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## Validating of Applied Model for the Implementation of the School Management Excellence Program

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### Article history:

Received date: 2021/09/02

Review date: 2022/10/20

Accepted date: 2022/11/13

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### Keywords:

Applied Model, Excellence Program, School Excellence, Factors Affecting the School Excellence

**Purpose:** The aim of the present study is to validate the applied model for the school management excellence program implementation.

**Methodology:** This study was a correlation and survey methods. All 20 middle and high schools located in districts 1 and 2 of Ardabil city, which have been the implementers of the excellence program during the last two years, were selected and their human resources formed the statistical population. The researcher-made questionnaire with Cronbach's alpha coefficient of 0.97 was distributed in 10 schools with the participation of 152 teachers using stratified random sampling method. Smart-PLS and SPSS soft wares were employed to analyze the data using structural equations and Hotelling's T test.

**Findings:** The findings showed that the current research model meets desirable validity. Therefore, the effective factors identified in the implementation of the excellence program were found to be valid. The results via Hotelling's T test also showed that there is a significant difference between the factors identified in successful and unsuccessful schools according to the performances of the years 2018 and 2019. The factors of management and leadership style and human resources training were found to meet the highest and lowest discrepancies between successful and unsuccessful schools, respectively.

**Conclusion:** The present results indicated that the factors of the space and resources, efforts of custodians, organizational culture, role of parents, environmental factors, management and leadership style, principal's features, human resources training, organizational health and usefulness of teachers play a key role in achieving program-centered, self-assessment, school-centered and total quality consequences.

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**Please cite this article as:** Rostami Alileh T, Rastgoo A, Namvar Y, Sattari S. (2023). Validating of Applied Model for the Implementation of the School Management Excellence Program, *Iranian Journal of Educational Sociology*. 5(4): 170-184.

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## 1. Introduction

Education is the basis of cultural, social, economic and political development of any society, which is currently considered as growth industry in most countries with largest allocated governmental budget after the defense. Since a significant part of education activities take place in schools, they have a special place as a sensitive and important social system. Schools can do their serious task well if they are healthy and dynamic organizations (Shariatmadari, 2015: 120). Finding useful and influential factors in education has been the subject of many studies and researches. During the past fifty years, “excellence” has been proposed as an educational paradigm playing a major role in the educational policy-making and reformative activities (Bruno-Jofré & Hills, 2011:335). The quality management is considered as the origin of organizational excellence models and these models are the evolved total quality management topics (Calvo-Mora et al, 2006). The organizational excellence models are counted as comprehensive and appropriate tools for the performance measurement of the organization which facilitate the performance control and improvement (Dolatkhah, 2015:4). Excellence includes various facilitators such as mental, physical, creativity and thought-centered for the leadership or management in order to improve the education system (Lador, 2010:126). The organizational excellence models were developed with the aim of measuring the overall performance of the organization along with a holistic view of all aspects of the organization and involving all beneficiaries. Examples of these models are the Deming Prize in Asia, Malcolm Baldrige model in the United States and European Foundation for Quality Management (EFQM) model (Loomba & Johannsson, 1997). The application of organizational excellence models without conceptualization and their adaptation in education is problematic. It should be noted that the education system’s nature differ from other organizations and the concepts and experiences of the industry cannot be directly used in education. The most important dimension which distinguishes education from other companies is that its goal is humanization instead of producing goods and increasing financial profits. Thus, judgments about the effectiveness and organizational excellence criteria of the schools are different, especially in terms of the results and sub-criteria. Therefore, according to this explanation, one of the most important organizational excellence criteria expected by the schools will be student outcomes so that other criteria will be judged in relation to this factor (Nodehi et al, 2009). Originally, “quality models” are successfully and effectively used in many commercial organizations. The “school excellence model” is a comprehensive program that can be employed in the schools’ self-assessment process (Ng & Chan, 2008). It can be said that the main purpose of the school excellence model is to determine a comprehensive framework for measuring strengths and repairing points which need improvement. This framework also improves all activities in the school environment and increases the quality of all educational outputs (Aldaihani, 2014:126). The term educational quality is a by-product of individuals’ mental values. The International Organization for Standardization defines the term quality as the set of characteristics and features of a product or service which demonstrates its ability to meet the expressed or mentioned requirements. On the other hand, the school quality is a multidimensional concept that should include all school functions and activities such as the teaching-learning process, students, teachers, facilities and equipment, etc., and attention should be paid to all its components, including the input, process and output, in order to improve the quality of the education system based on the organizational elements model (Bazargan, 2017).

