



Design and validation, researcher school model

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Abstract

Sustainable development does not work without education and both without the institutionalization of research. The first condition is to pay attention to research in all parts of the school, which is achieved in the form of a researcher school. The present study was conducted with the aim of designing and validating the researcher school model using a combined method of multi-stage exploratory type. In the qualitative part of the study, the phenomenological strategy was performed and the quantitative part of the study was performed through factor analysis. Methods of obtaining data: included semi-structured individual interviews with educational scientists and qualitative analysis of texts. In order to assess the accuracy of the interview questions, the question form was reviewed by 10 experts and professors in the field of educational sciences. The continuity of the interview form has been examined by providing a summary of the identified topics and topics to three experts through qualitative study methods and applying their opinions. 30 professors of Farhangian University and PhD students of educational sciences, experts of relevant departments of the Ministry of Education, successful principals and teachers in the country were selected by purposive sampling method. In this study, the components of values, learning education activities, professional competencies, educational-executive structure, out-of-school interactions and equipment are of equal importance for scientific experts and professors.

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Introduction

In the third millennium, the functioning of the education system is more than responding to traditional needs, as the most important factor of survival and competition in a changing and evolving environment, a developed country is not possible without a dynamic and good education system. In this regard, the school has a great position, sensitivity and importance. Most developed countries have realized that investing in the quality of school activities and methods is the basis of all-round development (Lassibille, 2016). And the belief that education in general and the school in particular is the main factor in the realization and sustainable development of nations, the role and importance of effective factors in the realization of good education becomes clear. Attention to research in all educational sectors is one of the factors affecting the growth and efficiency of education.

If we want to make timely efforts to improve education, we must pay special attention to professional development and qualitative development of research in school. Thus, in the last decade, most of the discussion about the quality of schools has been about the development of school research. The importance of "quality of educational activities" is due to the increasing challenges facing schools and increasing people's expectations of "quality of education". Schools are not only one of the variables that need to be changed in order to improve the quality of graduates' performance, but they are also the most important factor in causing change. This dual condition of schools in educational reforms, as one of the main elements of the quality of education in society, has made the school a growing and challenging field. But at the heart of these efforts, for the new and professional functions of shared schools, is the research and application of research-oriented activities to help students progress. (Huntly, 2008) and attention to research and research-oriented growth in education in the form of a research school has been considered. "The researcher school, with the help of institutionalizing research in the educational

environment, aims to increase the knowledge, skills and professional attitude of teachers, so that they can improve students' learning."

A researcher school is a school where all its staff and all educational and curriculum programs, classroom management, are research-oriented. The teacher should be a researcher and research should be institutionalized in teaching and learning activities, and in the field of measuring and evaluating research skills and thinking and questioning, and paving the way for students to search should be the headline of learning activities (Bergmark, 2020). The researcher school is a school in which research activities, research narrative and research course are effective models for promoting and enriching professional growth and development in the school (Hosseinpour Shohreh & Zeinabadi, Hassan Reza, 2019).

The basic model of the research school has three components: cultivating the researcher, facilitating research skills, and distributive leadership. Teacher-centered dimension: research belief and perception, professional knowledge and skills, and professional knowledge communication. The dimension of research-based culture: Research-based culture is the supportive structure and supporting laws, and the dimension of research resources: classroom management, research-based teaching, research-based educational content can be evaluated. (Schreiner, Louis, & Nelson, 2020)

Although a culture of research is essential for all government employees, the development of school research seems to be more necessary due to its role in the development and progress of society, therefore, the success of research-oriented efforts in the field of school improvement and efficiency is essential. (Richter, Kunter, Klusmann, Lüdtke & Baumert, 2011; Marks, 2013).

Developing a research school on teachers' positive perceptions of the field of study (Harris, Cale & Musson, 2011), teachers' beliefs (Girvan, Conneely & Tangney, 2016), promoting reasoning among students, and improving teacher communication (Sedova, Sedlacek & Svaricek,

2016), improving methods of using information and communication technology (Wang, Hsu, Reeves & Coster, 2014), classroom management, creative and innovative skills, and communication skills (Ninlawan, 2015) are effective. Research and Theories Zahedi (1994), Ali Mohammadi (1999), Shamsorkhani (2001) Babakhanian (2002), Romiani (2003), Azadi (2004), Khaje Bahrami (2003), Ebiat (2005), Sedigmir Azimi (2007), Mark & Leary (1995), Reece (2000) emphasized the importance of research among teachers and education.

However, in order for schools to become professional, they must create a good research environment, constantly review them, and move towards a research school. Researcher school refers to the set of cognitions, attitudes and skills that the school staff can use to help the physical, moral, emotional, social, intellectual and spiritual development of students during education. Considering the importance of research schools in educating the creative generation, this study examines the components of the research school and presents a model in this field. The following is related to related research:

The aim of the study (Suyo-Vega., Meneses-La-Riva, & Fernández-Bedoya, 2020) was to determine the relationship between research competencies and teachers of the University of Scientific Production in several institutions in Peru. The developed method of quantitative approach, correlation level, was non-experimental design. The main conclusion is that there is a positive and significant relationship between research competencies and teachers' scientific production.

