

## Presenting the Competency model of High School Principals in Guilan Province (Mixed Approach)

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**Purpose:** The school principals' competence plays an important role in improving the education system. As a result, this study aimed to investigate and present the competency model of high school principals.

**Methodology:** The current research was applied in terms of purpose and mixed (qualitative and quantitative) in terms of implementation. In the qualitative part, the research population was the educational management experts of Guilan province in the academic year of 2021-22, and according to the principle of theoretical saturation, 15 of them were selected as a sample using targeted and snowball sampling methods. In the quantitative part, the research population was the principals of the second year high school in Guilan province in the academic year 2021-22, and according to the table of Krejcie and Morgan, 127 of them were selected as a sample by stratified random sampling method. The research instrument was a semi-structured interview in the qualitative part and a researcher-made questionnaire in the quantitative part, whose psychometric indicators were checked and confirmed. The data of the qualitative part were analyzed by open, axial and selective coding method in Maxqda software, and the data of the quantitative part were analyzed by exploratory factor analysis method in Amos software.

**Findings:** The results of the qualitative section showed that 137 indicators, 17 components and 5 dimensions were identified for the competence of high school principals; so as to include the dimensions of belief (with the components of cognition, belief, value and behavior), rational (with the components of discretion power, future studies and effective decision-making), personal (with the components of creating a positive environment, needs assessment, mental health and the flourishing of talents), managerial (with the components of human/general skills, perceptual/maturity skills and specialized/leadership skills) and educational (with the components of teaching and learning process, educational supervision and guidance, and educational evaluation). Also, the results of the quantitative section showed that the factor load and the average variance extracted of the dimensions and components were higher than 0.50 and their content validity and reliability ratio with Cronbach's alpha method was higher than 0.80. In addition, the Competency model of high school principals had a good fit and each of the dimensions had a significant effect on the corresponding components and each of the components had a significant effect on the corresponding indicators ( $P < 0.05$ ).

**Conclusion:** According to the competency model of high school principals, planning to improve and promote the competence of school principals through the identified dimensions, components and indicators seems necessary.

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## 1. Introduction

Organizations' human resources should keep pace with the rapid evolution of science and technology by having new and up-to-date knowledge and skills, and organizations should be able to develop, modernize and cultivate their human resources by establishing human resources functions and processes based on human resources competencies (Cole, Boss, Fowler and Cheatham, 2021). The knowledge and skill of managers and employees is the most important source of competitive advantage of any organization, and among these, the competencies of the organization's managers are more important as the key human resource, and managers are currently responsible for coordinating human and material resources to achieve organizational goals (DaSilva, Jeronimo and Vieira, 2019). The subject of organizational management and leadership has a rich background in management literature, and various theories about organizational leadership have been proposed over time, among which theories of management characteristics, management style, and management competencies can be mentioned (Belliveau, 2021). In today's era, management in organizations is a complex and difficult process, and it requires mastering a set of management skills and adapting appropriate behaviors to the situation (Sanchez and Lehnert, 2019). Therefore, in the evolving world, it is necessary to identify and develop managerial competencies for survival and excellence. Because organizations are significantly facing problems such as lack of technical and expert labor, job turnover and insufficient skills. In the current conditions of societies, organizations need managers who can make the right decisions with different competencies, provide creative solutions to problems and accept the responsibilities of their profession (Misra and Ghosh, 2022). The effectiveness and efficiency of the education system depends on the knowledge, expertise, ability, skill, and competence of human resources, especially school principals, and the more competent and capable the school principals are, the greater and more effective their contribution and role will be in promoting the achievement of its goals (Bonyadi, Fani and Seyed Javadin, 2018).

Competence means having the right level of intellectual and physical abilities that a person can respond to different situations. In another definition, competence is defined as an outstanding characteristic that can be a motive, a characteristic, a skill, an aspect of a social role or a person's self-concept, or knowledge that expresses an outstanding and effective characteristic of people (Widyana, Handiyani and Kuntarti, 2019). Competence literally means worthiness, expertise, skill and mastery, and management means competence, qualification, and capability. Competence is any kind of attitude, skill, behavior or other characteristics of human resources that is necessary to perform a job, and most importantly, it distinguishes superior people from ordinary ones (Lara and Salas-Vallina, 2017). Examining different definitions of competence indicates several common points among them. First, competence includes knowledge, skills and individual characteristics such as motivation, value, attitude and physical characteristics. Second, competence is the characteristics of employees that form the basis of successful job behaviors and cause the superior and effective performance of a person in that job or profession. Thirdly, competencies should be visible and measurable and frequently and consistently observed in their behavior (Korzynski, Kozminski, Baczynska and Haenlein, 2021).