In the field of education, the national quality program of the United States has compiled and published the Baldrige model. This model has seven criteria (leadership, strategic planning, focus on the learners and beneficiaries, information and analysis, focus on the teaching staff and human resources, process management and performance gains) (Chavoshi, 2004). The school excellence model of Singapore, whose criteria are based on the criteria of the Baldrige model, EFQM and Singapore’s national model, includes the leadership, strategic planning, strategic management, resources, student-centered processes, managerial and operational results, staff outcomes, society and partners results and performance key outcomes (Ng and Chan, 2008). Mohd et al (2015) introduced the leadership, culture, goals and strategy, resource management, evolution management, innovation, employee-centric and customer-centric as effective factors in the excellence program. Aldaihani (2014) considered that the excellence model creates desirable management systems at

the local and central levels and transformational leadership style and promotes transparency among all beneficiaries to improve the school status and competence of teachers as well. The schools in Kuwait must conduct continuous assessments to balance the expectations and demands of the local and global environments, students and all beneficiaries, on the one hand, and the actual resources available in the school environment, on the other. Achieving school excellence in Kuwait requires a culture which encourages the creativity, innovation and development thinking. Malik et al (2012) stated that the total quality management capabilities such as the commitment to invest in information and quality sharing, focus on continuous improvement and teamwork are important in developing the organizational learning capabilities such as the commitment to learn, developing a common perspective and demonstrating open thinking and movement towards the organizational excellence will occur through the creation of learning in the organization. Choo et al (2007) considered that the support through leadership, ensuring the availability of resources, challenging tasks and confidence building are effective context components towards creating knowledge and learning in the organization and moving towards the organizational excellence. Cartmell et al (2011) reported that there is a positive relationship between the use of this model in the education sector and the improved financial situation so that employing this model has kept the balance between expectations of the beneficiaries and improved processes. Sergiovanni (2007) expressed that one of the most important features of excellent schools is the existence of a strong culture and a clear understanding of the school goals in which teachers and other members strive for the realization of basic values with freedom of action and intellectual independence and this accounts for the main reason for their success. Fernando Díez et al (2018) recommended the school excellence model in order to improve the quality of management in organization. Susan (2011) has introduced the organizational structure, space, attention to the needs of beneficiaries from the contexts, financial and physical resources, budget, facilities and equipment, organizational culture, information technology, educational programs from the input, teaching and learning and program enrichment from the processes, health, skills development, participation and innovation from the school excellence consequences. Tolley & Flecknoe (2016) introduced the continuous monitoring, encouragement, beneficiaries' participation in the program development, funding and emphasis on the program process instead of the results as the effective factors and lack of supporting equipment as the obstacles of this program. Twigg et al (2007) arrived at the point that the transformational leadership in the field of leader-subordinate relationships has overcome the weakness of most previous approaches and turned these relationships into dynamic ones. Today, the principals have a limited ability to lead schools towards continuous effectiveness without benefiting from the transformational leadership. the management and leadership and staff are counted as the most important factors affecting the success and excellence of the organization, respectively (Brown ,2013).

According to the reformative steps that have been taken in the Iranian education system in recent decades, the school-centered plan and excellence program are considered as two main ideas aimed at improving the school management. The school management excellence program focuses on three characteristics of qualityism, school-centric and participation of all school beneficiaries. The underlying philosophy of this program is the total quality management with the aim that the self-assessment system based on which will lead to the advancement and improvement of the school. The "school management excellence program", abbreviated as "school excellence", is a program that aims to provide the conditions for all effective agents in the school management, while identifying the capacities and internal and peripheral capabilities, take a program-centered approach to set the goals and design the school operational plan through relying on the fundamental evolution document and sublime school-centric, participatory and quality-centered look, while concentrating on the management processes (Education Policy Council, 2014).

Given many evidences about the failure of recent experiences and the possibility of its repetition in programs such as school management excellence, contemplating on the foundations and intellectual origins of this great event and thinking about its prerequisites seem to be necessary. The principals should draw the common vision and perspective of the school by means of the strategic thinking power and benefiting from the active participation of all school beneficiaries. This is while the current performance of principals as the main