Beisenbayeva, Abildina, Feizuldayeva, Kopbalina, & Kurmangaliñfeva, 2020 examined students' research skills and showed that children's intellectual and research skills depend on teacher research competencies. To develop them, a teacher must constantly do research and practical work in his learning process. The task of a teacher in this field is not only to build the cognitive interest of

young students, but also to integrate the competence of educational research in the age group.

The results of Maleki, Davari, Zarei (2018) research showed that research schools (research-oriented) have an effective role in cultivating a thoughtful and creative generation in order to realize the six principles of fundamental change.

Some studies have focused on the knowledge and research attitude between students and teachers by determining the effect of research methodology training. For example, (Linden et al, 2015) studied changes in research knowledge and attitudes toward research among samples of sophomore students before and after participating in an introductory course in research methodology. The results showed that the research knowledge of student-teachers has grown after the end of the course and their positive belief in research has been strengthened.

(Pikula, 2015) showed that teacher education programs have a fundamental need for change and innovation. So that these programs should pay more attention to participation, interaction, development and training of research skills in teaching. In such a way that it provides opportunities for students to learn content from an experienced, fluent and ready instructor in the field of educational innovations.

(Rohwer and Christina Svec, 2014) showed that the status of research resources is moderate and needs more attention. Also, research questions in the field of research showed that teachers are usually not sufficiently skilled in research and also believe The development of research skills is an indicator of their scientific excellence and progress.

The study (Butt & Shams, 2013) was conducted to explore student-teacher attitudes about research. The results showed that student teachers have a negative attitude towards research. This study indicates the need to pay attention to the role of teacher training programs in cultivating a positive attitude towards research.

Smith (2012) in a study examined the basic skills needed by the teaching staff. The Delphi National Study identified 50 basic skills required, of which seven were identified: 1- Communication and social

knowledge 2- Scientific and professional knowledge 3- Entrepreneurial skills 4- Application of media and new technologies 5- Research 6- Teaching and education 7- Writing and discourse.

(Craig Rush¹ and Joanna Wheeler, 2011) showed that teachers often do not receive the necessary cooperation and support in research activities. Supervision is an essential element in encouraging teachers to develop research skills. Research efficiency also increases individual and organizational participation of individuals. One of the key components in facilitating research efficiency is the support of schools and educational institutions.

So what is important is to create research thinking in schools. Research thinking means the application of the stages of the scientific method in life, in other words, the introduction of the scientific method into life, as well as the practical application of scientific knowledge in life. Teacher-researcher is an educational and research approach that the purpose of teaching and applying it is to solve the challenges and problems that teachers face during practice and especially in the process of teaching and learning. (Kridel, 2010)

In fact, the research school can encourage teachers and students to do such research. Every method in research requires familiarity with the methods, patterns and skills that the researcher needs to be sufficiently aware of in order to institutionalize. The question now is what are the steps to be taken to institutionalize research teaching in the school? Considering that a large part of the previous studies focused on the activities of the research teacher and did not consider all the research elements in a school, and on the other hand due to the great importance of research in quality development, questioning spirit, professional development of teaching staff and quality of learners' learning Research on the components of the research school is more and more necessary, so that through this research, solutions can be created for the implementation of the research school and the removal of obstacles. Therefore, the present

study has investigated the components of the researcher school and presented a model in this regard. To conduct the research, first the most important factors of the researcher school were examined from the texts and scientific sources by documentary method, and the researcher school studies were evaluated in the form of 6 dimensions (values, teaching and learning activities, professional competencies, educational structure and Executive, out-of-school interactions and equipment) were considered. Therefore, the findings of the interviewees have been analyzed and evaluated in these 6 dimensions, and a model has been developed and validated based on them.

Research method

In this study, the combined method with exploratory sequential mixed methods was used and, therefore, both qualitative and quantitative methods were used consecutively and with equal importance through the method of combining data connection. The qualitative approach was also done through phenomenology. The reason for choosing this method is to pay attention to the school as a social place that is formed through the interactions of people with each other. Using the phenomenological method, constructive experiences about the researcher school can be obtained. The quantitative approach was also done through factor analysis. To select the participants, purposive sampling method was used using the snowball method, which continued until the theoretical saturation limit. In the qualitative section, 30 professors and faculty members of Farhangian University and doctoral graduates of educational sciences, experts in the relevant fields of the Ministry of Education, and successful teachers in the country in the academic year 2020-2021 were purposefully selected.

The data collection tool, in the qualitative part, was a semi-structured interview, which used the Strauss and Corbin model 9 and content analysis technique to encode, classify and summarize the information.

In order to assess the accuracy of the interview questions, the question form was reviewed by 10 experts and professors in the field of educational sciences. The reliability of the interview form has been investigated by qualitative research methods by providing summaries of the identified topics and categories to three knowledgeable individuals.

SPSS software was used to analyze the obtained data.