Organizations need people to give them an identity and achieve their goals through them, and for this purpose, the most important organizational element is management, and effective managers use human resources in a way that leads to both excellent performance and the desired level of employee satisfaction. Therefore, the role of competent and capable managers in the performance of organizations has expanded to such an extent that it has placed management science in the ranks of the most important and complex fields of humanities, and accordingly, the most important and fundamental role in schools is its competent management, and for this purpose, it is necessary to pay attention to the managers' competence (Abbaspour, Khosravi, Khosravi, Taghavifard and Azimimoghadam, 2020). The school is the main and real place where the challenges of the educational system occur and, on the other hand, the realization of its goals, and the logical solution to its challenges as well as the efficient solution of any educational challenge depends on the use of expert and experienced forces that benefit from management knowledge (Jiang and Alexakis, 2017). Competence of managers is a set of behaviors, knowledge, attitudes, skills and personality traits that are most related to the

successful performance of a manager and helps a person to successfully perform a job and achieve desired organizational results (Ribeiro, Amaral and Barros, 2021). The quality of schools depends on the competence of managers more than any other factor, and all school activities such as planning, teaching and evaluation are carried out under the supervision of the manager. Therefore, the efficiency of schools depends on the competence of school principals, and the selection of school principals should be based on principled, rational and measurable criteria (Liikamaa, 2015). The Competency model of managers means an organized set of competencies in a role or a set of similar roles that make people succeed in performing those roles, and the Competency model represents an example and model of successful behaviors that gives the roles a professional identity (Molina, Castro, Antunez, Rady, Severino-Gonzalez and Palencia, 2022). The selection and appointment of competent managers to identify, attract and manage talented people requires designing and implementing an effective model based on managerial competencies and recognizing the types of mandatory and effective managerial competencies. It means a model that is able to identify and select talented and competent people in managerial areas and other key positions needed in the organization (Dziekonski, 2017). Competency model of managers is a set of special and effective capabilities that includes managerial competencies in addition to the general and specialized competencies required by the organization, and it is necessary to have managerial competencies to hold managerial positions in the organization, and in most competency models, the competency of managers is emphasized (Torres and Augusto, 2017). Managers' competence depends on the knowledge, attitudes and skills that strengthen the influence of managers on employees and customers and all organizational stakeholders. Therefore, it is important and necessary to establish a relationship between individual competencies, business type and organizational environment in determining managerial competencies and formulating the competency model of managers (Shum, Gatling and Shoemaker, 2018).

Researches about the competency model of managers, including school managers, have been conducted, most of them were qualitative and some were quantitative, and accordingly, the results of the most important researches are reported below.

Cheraghi, Batmani and Shirbagi (2021) concluded that the competency model of smart school managers has 62 primary codes in 15 categories including the values and attitudes of managers and employees, evaluation, monitoring and control, knowledge competence of managers, and general competence of smart school managers, professional competencies of managers, infrastructure conditions of the school, social and cultural factors, economic factors, religious factors, management of resources and education, skills and abilities of the teacher, skills and abilities of the manager, cooperation and partnership with the staff and the organization, making schools smarter and personality traits and the model designed based on them was valid.

Mousavi, Mohammadi and Safian (2021) conducted a research on the competency model of organizational university principals and concluded that the said model has 186 primary themes and 43 organizing themes in 9 comprehensive themes including value competencies (with the organizing themes of leadership-centeredness and leadership acceptance, revolutionary understanding and action, Islamic lifestyle, faith and piety), specialized skills (with organizing themes of specialized knowledge, education and teaching, content creation, spirit of research, information technology language and diversity of viewpoints), strategic thinking (with organizing themes of speed of understanding and transfer, insight, strategic thinking, systemic thinking and macro-viewing), innovation and problem solving (with the organizing themes of problem recognition, problem solving, innovation development and decision-making), coaching (with the organizing themes of leadership, empowerment, talent acquisition and development), professional ethics (with the organizing themes of military spirit, organizational piety, mobilizing spirit, challenge-accepting, hard work and sustainability), performance management (with organizational themes of planning and goal setting, organization, control and supervision, resource management and completion and agility), communication skills (with organizational themes of peoplehood, team building, eloquence and networking) and organizational skills (with the organizing themes of organizational knowledge and expertise, interacting with the Corps, providing consulting services and knowledge management).

Javanbakhsh, Fazollahi Ghomshi and Abolghasemi (2021) reported in a research about the competencies of managers of a scientific civilizing university, for which three dimensions of individual (with personality, moral, ability, attitudinal/insight and perception components), interpersonal (entrepreneurship, communication and leadership) and organizational competencies (management, ideological/political, operational and technical) were identified.

Mohammadi, Zolfaghari Zaferani, Navidadehm and Tourani (2020) came to the conclusion during a research that the competency criteria of education staff managers include 63 competencies in 17 subcategories and 6 main categories of values and attitudes, management skills and capabilities, personality traits, knowledge and personal skills, organizational knowledge and skills and supervision and control.

Piri, Abbaspour, Rahimian, Malaki and Eskandari (2020) reported in a research that the competency model of educational managers based on the teachings of the Holy Quran has 143 indicators, 32 components and 4 dimensions including the value dimension (with 5 components of God-centeredness, righteousness, seeking justice and opposing oppression, believing in hereafter and hereafterism and leadership-centeredness), attitudinal dimension (with 5 components of attitude to existence, attitude to man, attitude to the world and the hereafter, attitude to management and attitude to supervision), character dimension (with 13 components of sincerity, moderation, hope, trust, and piety, remembrance of God, gratitude, keeping one's promise, good character, spiritual actualization, patience, honesty and trustworthiness) and specialized dimension (with 9 components of planning, organizing, motivating, leading, empowering, evaluating, creating a favorable organizational culture, decision making and monitoring and control).