executors of the program is focused on writing the operational plan in a specific and predetermined format and framework, and lack the characteristic of professional and strong leadership in leading the school excellence. Besides, the lack of financial independence of the school and insufficient annual budget have always been considered as one of the main problems of the principals in implementing the excellence program (Bani Asad et al, 2017). Abdolmaleki et al (2018) considered that the evaluation components of the school excellence program in the context factors of effective indicators were introduced as needs assessment, goals, cultural factors, rules and regulations, effective indicators in evaluating the input data of the excellence program were content components, human, physical, financial and information resources, effective indicators in evaluating the processes were teaching-learning, supervision, complementary activities, motivation and creativity and also the effective indicators in evaluating the outcomes of the school excellence program were identified as organizational innovation, academic performance, career advancement, participation and mental health components. Aziznejad and Malakouti (2019) considered that the organizational culture plays a role in predicting the acceptance of the management excellence program. Their results indicated that among the four organizational culture components, the ideological culture has the highest ability to predict the variable criteria (acceptance of the excellence program) and the rational culture is in the second place. Also, it was found that the other two organizational culture components, namely the agreement and hierarchical cultures are unable to predict the variance (acceptance of the excellence program). In the meantime, Bani Asad et al (2017:141) emphasized that these actions are often aimed at redefining and shifting the criteria and indicators rather than contemplating and rethinking on its intellectual and theoretical foundations. However, the effective schools' literature reflects the regular and accurate efforts, especially problem- and context-centered ones, as well as the joint cooperation of policy makers and educational researchers in providing various models of effectiveness and their influential role in forming new intellectual waves in this area. The effective and excellent school is a background-dependent and context-centered phenomenon. The characteristics of the place where the school is situated from the cultural, social, political, economic and demographical points of view, fundamentally overshadow its inputs, processes and outputs, and this contradicts the effectiveness of the excellence program. It seems that the necessary groundwork has not been carried out in terms of the human resources training, space, facilities and equipment, comprehensive efforts of custodians in the planning and proper process-centered implementation of the program.

According to the above-mentioned points, "school excellence" is derived from organizational excellence and a new topic. A great deal of research has been conducted in this field outside Iran. However, given its infancy in Iran, less research has been carried out in this area, it does not meet sufficient field studies and no model has been presented for the implementation quality. Moreover, the results of the conducted studies emphasize the need for field-centered researches. Therefore, the present study seeks to validate the identified factors and prerequisites for the implementation of the school excellence program and suggest the practical solutions to improve the quality of its implementation.

Knowing this introduction, the main issue of the present study is: Are the effective and facilitating factors identified in the implementation of the school management excellence program valid? Therefore, the main purpose of the current research is to validate the applied model for the implementation of the school management excellence program. To achieve this goal, the following research questions are raised:

- 1- Is the practical model valid enough for the implementation of the school management excellence program?
- 2- Is there a significant difference between the identified factors according to the performances of the successful and unsuccessful schools?

## 2. Methodology

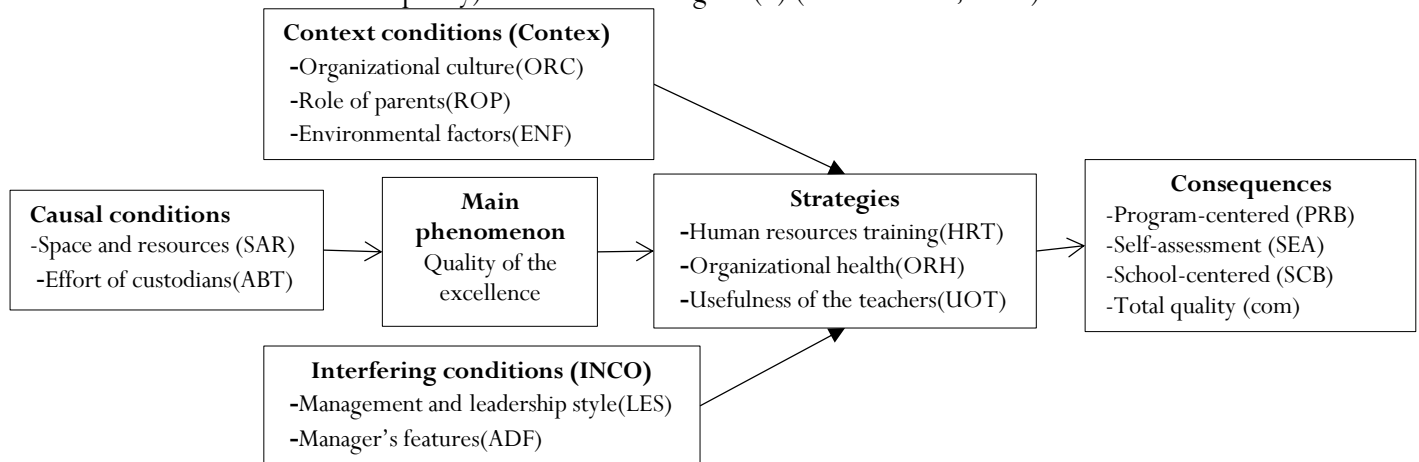
The present research is a practical one in terms of the aim and has been conducted in a quantitative manner with correlation and survey approaches. A number of 20 middle and high schools located in districts 1 and 2 of Ardabil city, which have been the implementers of the excellence program during the last two years, were examined, among which 10 schools were selected based upon their 2-year final evaluation scores. From this