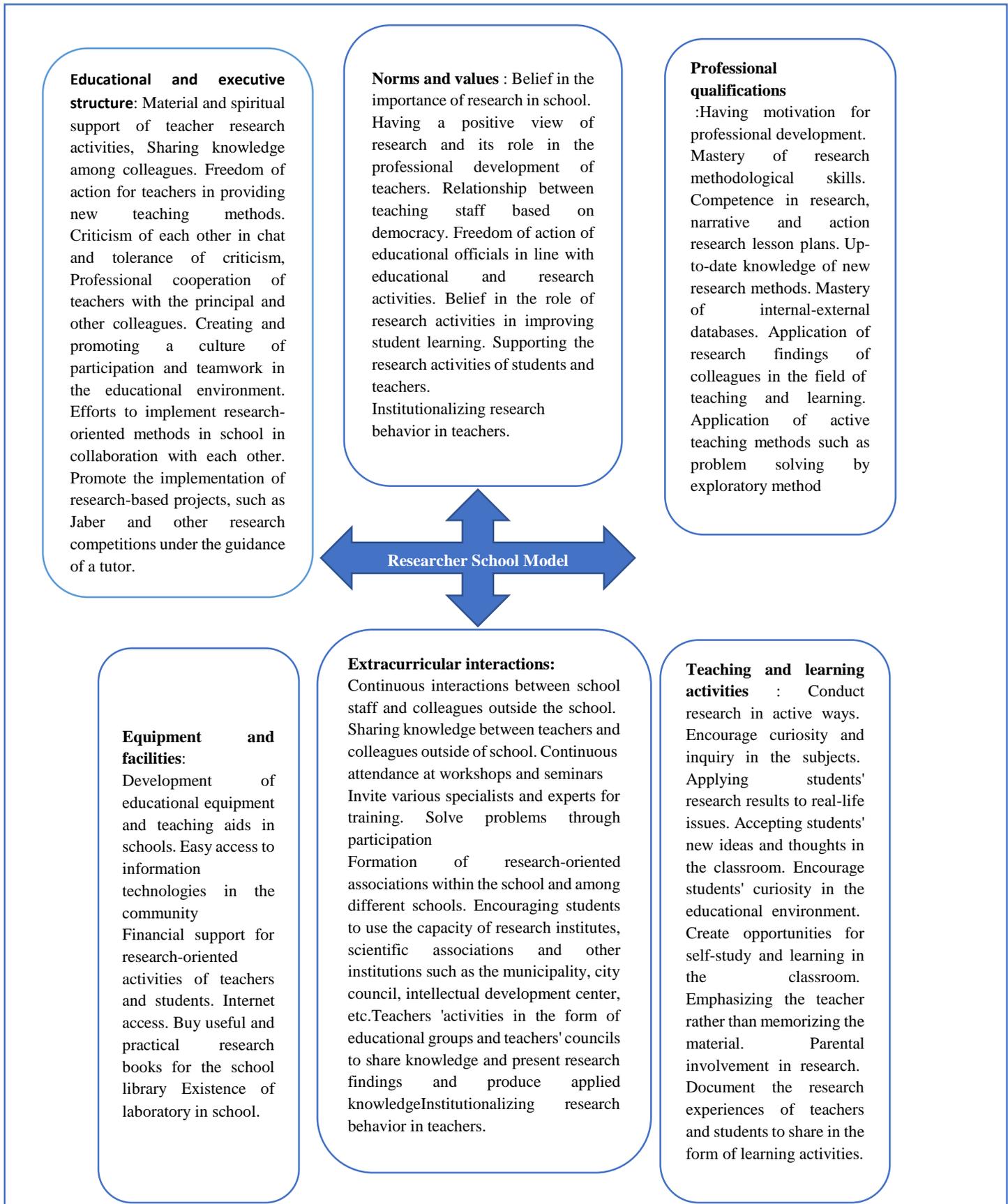
Findings

What are the characteristics of a research school and in what dimensions can they be determined?

Table 1: Selective, axial and open coding, characteristics of the researcher school

Selected code	Axial code	Open code
Researcher School	Norms and values that govern the school	<ul style="list-style-type: none"> • Belief in the importance of research in school. • Having a positive view of research and its role in the professional development of teachers. • Relationship between teaching staff based on democracy. • Freedom of action of educational officials in line with educational and research activities. • Belief in the role of research activities in improving student learning. • Supporting the research activities of students and teachers. • Institutionalizing research behavior in teachers.
	Professional qualifications of the executive staff	<ul style="list-style-type: none"> • Having motivation for professional development. • Mastery of research methodological skills. • Competence in research, narrative and action research lesson plans. • Up-to-date knowledge of new research methods. • Mastery of internal-external databases. • Application of research findings of colleagues in the field of teaching and learning. • Application of active teaching methods such as problem solving by exploratory method.
	Educational and executive structure	<ul style="list-style-type: none"> • Material and spiritual support of teacher research activities, • Sharing knowledge among colleagues. • Freedom of action for teachers in providing new teaching methods. • Criticism of each other in chat and tolerance of criticism, • Professional cooperation of teachers with the principal and other colleagues. • Creating and promoting a culture of participation and teamwork in the educational environment. • Efforts to implement research-oriented methods in school in collaboration with each other. • Promote the implementation of research-based projects, such as Jaber and other research competitions under the guidance of a tutor.
	Teaching and learning activities	<ul style="list-style-type: none"> • Conduct research in active ways. • Encourage curiosity and inquiry in the subjects. • Applying students' research results to real-life issues. • Accepting students' new ideas and thoughts in the classroom. • Encourage students' curiosity in the educational environment. • Create opportunities for self-study and learning in the classroom. • Emphasizing the teacher rather than memorizing the material. • Parental involvement in research. • Document the research experiences of teachers and students to share in the form of learning activities.