Rajebi, Maleki Avarsin and Daneshvar (2020) concluded in a research that the competencies of educational managers of executive bodies include 94 indicators in the three main dimensions of technical-specialized competencies (with sub-dimensions of educational needs assessment, educational planning, educational implementation, evaluation of educational effectiveness, leadership education and knowledge management ability), general competencies (with sub-dimensions of individual, personality, moral and intelligence) and managerial competencies (with sub-dimensions of organizational commitment, goal orientation, responsibility, team building, communication skills, analytical thinking, strategic thinking, flexibility, foresight, creative thinking and systemic thinking) that the validity and reliability of all of them were evaluated as appropriate.

Jafarirad, Zahed Babolan, Moradi and Samari (2019) while conducting a research on the conceptual model of competence development of secondary school principals with a data base approach, reported that in the said model, the categories of feeling the need for continuous growth, material and spiritual support and changes governing knowledge and job were identified for causal conditions, the categories of required knowledge, required attitude and skills for the central phenomenon, the categories of creating growth centers, providing direct training and implicit training for strategies, the categories of the existence of cooperative work culture, supportive atmosphere, and decentralized structure for the background conditions, the categories of political work, facilitating/obstructing rules and regulations for the intervening conditions, and for complications, the categories of improving the quality of learning, organizational growth and professional development.

Derakhshan and Zandi (2018) came to this conclusion during a research, the competency model of educational group managers includes 62 sub-competencies in 11 core competencies, including moral, administrative-supervisory, individual and personality, motivational, technological, managerial, communication and interpersonal, cultural, technical, professional and specialized, political and economic-entrepreneurial competencies.

Kin and Abdull Kareem (2018) reported in a research that the competencies of school principals included honesty and accountability, communication, collaboration, critical thinking, creativity and initiative, decision making, problem solving, change management, entrepreneurship, digital literacy and emotional intelligence. Hitt, Woodruff, Meyers and Zhu (2018) reported that the competence of school principals had components such as knowledge, skills, insight, ability, attitude, personality traits, moral traits and credibility.

Bitterova, Haskova and Pisonova (2014) concluded that the competence of school principals included creating a strategy, managing the teaching process, managing the development of the school as an institution, and managing and developing human resources.

The performance of managers and educational leaders has a significant contribution to the academic success of students, and any failure of the school principal imposes a lot of social costs on students and their families. In addition, school principals lacking the necessary competencies and abilities has weakened many of them in their managerial and leadership roles (Jafarirad and et al., 2019). Another important point is that principals play an important role in advancing the goals of the education system and the progress of any society depends to a large extent on the type and manner of activities implemented in schools that are managed and led by principals. In other words, principals play an important role in the quality of educational programs and the advancement of the educational goals, and in order for them to be able to fulfill this role well, it is necessary to have appropriate knowledge, skills, abilities, and competencies. If organizations care about the competencies of managers and can properly identify, evaluate and promote these competencies, the probability of their success will be high and even guaranteed. The last thing about the importance and necessity of the current research is that dealing with the competence of the organizational managers makes being in the responsible position in the field of human resources create a suitable opportunity to lead people's lives in a positive direction in addition to facilitating the creation of a competitive advantage for the organization, and to do this, a manager should first of all know the business environment and capabilities of himself and the organization and have a set of competencies. According to what mentioned above, this study aims to investigate and present the competency model of high school principals.

## 2. Methodology

This is an applied research in terms of purpose and mixed (qualitative and quantitative) in terms of implementation. In the qualitative part, the research population was the educational management experts of Guilan province in the academic year of 2021-22, and according to the principle of theoretical saturation, 15 of them were selected as a sample using targeted and snowball sampling methods. In this sampling method, researchers first selected some of the experts they knew after checking the inclusion criteria, and in the next step, they were asked to introduce other experts to the researchers, who were also selected as samples if they met the inclusion criteria. Also, in the quantitative part, the research population was 200 people (130 women and 70 men with at least master's degree) in the academic year of 2021-22, high school principals in Guilan province, according to Krejcie and Morgan's table, 127 of them with the stratified random sampling were selected as samples. In this sampling method, first, a list of all secondary school principals was prepared by gender and their ratio was calculated, and then a code was assigned to each of the male and female principals separately, and then with the help of a random number table, the required number from each class was selected as sample from among those who were eligible to enter the study.