community, 5 schools were selected as successful ones with the highest performance scores and the remaining 5 were selected as unsuccessful schools with the lowest scores. All human resources working in 10 schools of 250 people formed the statistical population. In order to collect the data, the 5-point Likert scale researcher-made questionnaire with Cronbach's alpha coefficient of 0.97 was used. The data analysis data was performed using structural equations together with Hotelling's T test and partial least squares (PLS) approaches. Furthermore, the Smart-PLS and SPSS soft wares were employed to conduct the analyses.

### 3. Findings

In response to the first research question, according to diagrams (1) and (2), the general research model test and corresponding t scores, validity of the measurement and structural models have been assessed using fitting indicators such as path coefficients, Cronbach's alpha, composite reliability, convergent validity, Stone-Geiseer's ( $Q^2$ ) and coefficient of determination ( $R^2$ ). According to the conducted tests, the models meet desirable validity. The diagrams and tables associated with the validation of the general research model are shown in the following.

During the design process of the model, the effective factors identified in the implementation of the excellence program were including the space and resources, effort of custodians, organizational culture, role of parents, environmental factors, management and leadership style, principal's features, human resources training, organizational health, teachers usefulness and consequences (program-centered, self-assessment, school-centered and total quality) as illustrated in Figure (1) (Rostami et al, 2020).