	<p>Extracurricular interactions</p>	<ul style="list-style-type: none"> • Continuous interactions between school staff and colleagues outside the school. • Sharing knowledge between teachers and colleagues outside of school. • Continuous attendance at workshops and seminars • Invite various specialists and experts for training • Solve problems through participation • Formation of research-oriented associations within the school and among different schools • Encouraging students to use the capacity of research institutes, scientific associations and other institutions such as the municipality, city council, intellectual development center, etc. • Teachers 'activities in the form of educational groups and teachers' councils to share knowledge and present research findings and produce applied knowledge
	<p>Equipment and facilities</p>	<ul style="list-style-type: none"> • Development of educational equipment and teaching aids in schools • Easy access to information technologies in the community • Financial support for research-oriented activities of teachers and students. • Internet access. • Buy useful and practical research books for the school library • Existence of laboratory in school



The result of examining the model is that norms and values, professional competencies, teaching and learning activities, out-of-school interactions, equipment and facilities, and the educational executive structure are all the basis of the research school. And they are interrelated and the formation of a research school requires that there be a research-oriented view and importance to research among the school executive staff, especially principals and deputies. These beliefs and values influence their professional preferences and choices

and their communication relationships and cause teachers to tend to research-based teaching and learning activities and to support their research-oriented activities during education. In this regard, provide appropriate equipment and facilities for core research. And due to the development of the quality of school professional activities and the growth of students, they develop extracurricular interactions with different professionals and benefit from their opinions by sharing knowledge.

Table 2: Researcher school markers based on text analysis

1	Adequate authority to teachers and staff
2	Successful appearance of the school in the community
3	Relationship between teaching staff and principal based on democracy
4	Encourage students' curiosity by the teacher
5	Paying attention to the voluntary research activities of students and teachers
6	Promoting a culture of participation and teamwork in the educational environment
7	Preference of collective interests over individual in decisions
8	Familiarity of teachers and principals with research methods
9	Familiarity of students with research methods
10	Participation of teachers and executive staff in research methodology training courses
11	High level of teacher education
12	The relevance of the research topic to the student's personality traits
13	Preparation of educational equipment and teaching aids in schools
14	Holding an exhibition of research works of students and teachers at the community level
15	The richness of public libraries in terms of amenities and equipment
16	Material and spiritual support for teachers' innovations in the field of research
17	Application of research-based teaching methods
18	Development of educational innovations
19	Creating deep, sustainable learning with understanding and insight
20	Acquire the necessary life skills such as developing the ability to reason and solve problems
21	Preparing students for work and real life
22	Create opportunities for thinking
23	Student participation, as an important principle in teaching and learning
24	In school, the principal is the director of education, not the controller.
25	Provide conditions to enjoy educational activities
26	Teaching aids (projectors, televisions, computers, etc.) are tailored to the needs of students and teachers.
27	An equipped library is available at the school.
28	A computer room is available for students and teachers to use computers and the Internet in their spare time.

Table 3: Major categories of researcher school

Row	Basic categories	Number of major categories extracted
1	Norms and values that govern the school	7
2	Professional qualifications of the executive staff	7
3	Educational and executive structure	8
4	Learning teaching activities	9
5	Out-of-school interactions	9
6	Equipment and facilities	6
total	6	46

In this part of the study, selective coding, the presentation of a convergent pattern with a high level of abstraction was considered. In the researcher school discussion, the opinions of the interviewees about the 6 main categories as the constituent components of the researcher school are listed in Table 1, along with the frequency

Table 4: Frequency distribution and percentage of related categories

Category	Abundance
1. Norms and values that govern the school	25 people
2. Professional qualifications of the executive staff	20 people
3. Educational and executive structure	28 people
4. Teaching-learning activities	17 people
5. Out-of-school interactions	22 people
6. Equipment and facilities	19 people

Table 5: Major categories and their operational burden

Major categories	methods	Factor load	The variance obtained
Norms and values that govern the school	Belief in the importance of research in school	0.999	0.9988
	Having a positive view of research and its role in the professional development of teachers.	0.724	0.5241
	Relationship between teaching staff based on democracy.	0.728	0.5299
	Freedom of action of educational officials in line with educational and research activities.	0.582	0.3387