The research tool was a semi-structured interview in the qualitative part and a researcher-made questionnaire in the quantitative part. To design the interview questions, first the theoretical foundations of the study and then, with the help of the supervisors and advisors, questions for the interview with the experts were designed. After identifying the samples of the qualitative section and coordinating with them to conduct the interview, stating the conditions of the interview and accepting them to participate in the interview, the experts were asked about interview questions and the important content was noted down, and the interview with the experts continued until the new samples could not add new information to the findings from interviews with other experts, or in other words, the research reached saturation in terms of findings. The validity of the findings obtained from the interview was confirmed with the triangulation method and its reliability was calculated 0.83 with the Cohen's kappa coefficient method. Also, in the quantitative part, based on the findings of the qualitative part, a researcher-made questionnaire with 137 items was designed. To respond to each item, a seven-point Likert scale from completely disagree with a score of one to completely agree with a score of seven was used, the score of the tool or any part of it was calculated through

the average of the items that make it up. The face validity of the researcher-made questionnaire was confirmed by the opinion of experts who are not members of the research, and its total reliability was calculated 0.91 using the Cronbach's alpha method.

In short, the steps of conducting the research were as follows: first the theoretical foundations of the study were designed and based on them, questions were designed for interviewing the experts, and then they were identified, and the importance and necessity of the research was explained to them, and they were assured about the observance of ethical considerations and they were asked to attend the interview at the agreed time and place. The interviews were conducted in person and the most important results were recorded in the form of keywords. In the next step, based on the findings of the qualitative section, a questionnaire was designed and sampled among the high school principals, and the importance and necessity of the research was explained to them, and they were assured about the observance of ethical considerations, and they were asked to completely and honestly answer the researcher-made questionnaire. The data obtained from conducting the interview and completing the researcher-made questionnaire were analyzed in two parts, qualitative and quantitative. For data analysis in the qualitative part, the open, axial and selective coding method was used in Maxqda software, and in the quantitative part, the exploratory factor analysis method was used in Amos software.

### 3. Findings

In this study, 15 educational management experts and 127 high school principals were present, and the frequency and percentage of their gender and education are presented in Table 1.

**Table 1.** Results of frequency and frequency percentage of demographic information of qualitative and quantitative samples

| Variable  | Class           | Qualitative part |                      | Quantitative part |                      |
|-----------|-----------------|------------------|----------------------|-------------------|----------------------|
|           |                 | Frequency        | Frequency percentage | Frequency         | Frequency percentage |
| Gender    | Man             | 10               | 67/66                | 45                | 43/35                |
|           | Female          | 5                | 33/33                | 82                | 57/64                |
| education | Master's degree | 0                | 0                    | 58                | 67/45                |
|           | PhD student     | 2                | 33/13                | 52                | 94/40                |
|           | P.H.D           | 13               | 67/86                | 17                | 39/13                |

According to Table 1, most of the samples of the qualitative section or experts are male (66.67%) and have a doctorate education (86.67%), and most of the samples of the quantitative section or the high school principals are female (64.57%) and have a master's education (45.67%). The results of open, axial and selective coding for the competency model of high school principals were presented in Table 2.

**Table 2.** The results of open, axial and selective coding of the competency model of high school principals

| Selective coding (dimension) | Axial coding (component)        | Open coding (index)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------------|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Belief                       | Cognition                       | Knowledge of God, self-knowledge of God, knowledge of origin, path and destination, knowledge of resurrection, knowledge of prophecy and knowledge of religious leaders                                                                                                                                                                                                                                                                                                                             |
|                              | Belief                          | Managers possess monotheistic faith and worship of God, belief in the system of the Islamic Republic of Iran, belief in the authority of the jurist, belief in the philosophy of the organization and familiarity with the rules of the Islamic religion.                                                                                                                                                                                                                                           |
|                              | Value                           | Compliance with the principles of professional ethics, the spirit of justice and equality, commitment to the society, leadership, the spirit of cooperation and teamwork, unity of action, positive thinking towards people and events, attention to human and moral values, religious/revolutionary insight, simultaneous attention to material and spiritual aspects, directing the behavior and performance of employees towards value ideals and turning differences into commonality and unity |
|                              | Behavior                        | Virtuous behavior, benevolent behavior, committed behavior, empowering behavior and supportive behavior                                                                                                                                                                                                                                                                                                                                                                                             |
| Rational                     | Discretion power                | Diagnosing the current issues of the society, diagnosing the current situation, diagnosing the desired situation and identifying the key elements of ideas                                                                                                                                                                                                                                                                                                                                          |
|                              | future studies                  | The ability to see the unseen, the ability to explain the desired future, the ability to bring the future to the present, the ability to recognize events, the ability to recognize trends, the ability to recognize drivers, the ability to recognize inhibiting factors, and the ability to recognize beneficiaries.                                                                                                                                                                              |
|                              | Effective decision-making       | Quality decision-making power, rational decision-making power, ethical decision-making power, up-to-date and timely decision-making power, effective decision-making power and logical decision-making power                                                                                                                                                                                                                                                                                        |
| Personal                     | Creating a positive environment | Empathy with stakeholders, support of team members, empathy with stakeholders, the ability to take criticism, the ability to develop teamwork and the spirit of cooperation with others.                                                                                                                                                                                                                                                                                                            |
|                              | needs assessment                | Measuring the needs of employees, measuring the needs of teachers, measuring the needs of students, measuring educational needs, measuring research needs, measuring educational needs, measuring professional growth needs, measuring service needs, understanding school needs, understanding school expectations and creating growth opportunities.                                                                                                                                              |
|                              | Mental Health                   | Creating a healthy environment for the emotional growth of students, creating a healthy environment for the emotional growth of teachers, creating a healthy environment for the emotional growth of employees, creating a healthy environment for the academic growth of students, creating a healthy environment for                                                                                                                                                                              |