**Figure 1.** The practical model of excellence program implementation

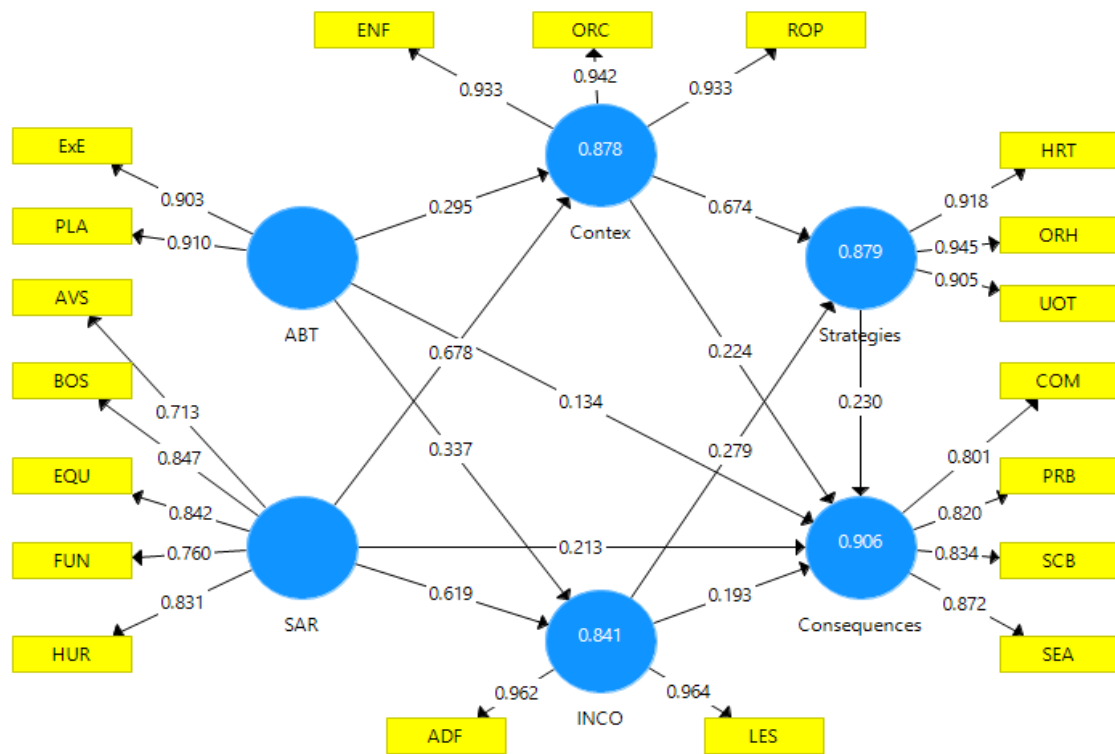


Figure 2. The general research model test

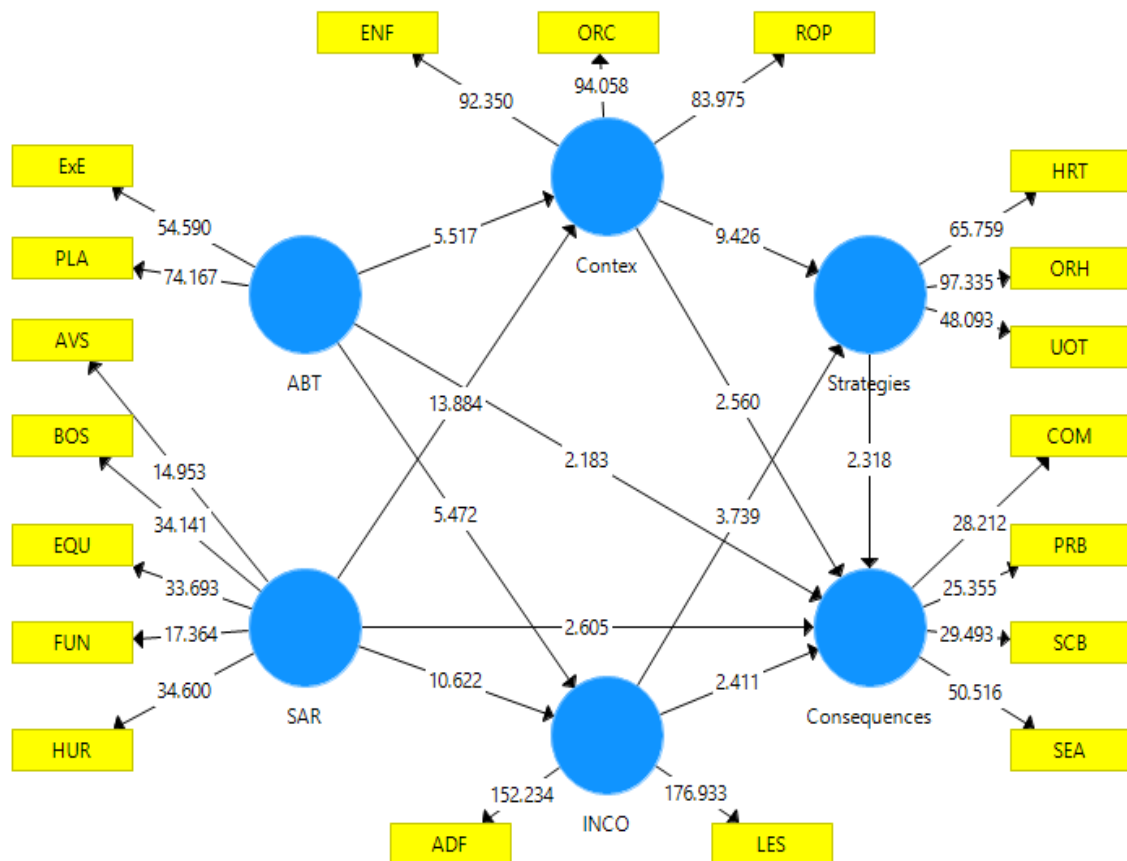


Figure 3. The t scores associated with the general research model test

### Path coefficients

According to Figure (1), Figure (2) and Table 1, all direct path coefficients are significant at a significance level of 95%. Also, all indirect impact coefficients are significant at a 95% level.

**Table 1.** Path coefficients and t scores corresponding to the general model

Path	Direct impact	Indirect impact	Total impact	T score	Result
ABT --> Context Effort of custodians ---> Context conditions	0.295	---	0.295	5.517	Relationship confirmed
ABT --> INCO Effort of custodians ---> Interfering conditions	0.337	---	0.337	5.472	Relationship confirmed
ABT --> Consequences Effort of custodians ---> Consequences	0.134	0.199	0.333	4.843	Relationship confirmed
SAR --> Context Space and Resource components ---> Context conditions	0.678	---	0.678	13.884	Relationship confirmed
SAR --> INCO Space and Resource components ---> Interfering conditions	0.619	---	0.619	10.662	Relationship confirmed
SAR --> Consequences Space and Resource components ---> Consequences	0.213	0.416	0.629	9.366	Relationship confirmed
Context --> Strategies Context conditions ---> Strategies	0.674	---	0.674	9.426	Relationship confirmed
Context --> Consequences Context conditions ---> Consequences	0.224	0.155	0.379	4.593	Relationship confirmed
INCO --> Strategies Interfering conditions ---> Strategies	0.279	---	0.279	3.739	Relationship confirmed
INCO --> Consequences Interfering conditions ---> Consequences	0.193	0.064	0.257	3.575	Relationship confirmed
Strategies --> Consequences	0.230	---	0.230	2.318	Relationship confirmed