	Belief in the role of research activities in improving students' learning.	0.609	0.3708
	Supporting the research activities of students and teachers.	0.623	0.3881
	Institutionalizing research behavior in teachers	0.767	0.5882
Professional qualifications of the executive staff	Strong motivation for professional development.	0.794	0.1681
	Mastery of research methodological skills.	0.740	0.7921
	Competence in the field of lesson plans, narrative research and action research.	0.813	0.6609
	Up-to-date knowledge of new research methods.	0.648	0.4199
	Mastery of internal-external databases.	0.888	0.7885
	Application of research findings of colleagues in the field of learning teaching.	0.476	0.2265
	Application of active teaching methods such as problem solving method and exploratory method	0.898	0.8064
Educational and executive structure	Material and spiritual support of teacher research activities,	0.898	0.8064
	Sharing knowledge among colleagues.	0.897	0.8064
	Relative freedom of action of teachers in providing new teaching methods.	0.707	0.4998
	Criticism of each other in chat and tolerance of criticism,	0.472	0.2227
	Professional cooperation of teachers with the principal and other colleagues.	0.550	0.3025
	Promoting a culture of participation and teamwork in the educational environment.	0.832	0.6922
	Efforts to implement a research-oriented approach in school in collaboration with each other.	0.909	0.8262
	Promote and facilitate the implementation of research-based projects such as Jaber and other research competitions under the guidance of a tutor.	0.894	0.7992
Teaching-learning activities	Conduct research in active ways	0.807	0.6512
	Encourage curiosity and inquiry in the subjects	0.669	0.4475
	Applying students' research results to real-life issues	0.879	0.7726
	Accepting students' new ideas and thoughts in the classroom	0.824	0.6789
	Encourage students' curiosity in the educational environment	0.880	0.7744
	Create opportunities for self-study and learning in the classroom	0.873	0.7621
	Emphasizing the teacher rather than memorizing the material	0.827	0.6839
	Parental cooperation in conducting research	0.525	0.2756
	Document your research experiences and those of students to share in the form of learning activities	0.633	0.4006
Interactions with out of school	Continuous interactions between school staff and colleagues outside the school.		
	Sharing knowledge between teachers and external colleagues.	0.879	0.7726
	Continuous attendance at workshops and seminars.	0.803	0.6448
	Invite different specialists and experts for training.	0.915	0.8327
	Solve problems through participation	0.854	0.7293

	Forming research-oriented associations within the school and between different schools	0.885	0.7832
	Encourage students to use the capacity of research centers, and ...	0.576	0.3317
	Teachers' activities in the form of educational groups and teachers' councils to share knowledge and present research findings and produce applied knowledge	0.844	0.7123
Equipment and facilities	Enrichment of educational equipment and teaching aids in schools.	0.942	0.8873
	Easy access to information technologies in the community	0.733	0.5372
	Financial support for research-oriented activities of teachers and students.	0.534	0.2851
	Internet access.	0.954	0.9101
	Provide useful and practical research books in the school library.	0.939	0.8789
	Existence of laboratory in school.	0.951	0.9044

According to the output of the table, CMIN / DF and RMSEA values are significant, as well as the Goodness of fit index, the adjusted Goodness of fit index of the adaptive fit index, The normalized fit of the Butler-Bount index, the Tucker-Lewis fit index, the incremental fit index, and the relative fit index are above 0.90. Therefore, the data of this research have a good fit with the scientific structure of the components.

Table 6: Indices of fit of first-order factor analysis

Components	Fit indicators								
	CMIN / DF	RMSEA	GFI	AGFI	GFI	NFI	TLI	IFI	RFI
1. Norms and values that govern the school	2.266	0.048	0.961	0.956	0.968	0.955	0.936	0.947	0.961
2. Professional qualifications of the executive staff	1.961	0.053	0.992	0.905	0.973	0.926	0.982	0.980	0.916
3. Educational and executive structure	1.829	0.039	0.935	0.916	0.954	0.937	0.965	0.976	0.958
4. Teaching-learning activities	2.326	0.046	0.952	0.923	0.967	0.969	0.959	0.937	0.965
5. Out-of-school interactions	2.342	0.059	0.933	0.980	0.945	0.919	0.972	0.948	0.919
6. Equipment and facilities	1.987	0.051	0.922	0.957	0.932	0.914	0.936	0.904	0.918

Discussion and conclusion

Research is one of the most important methods of gaining knowledge, awareness and development of thinking and has a very important role in the development of countries, societies, organizations, institutions and systems. Education, as one of the most important social institutions in any society, has a strong relationship with research. In principle, education are two inseparable components. The complexities and capacities of education and increasing scientific innovations make education more in need of research than any other institution.

For this reason, it is necessary to design practical models so that schools can maintain their research-oriented function. Developing a researcher school model, regardless of the views of the stakeholders of these programs and without considering the appropriate conditions, has a negative effect on the performance of schools.

Therefore, it is necessary for researchers to take steps to design appropriate models according to the needs of the country. The purpose of this study was to design and validate the researcher school model. The results of this study showed that the researcher school model has 6 main components. In this study, for experts and professors, the components of values, teaching and learning activities, professional competencies, educational-executive structure, interactions with out-of-school and equipment are of equal importance. The model designed and validated in the present study, having 6 components, while being comprehensive and having a favorable fit, directly and indirectly overlaps with the results of other researches inside and outside the country.

In this regard, the first factor shaping the research school is the norms and values that govern the school. Teachers' understanding of the values and norms of the school towards research leads to innovation in teachers and also affects the research performance in achieving work and career success. In this regard, Snoek, M., & Moens (2011) and Levin (2010) emphasized that research-based learning and other research-based educational

innovations arise from a culture-based culture and structure.

One of the influential components was professional competencies. Which has been considered in studies and is consistent with the findings of the present study. Shamsmorkani (2001) has mentioned the participation of teachers in retraining and in-service courses as a factor in the tendency to research activities. Amouzade (2005) who considers educational factors to be effective in developing the teacher-researcher project.