|             |                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             |                                      | the professional growth of teachers, creating a healthy environment for the professional growth of employees, creating a healthy environment for the physical growth of students, creating a healthy environment for the physical growth of teachers and creating a healthy environment for the physical growth of employees                                                                                                                                                                                                                                                                       |
|             | The flourishing of talents           | The growth and flourishing of the talents of employees, the growth and flourishing of the talents of teachers and the growth and flourishing of the talents of students.                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Managerial  | Human/general skills                 | The ability and interest in participating in various topics, the ability to participate and discuss with colleagues, having the need to achieve success, having the motivation to satisfy the needs of oneself and colleagues, the ability to accept new ideas and changes, positive thinking, preventing despair and hopelessness, valuing constructive efforts of colleagues, encouraging innovation and initiatives of colleagues and students and having accuracy and fairness in evaluations                                                                                                  |
|             | Cognitive/maturity skills            | Evaluating the environmental trend and analyzing its impact on future performance, developing plans to identify strengths, weaknesses, threats and opportunities, coordinating internal goals and strategic goals, identifying stakeholder groups and their expectations, identifying effective elements in increasing performance, integrating ideas and trying to realize them, react positively to new changes, step-by-step examination of problems in a situation, and challenging one's own and others' assumptions.                                                                         |
|             | Specialized/leadership skills        | Drawing a vision of the future of school, setting clear missions and goals, explaining the vision to staff, students and parents, creating a common understanding of the vision and goals, encouraging movement in line with the goals and vision, having strategic planning, setting high, transparent and clear expectations. Setting high-level standards for performance, the ability to achieve logical results, making high-quality decisions, the ability to recognize and prioritize educational needs, the ability to critically evaluate, and having curriculum and educational methods. |
| Educational | Teaching and learning process        | Paying attention to the quality of teaching and learning, teachers' support for education, creating a suitable educational environment, improving teaching and learning conditions, effective use of teaching time, having educational knowledge, technicality of teaching and learning actions, creating a suitable educational environment, trying to improve the quality of teaching , enriching the curriculum and raising the quality of the teacher                                                                                                                                          |
|             | Educational supervision and guidance | The importance of students' academic success, continuous follow-up of students' progress, checking and following up the quality of teachers' teaching, monitoring the implementation of teachers' lesson plans, monitoring the quality of education in the school and monitoring the curriculum adjustment.                                                                                                                                                                                                                                                                                        |

|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Educational evaluation | Continuous evaluation of students, continuous evaluation of teachers and staff, continuous self-evaluation and self-improvement, identification of strengths and weaknesses of educational elements, curriculum evaluation, formulation and implementation of expectations from students and employees, alignment of curriculum, evaluation and improvement of educational methods, ensuring the integrity of class evaluation, holding familiarization courses with criterion-based evaluation, holding courses for familiarization with norm-based evaluation and recognition of meaningful learning |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

According to Table 2, 137 indicators, 17 components and 5 dimensions were identified for the competence of high school principals; so as to include the dimensions of belief (with the components of cognition, belief, value and behavior), rational (with the components of discretion power, future studies and effective decision-making), personal (with the components of creating a positive environment, needs assessment, mental health and the flourishing of talents), managerial (with components of human/general skills, perceptual/maturity skills and specialized/leadership skills) and educational (with the components of teaching and learning process, educational supervision and guidance, and educational evaluation).

