adaptation of teachers with the program; teacher awareness of student IQ based on standard tests; teacher awareness of the power and sequence of learners; highlighting all 8 talent areas equally; positive change in teaching method; positive attitude of learners in the courses; and participation of teachers out of force. For intra-school factors, the results obtained from TOPSIS showed that the highest effect was related to positive attitude of executors (0.909); using active and workshop methods in holding SHAHAB training course classes (0.822); and effectiveness of SHAHAB program training course content in better completion of talent identification checklists (0.813); scheduling in order to identify talent areas of each student; forming detailed checklists to identify talents; complete coordination between the results of the checklists for identifying the program with descriptive evaluation; coordinating the implementation of plans by changing textbooks, implementing programs and various training courses; effectiveness of SHAHAB training course for justifying, persuading and improving the awareness of learners regarding talents; effectiveness of applying Shahab program approaches in order to improve the quality of

teaching-learning processes; success of SHAHAB national program in correct identification of talents; mastery of future goals according to the existing routine in Shahab program; resistance of colleagues (teachers, managers and assistants) in their educational area; expanding the culture of talent cultivation among officials; positive effectiveness of Shahab program courses in their region compared to other regions; participation of learners in training sessions; comments and views of learners in training sessions; hardware and software facilities to record information in the system; supplementary tools and educational aids to discover and identify the talent areas of students, respectively. For intra-school factors, the results obtained from TOPSIS showed that the highest effect was related to determining the necessary capacity in terms of space, facilities and human resources to identify talents in schools (0.722); followed by visiting and supervising and coordinating the responsible colleagues during the training course (0.568); and using opinions, suggestions and information of parents in preparing detailed checklists for identifying talents (0.559); and appreciation of executive officers for efforts to implement the Shahab program; necessary cooperation of managers and deputies in implementation of Shahab program; motivation, interest, participation and hope to continue the program implementation process in the coming years, respectively. The results obtained from survey of experts, teachers and school principals of Guilan showed that individual factors, extra-school factors and intra-school factors are among the important factors that are effective in successful implementation of SHAHAB National Program in Guilan. Finally, the items of each of these were analyzed using structural equations; the factor load of all the above items were significant at 0.001 level. After confirming the significance and  $t > 1.96$  of all relevant items, all three factors were confirmed and identified as effective factors on successful implementation of Shahab National Program and remained in the model for further investigations. For the third question, the results obtained in the TOPSIS model and ranking of the sub-criteria showed that the factor "mastery on implementation of the Shahab national program by the executor" (weighted score of 0.911) has the highest rank in successful implementation of this program in Guilan. This is followed by positive attitude of executors (0.909) and using active and workshop methods for classes (0.822), respectively. Pairwise comparisons of the factors in relation to objective of the study in AHP model also showed that "individual factor" (weight ratio of 0.731) has the highest priority, followed by extracurricular factor (0.198) and intra-school factor (0.081), respectively. Since the calculated consistency rate (CR) is equal to 0.06 and it is less than 0.1, consistency of the variables with the objective of the study is acceptable. The results obtained in the study provide a basis for executive suggestions to organization of education, schools and the National Elite Foundation. Regarding the Intra-personal factors, it is suggested that the rank 1 to 3 is



specified, which includes the mastery on implementation of the Shahab national program by the executor, which shows the strengthening of the attitude and beliefs of the teachers about talent search in students (rank 1); order in implementation of the Shahab program, which shows the need to pay attention to implementation process until the end of the academic year (rank 2); identification of gifted students, which implies the explanation of the process and methods of guiding students after identifying their talent areas, as the basis for correct implementation of Shahab National Program (rank 3). Regarding extra-school factors, rank 1 to 3 should be taken into consideration, which includes the positive attitude of executors, which shows similar thinking of the officials (head and deputy heads of the department and experts) for implementation of the program (rank 1); using active and workshop methods in holding classes, which includes raising the information of teachers to get more familiar with the program (rank 2); effectiveness of the training course content in better completion of talent identification checklists, which shows the seriousness and determination of the teacher regarding inclusion of actual grades and criteria, which is one of the challenges of this large national program, requiring a financial incentive for the relevant teacher (rank 3). Regarding intra-school factors, rank 1 to 3 should be specified, which includes determining the necessary capacity in terms of space, facilities and human resources to identify talents, which indicates the necessary facilities and skilled human resources (rank 1); visiting, supervising and coordinating the responsible colleagues during the training course, which shows the importance of proper implementation of the program and basic supervision (rank 2); using opinions, suggestions and information of parents in developing talent identification checklists, which implies cooperation with the teacher to better observe the behavior in the Shahab program, which is a great help to students and their parents in identifying and strengthening talent. In case of sufficient care and patience on the part of the relevant elementary teacher, it can be of great help in choosing major in the secondary school.

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