(2011) Gerber, Marek, Martin also pointed out that the competence and professional development of teachers is an important mechanism for the growth of school research efficiency. Therefore, based on the present research and research, training and training courses that familiarize teachers with the process of research competencies can be effective in institutionalizing research competencies.

In fact, from the findings of this component, it can be concluded that encouraging teachers' innovations in relation to educational issues and holding training courses institutionalizes research competencies in teachers. The results showed that teachers are interested in the experiences, initiatives and innovations of others and providing the necessary conditions to encourage researchers and create teacher participation in classroom innovations can be effective factors in teachers becoming researchers and On the other hand, managers' lack of cooperation with innovations resulting from research activities is considered as a threat.

Based on this research finding, it should be said that if the technical efficiency of teachers and school principals is low, the teacher's willingness to research in teaching will decrease (Prevost, 2010), which is due to the use of new and appropriate technologies in today's schools. It will help teachers in their desire to use information technology to replace modern teaching with better traditional methods, so that they can be effective in research-based teaching. This means that teachers with high

self-efficacy will feel more confident and confident in using educational innovations.

Another component of the research school is the development of interactions between the school and external specialists. In fact, the interaction and exchange of teachers' experience in research activities, sharing the knowledge of principals and relevant officials in teaching and learning, organizing conferences and workshops, etc. can be Instrument for research and thinking in the school context. Providing a platform for exchange of views and interaction of teachers in the field of research competencies and teaching can be effective in institutionalizing research-oriented thinking in teachers. In other words, exchanging views of teachers with each other on the one hand and with supervisors and researchers on the other hand and holding in-service classes and conferences can play an important role in facilitating the research school.

The results of the study are consistent with the findings of (2014) Tripathi, & Agrawal. The researchers stressed that co-education at universities and research centers, courses of study for teachers, including lesson introduction to research methods in the school program, and allow easy access of education to research and publications to promote research Creates.

Findings of Pacheco, G., & Lange (2010) are consistent with the results of the study. They showed that the art of participatory management in educational organizations provides a suitable environment for teachers so that teachers and principals can show their abilities and capabilities and increase the efficiency and quality of education. On the other hand, with the proper implementation of participatory management in schools, teachers can be motivated to feel that they are more accepted by the principal. And thus engage in more positive research.

According to the results of this study, forming groups based on specialized field among teachers, providing the ground for group activities related to research action, teaching teachers collaborative research methods and creating opportunities for

group work and encouraging teachers to work in groups and teams, institutionalization strategies The school is a researcher. Teachers 'participation in solving educational problems, holding research classes for teachers and teachers' participation in workshop activities are very important as solutions for institutionalizing research competencies in teachers. The above content shows the importance of researchers' experiences, holding research festivals and allocating financial credits and giving priority to research teachers in career advancement in educational planning.

Another effective component in the formation of a researcher school is teaching and learning. The results show that research-based teaching planning, research-based curricula, new teaching methods with emphasis on research-oriented, teaching research-oriented teaching planning to teachers, can in the development of research skills of teachers and learners in particular and The researcher school is generally effective. It can be said that traditional teaching methods in the field of classroom activities hinder teachers' research activities. And research-oriented activities such as research action, new teaching methods and creative methods of classroom management will be very decisive on the research platform. Findings of the study are consistent with the research (2019) Ali, & Abbas. The researchers emphasized that teacher mastery and knowledge of research-based teaching and learning methods improve the research skills of learners and teachers.

The educational and executive structure is also one of the effective factors in the formation of the researcher school. The present findings are indirectly consistent with the findings of (2013) Tarter., &, Hoy, W. They showed that the empowerment structure and collective responsibility both have indirect effects on the progress of learners and teachers. The school empowerment structure indirectly affects professional competencies and innovations. Another component of the researcher school is equipment. In other words, allocating appropriate

financial credits and providing the necessary facilities and resources, encouraging research teachers and considering teachers' research scores in evaluation, job promotion, etc. cause teachers to tend to perform research-oriented activities. And the lack of facilities and appropriate financial and human resources is the cause of unwillingness to research. The results are consistent with the findings of (2016) Wagner, Harrison, & Cohen-Vogel. The researchers stressed that it is very important to provide a suitable software, hardware and equipment platform based on up-to-date educational indicators for the research-oriented school.

In this regard, to improve the research situation in the school, it is suggested:

- Material and spiritual support for teachers and researchers.
- Providing an executive and technical platform for research activities in the school.
- Continuous presence of teachers and principals in knowledge and research workshops.
- Development of research culture and application of research-based teaching methods in school.
- Drawing a clear picture of the research situation in the school with the help of colleagues.
- Provide the necessary conditions for sharing research results.
- Invite specialists to strengthen and guide research in the school,
- Encourage teachers to use the capacity of various institutions to strengthen students' research.
- Creating conditions for cooperation and interaction, trust and respect and mutual accountability, transformational leader and criticizable.

Ethical considerations

During the implementation of this research and the preparation of the article, all national laws and principles of professional ethics related to the subject of research, including the rights of statistical community, organizations and institutions, as well as authors and writers have been observed. Adherence to the principles of research ethics in the present study was observed and consent forms were consciously completed by all statistical community.

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Conflict of interest

According to the authors of the present article, there was no conflict of interest.

This article has not been previously published in any journal, whether domestic or foreign, and has been sent to the School Administration Quarterly for review and publication only.