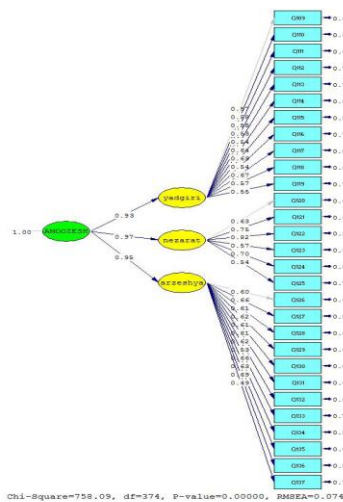
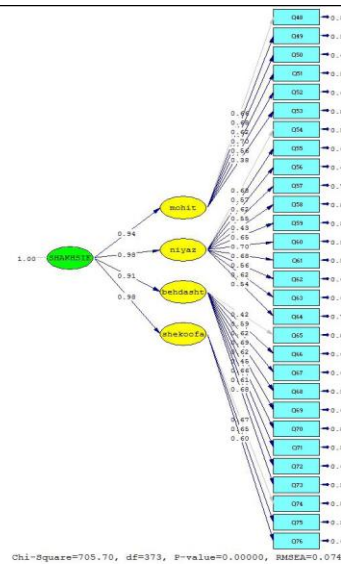
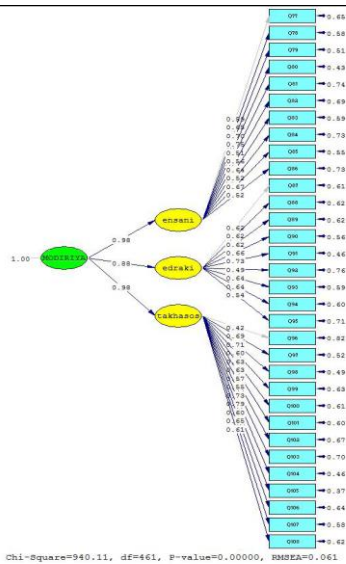
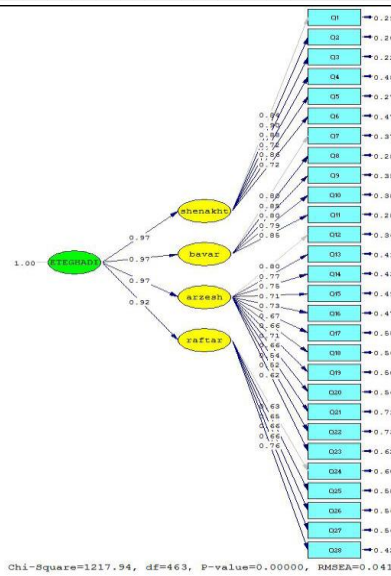
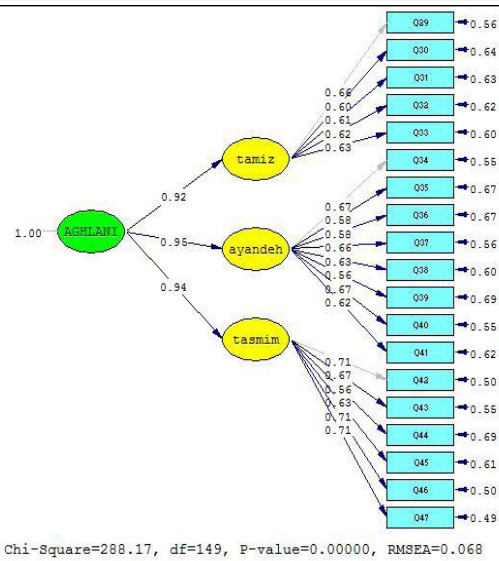
The assumptions of the exploratory factor analysis showed that the KMO statistic with a value of 0.78 and Bartlett's sphericity statistic with a value of 1429.10 were significant at a level smaller than 0.001, which indicated that these findings indicated sufficient correlation and the adequacy of the samples to perform factor analysis. The results of the exploratory factor analysis for the competency model of high school principals were presented in Table 3.

**Table 3.** The results of the exploratory factor analysis of the competency model of high school principals

| Dimension | Component                       | Factor load |      | Mean variance extracted | Content validity ratio | Reliability |
|-----------|---------------------------------|-------------|------|-------------------------|------------------------|-------------|
| Belief    | 4 components                    | 96/0        | 70/0 |                         | 90/0                   | 89/0        |
|           | Cognition                       | 97/0        | 79/0 |                         | 90/0                   | 88/0        |
|           | Belief                          | 97/0        | 81/0 |                         | 88/0                   | 91/0        |
|           | Value                           | 97/0        | 76/0 |                         | 87/0                   | 87/0        |
|           | Behavior                        | 92/0        | 59/0 |                         | 88/0                   | 89/0        |
| Rational  | 3 components                    | 94/0        | 85/0 |                         | 91/0                   | 93/0        |
|           | Discretion power                | 92/0        | 66/0 |                         | 93/0                   | 92/0        |
|           | future studies                  | 95/0        | 93/0 |                         | 90/0                   | 90/0        |
|           | Effective decision making       | 94/0        | 89/0 |                         | 93/0                   | 93/0        |
| Personal  | 4 components                    | 95/0        | 79/0 |                         | 88/0                   | 90/0        |
|           | Creating a positive environment | 94/0        | 76/0 |                         | 92/0                   | 90/0        |
|           | needs assessment                | 98/0        | 75/0 |                         | 90/0                   | 89/0        |
|           | Mental Health                   | 91/0        | 69/0 |                         | 90/0                   | 89/0        |

|             |                                      |      |      |      |      |
|-------------|--------------------------------------|------|------|------|------|
|             | The flourishing of talents           | 98/0 | 81/0 | 89/0 | 90/0 |
| Managerial  | 3 components                         | 94/0 | 87/0 | 89/0 | 91/0 |
|             | Human/general skills                 | 98/0 | 83/0 | 88/0 | 89/0 |
|             | Cognitive/maturity skills            | 88/0 | 89/0 | 90/0 | 90/0 |
|             | Specialized/leadership skills        | 98/0 | 91/0 | 89/0 | 92/0 |
|             | 4 components                         | 96/0 | 83/0 | 92/0 | 94/0 |
| Educational | Teaching and learning process        | 93/0 | 89/0 | 90/0 | 92/0 |
|             | Educational supervision and guidance | 97/0 | 91/0 | 93/0 | 94/0 |
|             | Educational evaluation               | 95/0 | 78/0 | 91/0 | 95/0 |
|             |                                      |      |      |      |      |