**Table 2.** Exogenous and endogenous variables together with corresponding  $R^2$  values (Coefficient of determination ( $R^2$ ))

Exogenous variables	Endogenous variables	$R^2$	Evaluation
Effort of custodians and space and resources	Context factors	0.878	Significant
Effort of custodians and space and resources	Interfering factors	0.841	Significant
Context and interfering factors	Strategies	0.879	Significant
Effort of custodians, space and resources, context and interfering factors, strategies	Consequences	0.906	Significant

As would be observed from Table (2), the components of effort of custodians, space and resources can explain 0.878 and 0.841 of the variances of the context and interfering factors, respectively. Also, the context and interfering factors can explain 0.879 of the variance of strategies, while the effort of custodians, space and resources, context and interfering factors and strategies can explain 0.906 of the variance of the consequences. All of these values are greater than 0.67, indicating that they are significant.

**Table 3.** Predictor indicator (Stone-Geiseer's  $Q^2$ ) values for the endogenous variables

Exogenous variable (Predictor)	Endogenous variable (Predicted)	Stone-Geiseer's $Q^2$	Predictor ability
Effort of custodians and space and resources	Context factors	0.726	Strong
Effort of custodians and space and resources	Interfering factors	0.744	Strong
Context and interfering factors	Strategies	0.706	Strong
Effort of custodians, space and resources, context and interfering factors, strategies	Consequences	0.579	Strong

According to Table 3, the values of  $Q^2$  are evaluated as strong for all endogenous variables. Therefore, it can be concluded that the examined structural model is of good quality and the observed values are well reconstructed. Furthermore, it has a desirable predictive ability and can predict the latent endogenous variable.

Investigation of the identified factors in the successful and unsuccessful schools

In response to the second question of research (Is there a significant difference between the identified factors according to the performance of successful and unsuccessful schools?), the mean performance measurement scores of 20 schools implementing the program during the last two years were calculated. Then, 5 schools with the highest performance scores were selected as the successful and 5 others with the lowest performance scores were selected as unsuccessful ones. Comparing the scores associated with the factors identified in those schools, the following results were achieved.

The data presented that the mean of the scores corresponding to each component in all successful schools is higher than that of the unsuccessful counterparts. In order to test the significance of this difference in two independent school groups (successful and unsuccessful), the Hotelling's T test was used. Moreover, Levene's test was employed to examine the equality of variance between the two groups.

#### 4. Conclusion

The aim of the present study was to validate the model presented about the investigation of the supervisors and executors perception of the factors affecting the quality of school management excellence program implementation, and to determine the contexts and prerequisites for improving the implementation of the excellence program. Based on the present achievements, the two factors of the effort of custodians and space and resources were discovered and presented as preconditions for the quality of the excellence program implementation.

**A) Effort of custodians:** The attempts and serious attention of the custodians in planning and observing the necessary contexts and conditions in the implementation of the program and also observing the principle of meritocracy in appointing agents are directly effective in the implementation quality of the excellence program which can be analyzed at the following two levels:

**1. Planning:** The collective will of high management levels for the implementation quality of program and considering the conditions and situation of the school in implementing the program, including the course, type, facilities and benefiting level of school location are essential factors for executing the excellence program. In the case of lower will of high management levels in the implementing process of the program, the agents do not have the necessary coordination and follow the program with a kind of confusion and doubt. Furthermore, in such a case, monitoring and evaluation are not conducted in a principled way, the implementation process becomes problematic and the desired results are not achieved. Also, if the status, position, type and conditions of all schools such as courses, normal, boarding, brilliant talents, urban, rural



and nomadic schools with different facilities are observed at the same level, the agents of low-income schools will be discouraged in implementing the program.

**2. Administrative:** The observance of meritocracy principle in appointing the principals, as well as serious attention to the provision of context factors of the excellence program by the implementers, will be a better basis for a better implementation of the excellence program.