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Resources

- Abiyat, M (2007). Evaluation of the effectiveness of action research training courses from the perspective of high school teachers in Ahvaz. Master Thesis. Shahid Beheshti University of Tehran. Faculty of Educational Sciences and Psychology.
- Ali, M. S., & Abbas, Q. (2019). Oriented Teaching and Students' Academic Performance: Perception of University Teachers. *European Online Journal of Natural and Social Sciences*, 8(1), pp-1.
- Babakhanian, M.R. (2003). Investigating the ways to motivate research in teachers of Chaharmahal and Bakhtiari province.
- Beisenbayeva, A. M., Abildina, S. K., Feizuldayeva, S. A., Kopbalina, K. B., & Kurmangaliñfeva, Z. K. (2020). Research Skills in Primary School Students Formation: Developmental and Competence Impact. *Journal of Intellectual Disability-Diagnosis and Treatment*, 8(3), 413-420.
- Bergmark U. Teachers' professional learning when building a research-based education: context-specific, collaborative and teacher-driven professional development. *Professional Development in Education*, 1-15. 2020.
- Boldwin, G. (2005). The teaching- research nexus. Center for the study of higher education.
- Boyer, E.L, 1997. *Scholarship Reconsidered: Priorities of the Professoriate*, New York.
- Bright, F. (1999). Survey of opinions and the level of familiarity and interest of bachelors and higher in education towards research in Khorasan province. Research Project. Education Organization of Khorasan Province.
- Butt, I.H., & Shams, J. H. (2013). Master in Education student attitudes towards research: A comparison between two public sector universities in Punjab. *South Asian Studies*, 28 (1), 97-105.
- Cardno, C. (2006). Learning Change From Within: Action Research to Strengthen Curriculum Leadership in a Primary School. *School Leadership and Management*. Vol, 26. No, 5.
- Finmore, B. (2003). Student-centered classroom management. Translator (Kianoosh Hashemian). Tehran: Al-Zahra University.
- Gerber, B. L., Marek, E. A., & Martin, E. P. (2011). Designing research-based professional development for elementary school science and mathematics. *Education research international*, 2011.
- Ghasemi Pouya, I. (2000). A practical guide to practical research. Tehran: Education Research Institute.
- Ghasemi Pouya, I. (2002). *Research Teacher Guide: Who is the Research Teacher? What is research in practice?* Tehran: Nashr Publishing.
- Golshan Foumani., & Mohammad Rasool (2000). *Sociology of Education*. Tehran: Doran Publishing.
- Gorman, E. H., & Sandefur, R. L. (2011). "Golden age," quiescence, and revival: Howthe sociology of professions became the study of knowledge-based work. *Workand Occupations*, 38(3), 275e302.
<http://dx.doi.org/10.1177/0730888411417565>
- Greft, M. (1990). *Action Research*. NewYork: Routledge.
- Hosseini, M. (1994). Strategies and methods for upgrading and developing the capabilities and skills of faculty members in Iranian universities. *Proceedings of the Higher Education Seminar*.
- Hosseinpour, Shohreh and Zeinabadi, Hassan Reza. Research-oriented school: Development and testing of a causal model by combined exploratory method. *Family and Research*, 2019, 42, 48-27.
- Huntly, H. (2008). Teachers Work: Beginning Teachers Conceptions of Competence. *The Australian Educational Researcher*, 35 (1), 125145.
- Irani, Y., & Bakhtiari, A. (2003). Practical research method (action research). Tehran: Golden Tablet.
- Kridel, C. (Ed). (2010). *Encyclopedia of curriculum studies (Vol. 1)*. Sage. The Education system of England (2013) .British Council. www.britishcouncil.org
- Levin, B. (2010). Leadership for evidence-informed education. *School Leadership and Management*, 30(4), 303-315.
- Linden, van der, P. W. J., Bakx, A. W. E. A., Ros, A., Beijjaard, D., & Bergh, van den, L. (2015). The development of student teachers' research knowledge, beliefs and attitude. *Journal of Education for Teaching*, 41(1), 4-18. DOI: 10.1080/02607476.2014.992631
- Lissitz, R., & H. Doran. (2009). Modeling growth for accountability and program evaluation.