According to Table 3, the factor load and average variance extracted of the dimensions and components were higher than 0.50 and their content validity and reliability ratio was higher than 0.80 using Cronbach's alpha method. Investigations indicated that the competency model of high school principals had a good fit due to  $\chi^2/df$  values less than 3, RMSEA less than 0.08 and CFI, IFI, RFI, GFI and AGFI above 0.90. The results of the dimensions of the competency model of high school principals along with their factor load were presented in Figure 1.



**Figure 1.** The results of the dimensions of the competency model of high school principals along with the factor load

According to Figure 1, in the competency model of high school principals, each of the dimensions had a significant effect on the corresponding components and each of the components had a significant effect on the corresponding indicators due to the factor load higher than 0.40 ( $P < 0.05$ ).

#### 4. Conclusion

Education is one of the most vital, main and important social institutions of any country and a miniature of the society and the downsized version of social system, which should start from the school for any decent transformation in the social system. The competence of school principals plays an important role in improving the education system and the growth and prosperity of students. As a result, this study aims to investigate and present the competency model of high school principals.

The findings of the qualitative section showed that 137 indicators, 17 components, and 5 dimensions were identified for the competence of high school principals; so as to include the dimensions of belief (with the components of cognition, belief, value and behavior), rational (with the components of discretion power, future studies and effective decision-making), personal (with the components of creating a positive environment, needs assessment, mental health and the flourishing of talents), managerial (with components of human/general skills, perceptual/maturity skills and specialized/leadership skills) and educational (with the components of teaching and learning process, educational supervision and guidance, and educational evaluation). Also, the findings of the quantitative section showed that the factor load and the average variance extracted of the dimensions and components were higher than 0.50 and their content validity and reliability ratio with Cronbach's alpha method was higher than 0.80. In addition, the competency model of high school principals had a good fit and each of the dimensions had a significant effect on the corresponding components and each of the components had a significant effect on the corresponding indicators. Many researches have been conducted on the competency model of managers, including school principals, and most of the researches in this field were of a qualitative type, and based on this, it can be said that the findings of this study are in agreement with the findings of the studies and researches of Cheraghi et al (2021), Mousavi et al (2021), Javanbakhsh et al (2021), Mohammadi et al (2020), Piri et al (2020), Rajebi et al (2020), Jafarirad et al (2019), Derakhshan and Zandi (2018), Kin and Abdull Kareem (2018), Hitt et al (2018) and Bitterova et al (2014).

In explaining the results of this study, it can be stated that the first dimension, that is, the dimension of belief competence, with four components of cognition, belief, value and behavior, deals with the set of factors that show worldview, attitudes and individual values. Faith and belief is an important and basic condition for management, and it is a comprehensive faith and belief for a manager, in which heart knowledge, verbal confession, and practical commitment to Islamic principles are realized. A manager without piety and commitment considers the organization as a means of achieving his personal goals and interests, deprives the employees of spiritual and divine motivations, ignores the selection criteria, which commitment and piety is one of its obvious steps, prioritizes incompetent and non-committed people, resorts to lies and tricks to maintain his status and position, he uses employees and subordinates as means to achieve his own goals, paves the way for deception and hypocrisy and puts the organization on the slope of decline and fall. A manager with a high belief dimension is always looking for personal, organizational and social honor and pride, and such a committed manager governs the culture of expertise in the light of commitment in the form of speech and action and provides the basis for the growth and excellence of employees.

The second dimension, that is, the dimension of rational competence, with three components of discretion power, future studies and effective decision-making, refers to the manager's rational competences, which in fact, the set of knowledge required by managers is a reflection of the duties and roles of managers at different levels of management. The heavier and more diverse the manager's duties and roles are, the wider and deeper the knowledge and skill set will be needed. In fact, it is benefiting from a level of intellectual and mental abilities and competences that can be the basis for the crystallization of managers' latent knowledge set.

Therefore, the most important task of management is to properly understand different conditions and situations and make decisions based on knowing the conditions, and identifying the stakeholder groups and checking their expectations, as well as having the insight, analytical power and understanding necessary to creatively solve various problems and the coherence of ideas and examine ways to achieve goals can express the rational competences of managers.

The third dimension, i.e. the dimension of personal competence with four components of creating a positive environment, needs assessment, mental health and the flourishing of talents, refers to the fact that personality and psychological characteristics are a positive psychological state with a realistic and flexible approach to life. Basically, managers must have a series of attributes and personal or personality characteristics to be able to carry out the assigned tasks. Manager's intelligence and creativity is a trait that is often mentioned. Therefore, the manager's personality is an organizational category and personal characteristics are defined as a set of relatively fixed and stable characteristics in people that distinguish people from each other. If a person suitable to the abilities and personality traits is selected for management, not only individual prosperity will be achieved, but also the organization will benefit more from him and the correct selection of human resources in the management department considering the macro investments in this department is one of the important issues of every organization.