**B) Space and resources:** The existence of sufficient and lively space, financial and human resources and necessary equipment as the basic necessities of the excellence program implementation are considered as vital and infrastructural factors that, if the context is prepared, can provide high-quality implementation of the excellence program being analyzed in the following five levels:

**1. Available space:** The existence of sufficient space with different uses, including the classrooms, prayer halls, laboratories, libraries, study rooms, gyms, etc. are among the primary needs of the school, which are eliminated in the case of lack of quality in the excellence program implementation. In other words, a standard space in terms of size and conventional norms can lay the groundwork for the quality of excellence program implementation.

**2. The space beauty:** the surrounding space with wall and asphalt, square markings, green space, benches and suitable sunshades in the yard as well as the construction's facade, arrangement of the objects, decoration and painting of the rooms may create a lively and relaxing environment for the students and agents for various educational activities.

**3. Equipment:** Teaching aids and equipment for the laboratory, workshops, classrooms, libraries, security systems, etc. and also the technology and access equipment to the Internet and intranet are among the factors that play a key role in implementing the excellence program and improving the performance of schools.

**4. Human resources:** Adequate human resources and employing them in specialized positions can pave the way for the high-quality implementation of the excellence program. However, in most schools, especially those with low student statistics, there is not enough and specialized human resources to implement the ideals envisaged in the excellence program, and this factor leads to the program quality declination.

**5. Financial resources:** Financing the school through allocating sufficient and timely governmental budget and existence of the necessary context for attracting non-governmental help through public participation or other resources play a vital role in implementing various plans, programs and activities of the school. Hence, the absence or lack of financial resources leads to the reduced performance quality.

Regarding the components of the effort of custodians, the mean factor loading in the planning and administrative affairs is almost the same and at a high level. In explaining this result, it can be stated that both the issue of planning and administrative affairs are of great importance from the perspective of supervisors and implementers, and the slothfulness, lack of strong will, lack of proper planning or poor oversight in the implementation by officials and superior custodians, can make it difficult for middle and operational principals and all agents in carrying out the high-quality excellence program. In addition, regarding the components of space and resources, the mean factor loading of the space beauty, equipment and human resources is higher than the others. These findings are consistent with the results of Bani Asad et al. (2017), Choo et al. (2007), Abdolmaleki et al. (2018), Aldaihani (2014), Cartmell et al. (2011), Ng & Chan (2008), Susan (2011), Tolley & Flecknoe (2016), Nodehi et al. (2009) and Mohd et al. (2015).

In the research findings, two factors of management and leadership style and principal's features were identified as interfering factors.

**A) Management and leadership style:** Knowing that the essence of excellence program is based on the participation and cooperation of beneficiaries, the styles that can develop participation and compatibility along with intimacy, empathy and transformationalism in the school and lead to the cooperation and synergy among beneficiaries and facilitate the interaction process which can be analyzed at the following four levels:

**1. Collaborative:** The interaction and cooperation between beneficiaries in the school management process, activation of councils (school council, teachers' council, etc.) and accountability of all to their performance are among the factors of participation.

**2. Power distribution:** The prevalence of the principle of cooperation and lack of emphasis on administrative hierarchy with horizontal structure in the school, human relations, maintaining dignity and munificence of individuals, lack of emphasis on the discipline, principal's trust in colleagues and delegation of authority in necessary cases are considered as the management power distribution factors.

**3. Transformationalism:** The principal foresight in planning, systematic thinking and holistic view in the programs, analysis of various school factors in relation to each other, variability and lack of resistance to improve the quality of work and responsiveness to new demands, empowerment and improvement of knowledge and skills, development of the ability of colleagues to maintain the competitive advantage of the school, principal's attention to the creativity and innovation and creating a favorable environment for it and knowledge management (creation, implementation, knowledge sharing) are the transformationalism factors in school.

**4. Compatibility:** The principal's personality infiltration which means the acceptance of the principal by beneficiaries due to his/her positive personality traits and respecting the professional rights of colleagues, indicate the compatibility and empathy in the school.

**B) Principal's features:** A principal must have desirable personality traits, appropriate educational leadership and sufficient managerial knowledge and skills in applying effective management and leadership styles in order to be successful in his/her managerial affairs. This factor can be analyzed at the following two levels:

**1) Personality features:** Patience, endurance and flexibility in dealing with conflicts, morality and honesty in speech and actions, efforts to create a moral and spiritual atmosphere in the school, hardworking and perseverance in doing school affairs, timeliness and having work order in the school affairs, paying attention to the constructive criticisms and suggestions from the side of colleagues, having the necessary self-confidence in managerial affairs, are among the factors that assist the principal to create a healthy atmosphere and relationship with beneficiaries for the team effort and effective leadership.