- Madison, WI: Wisconsin Department of Public Instruction.
- Mahdirji cousin, H. (2006). Identifying the effective factors in the development of the researcher teacher plan among primary school teachers in Tehran. Master Thesis. Shahid Beheshti University of Tehran. Faculty of Educational Sciences and Psychology.
- Maleki R, Davari N., & Zarei E. Investigating the Role and Position of Researcher (Research-Oriented) Schools in the Country in Cultivating a Thoughtful And Creative Generation in Order to Achieve The Six Areas of the Document of Fundamental Change (Identification and Evaluation of Educational Strategies). *Islamic Life Style*. 2018; 3(1): 86-91 URL
- Mark, R., & Leary, G. (1995). *Behavioral Research Methods*. Broke Skole, Company, USA.
- Mehr Mohammadi, Mahmoud (1999). *Research papers in the field of education*. Tehran: Education Research Institute
- Michelle, V. Porche, Daniel, H. Pallante., & Catherine Snow. (2012). Professional Development for Reading Achievement: Results from the Collaborative Language and Literacy Instruction Project," *The Elementary School Journal* 112 (4), 495-515.
- Noffke, S. (1990). *Action Research: A Multidimensional Analysis*. Dissertation: University of Wisconsin Madison.
- Pacheco, G., & Lange, T. (2010). participation and life satisfaction: a crossEuropean analysis. *International Journal of Social Economics*, 37(9): 686 – 702.
- Pikula, k. I. (2015). Novice teachers' perceptions of their ability to transfer teacher education program knowledge to performance, in the classroom, doctor of philosophy capella university.
- Prevost, E. (2010). *Developing a culture of inquiry in elementary schools: The role of the teacher-librarian*. Edmonton, Alberta: Department of Elementary Education, University of Alberta.
- Reece, T. (2000). Activity Research and Interest of Teacher. *Journal Education Research*. Vol, 33. No,1.
- Richter, D., Kunter, M., Klusmann, U., Ludtke, O., & Baumert, J. (2011). Professional development across the teaching career: Teachers' uptake of formal and informal learning opportunities. *Teaching and Teacher Education*, 27(1), 116-126
- Robert, B.B. (2000). *Introduction to Research Methods*. Sage Publication.
- Rohwer, D., & Svec, Ch. (2014). Perceived Value of Research Preparation Opportunities for Future Music Education Professors. *Applications of Research in Music Education*, 20, 1-8.
- ROSS, J., & Bruce, K. (2007). *Professional Development Efection Teacher Efficacy: Results of Rand Omized Fieldtrial*. University of Toronto, Trent.
- Rush, C., & Wheeler, J. (2011). Enhancing Junior Faculty Research Productivity Through Multiinstitution Collaboration: Participants' Impressions of the School Psychology Research Collaboration Conference. *Canadian Journal of School Psychology*, 26 (3) 220– 240.
- Schoen, S. (2007). *Action Research: A Developmental Model of Professional Socialization*. Lasalle University. In the Department of Education Philadelphia, Pennsylvania. Heldref Publications. Vol, 80. No, 5.
- Schreiner, L. A., Louis, M. C., & Nelson, D. D. (Eds.). *Thriving in transitions: A research-based approach to college student success*. Stylus Publishing, LLC. 2020
- Sedova, K. Sedlacek, M., & Svaricek, R. (2016). Teacher professional development as means of transforming student classroom talk. *Teaching and Teacher Education*, 57, 14–25
- Selwood, L., & Twining, P. (2005). *Action Research*. [http://www. Becta.Org.Uk](http://www.Becta.Org.Uk). Practioner Research.
- Shams Morkani, Gh, R. (2002). Investigating the reasons for the lack of interest of teachers in Zarrinshahr region in research activities. Research Project. Isfahan Education Research Institute.
- Shariatzadeh, M. (2004). Teacher researcher approach to the development and improvement of human resources. *Educational Research Journal* .13.
- Siddiq Mir Azimi, S. (2008). Investigating the effect of action research courses (teacher researcher) on teachers' approach to research. *Teacher Growth Monthly*, (2008).
- Smith, J. (2012). *Core components of a doctoral program in agricultural communications: A national Delphi study*. (Master of Science), Oklahoma State University, Stillwater, OK.
- Smith, M. k. (2004). *Kurtlewin Groups. Experiential Learning and Action Research*. The Ency

- Clopedia of Informal Education. <http://www:Infed.Org/Thinkers/et-Lewin.htm>.
- Snoek, M., & Moens, E. (2011). The impact of teacher research on teacher learning in academic training schools in the Netherlands. *Professional Development in Education*, 37(5), 817-835
- Suyo-Vega, J. A., Meneses-La-Riva, M. E., & Fernández-Bedoya, V. H. (2020). Research Competencies and its Relationship with the Scientific Production of University Teachers in Peru. *International Journal for Educational and Vocational Studies*, 2(5).
- Tripathi, K., & Agrawal, M. (2014). Competency Based Management In Organizational Context: A Literature Review. *Global Joournal of Finance and management*, 6(4): 349-356. ISSN 0975-6477.
- Tshakkiros, A., & Pashardis, P. (2002). Strategic Planning and Education: the Case of Cyprus. *Journal of Educational Management*. Vol, 16, No,1.
- Wagner, A.T., Harrison, C., & Cohen-Vogel, L. (2016). Cultures of learning in effective high schools. *Educational Administration Quarterly*, 52(4), 602-642.
- Wang, S.K. Hsu, H. Y. Reeves, T. C. & Coster, D. C. (2014). Professional development to enhance teachers' practices in using information and communication technologies (ICTs) as cognitive tools: Lessons learned from a design-based research study. *Computers & Education*. 79, 101–115
- Watkins, A. (2006). Teacher as Researcher, Sowhat Exactly do Teacher – Researchers Think About Doing Research. *Support for Learning*. Vol, 21, No, 1.
- Wu, J. H., Hoy, W. K., & Tarter, C. J. (2013). Enabling school structure, collective responsibility, and a culture of academic optimism. *Journal of Educational Administration*.
- Zahedi, M. (1994). Investigating the effective factors in the lack of tendency of high school teachers in Khuzestan province to conduct research. *Research Project. Khuzestan Education Organization*.

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