The fourth dimension is the dimension of managerial competence with three components of human/general skills, perceptive/maturity skills and specialized/leadership skills. It indicates that the managerial abilities and competencies correspond to the manager's knowledge of all the structures and relationships governing the organization's field, based on which he can manage different departments of the organization optimally. In other words, a manager must have the necessary efficiency for how the organization uses resources to produce services or products. It means to be able to understand and calculate the relationship between the actual and desired combination of inputs for production and certain outputs and, in addition, to have the necessary effectiveness to achieve organizational goals. What can be considered as the organizational and managerial capabilities of a manager is the ability to manage human resources, which includes several sub-processes, and indicators such as providing the information needed by secondary school principals at the right time, the effectiveness of timely information transfer to school principals on increasing service satisfaction of students from high schools. Knowledge of the amount of powers and responsibilities delegated to high school principals, giving feedback to the superior job performance of principals before informing their superiors, designing a detailed description of the duties and responsibilities of high school principals in the structure of the education system, the possibility of using expert and capable human resources by high school principals through laws and regulations, management of material resources available in order to fulfill the tasks assigned by high school principals, the evaluation system of high school principals is a basis for assigning responsibility and providing appropriate and timely feedback to eliminate defects and improve strengths, giving rewards based on performance and merit to high school principals and giving more responsibility to high school principals can be counted as some indicators of the management competence of high school principals.

The fifth dimension is the dimension of educational competence with three components of the teaching and learning process, educational supervision and guidance, and educational evaluation. Because the least inattention and carelessness in the selection of educational managers causes severe stagnation in social progress. Mistakes and waste in production and economic centers can be compensated in some way by presenting special and separate plans or by fundamental revision, but any mistake and defect in education is a big loss whose effects and results will remain in the society and even on a generation and it will not be easy to remove its implications from society and people's thoughts. Therefore, in order to ensure the usefulness or effectiveness of the educational and training activities of managers, it is necessary that the efficiency and results of their work are examined and analyzed by the authorities and appropriate decisions are made based on that. School management is a subset of management in educational organizations, and school principals have a major contribution to social progress by carrying out educational activities. Therefore, people should be appointed as managers and leaders in schools who have high education, expertise and skills, feel

commitment and responsibility, and have sufficient vision and ability to manage the school and educate students properly, in which case it can be expected that children and teenagers should be well educated in schools and their talents and abilities should flourish.

In general, the achievement of this research was that a relatively comprehensive and complete model developed based on the requirements and competence characteristics of managers and from other models presented by other experts is more appropriate, considering that it was developed for communities other than education or other than the principals of high schools in Guilan province. Most of the models presented are for societies such as government institutions, and their comprehensiveness and generalizability are very low, and they cannot be a suitable model for educational organizations, including principals of high schools. Although this model has similarities with other models, it has been drawn as much as possible in accordance with educational organizations, especially the education system and principals of high schools. Second, compared to other studies, the model of this study is more comprehensive in terms of the obtained dimensions, components and indicators, and this issue has been compared with a number of domestic and foreign researches that, while having the current research model, it is identified from most of their dimensions and components, which is a strong point for the present research, and the main achievement of the research is the comprehensiveness of the model and its localization for the educational organization, especially the principals of high schools.

The limitations of this study include the use of non-random sampling method in the selection of qualitative samples, the resistance of some principals to complete the questionnaire, the low cooperation of some academic experts to conduct interviews, the difficulty of conducting the research due to the spread of the Covid-19 and the limitation of experts and school principals to Guilan province. Therefore, it is suggested to conduct more research on the competency model of school principals of other academic courses and other provinces. Another recommendation is to conduct comparative studies focusing on successful countries in the field of educational management with the approach of school principals' competency models, review the competency model of principals every five years to update the said model, and set up evaluation and development centers for high school principals. Some of the practical suggestions include sharing the employees in the organizational mission with managers by holding joint meetings by the organization's ideological special headquarters, forming a special headquarters using religious and ideological experts, holding meetings and conferences by inviting cultural and social experts, recognizing educational and training philosophy of the school and determining its perspectives, goals and missions, drawing a picture of the organization's destination and ideal in the future, inviting experts to examine the current situation of the organization and make wise decisions, turning passive members of the school into active supporters by providing opportunities for growth, trying to create an environment based on mental security in the workplace, assessing the needs of standards by inviting specialists and experts in the form of an expert committee to review and identify the needs of the organization and provide solutions, holding knowledge-enhancing courses for managers, establishing clear and direct communication between managers and subordinates to better understand and increase interest, respect, empathy and sympathy, managers support creative employees and teachers through financial and spiritual support, continuous and standard evaluation training for teachers, identifying the strengths and weaknesses of teachers, employees and students and turning weaknesses into opportunities, creating the context for the use of multiple technologies to provide information and forming a supervision and guidance group in schools in the form of a specialized committee.

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