**2) Principal's knowledge and skills:** Having professional knowledge, familiarity with new leadership styles, having the necessary knowledge and skills of the program to justify and supervise the colleagues, attempting to increase knowledge by participating in courses, workshops and research works, having the knowledge and skills of technology and its application in school affairs are among the factors that enhance the ability of the principal in the managerial affairs.

As would be observed the personality feature (0.949) from the principal's feature components and transformationalism (0.933) from the management and leadership style have been found to have the highest factor loadings. This achievement is in agreement with those reported by Abdolmaleki et al. (2018), Aldaihani (2014), Choo et al. (2007), Ng & Chan (2008), Susan (2011), Tolley & Flecknoe (2016), Twigg et al. (2007), Brown (2013), Nodehi et al. (2009) and Mohd et al. (2015).

In this research, the organizational culture, role of parents and environmental factors were identified as the context conditions.

**A) Organizational culture:** The different models of organizational culture meet different functions on the employees and organization, and in order to facilitate the performance process and achieve the goals of each organization, the organizational culture tailored to the missions and inherent purpose of that organization should be created, maintained or changed, which can be analyzed at the following four levels:

**1. Involvement in the work:** Responsibility is one of the indicators of this aspect of the organizational culture which indicates the degree of commitment and responsibility of the beneficiaries towards school and work. Another indicator is the teamwork which shows the motivation of colleagues for the collective working.

**2. Integration:** The common values and perceptions of colleagues in school affairs, sense of belonging to the school, interaction and a sense of cooperation and friendship instead of unhealthy competition in school activities, continuity or in other words giving meaning to the organizational identity through implementing

special programs and the presence of special symbols in the school are the factors that were identified as the integrity.

**3. Adaptability:** Customer orientation or understanding the capacities and needs of beneficiaries and trying to satisfy them, school adaptation to the environment and creating innovation opportunities, learning and capabilities development or in other words organizational learning, are factors which indicate the adaptability.

**4. Organizational mission:** Strategic orientation means obvious knowledge of teachers about the strategy of education in school, familiarization of teachers with the aims and objectives of education and efforts towards it, clear drawing of the school perspective and the efforts of all colleagues to achieve it, were among the factors that have been identified as the organizational mission.

**B) Role of parents:** In order to benefit from the capabilities of parents and attract their participation and assistance in solving school problems, the relationship between home and school should be strengthened with various arrangements and programs which is analyzed at the following two levels:

**1. Home-school relationship:** The establishment of association and database of parents and school teachers, holding public meetings with parents, participation of parents in family education classes, their presence in various school programs, using their capabilities in solving various school issues, are among the factors that can represent the role of parents.

**2. Parents' participation:** Facilitation in the communication and creation of a suitable communication base with parents for better responsiveness, desirable level of local culture and parents' literacy for the participation, parental access to the school in terms of the distance, opportunity, living conditions and costs, etc. are identified factors illustrating the parental involvement context.

**C) Environmental factors:** Every open organization is necessarily affected by the environmental factors and interacts with it. In the case of schools, the environmental factors are one of the context factors affecting the quality strategies of the excellence program which can be analyzed at the following two levels.

**1. Resource dependence:** The lack of influence and intrusion of external forces in school decisions, possibility of needs assessment, adaptation and school responsiveness to the environmental needs, are the two basic factors in the resource dependence. In other words, the dependence on various environmental resources should not cause the intrusion of external forces and lack of school independence. The school must also make attempts to meet the environmental needs.

**2. Interaction:** The possibility of school interaction with other social, educational, cultural and sports centers, possibility of interaction with environmental beneficiaries, provision of the context for interacting with audiences and beneficiaries through cyberspace in the school, efforts of agents to attract the participation of officials and external donors account for the identified factors of interaction.

Among the components of organizational culture, role of parents and environmental factors, the highest factor loadings are associated with the integration (0.870), home-school relationship (0.945) and interaction (0.943), respectively. The present findings are consistent with the results of Aldaihani (2014), Malik et al. (2012), Sergiovanni (2007), Fernando Díez et al. (2018), Ng & Chan (2008), Susan (2011), Tolley & Flecknoe (2016), Aziznejad & Malakouti (2019), Nodehi et al. (2009) and Mohd et al. (2015).

According to the data analysis, the three factors of human resources training, organizational health and usefulness of teachers were identified as the strategic ones.

**A) Human resources training:** The excellence program implementation requires the human resources empowerment, and colleagues must have the latest knowledge and skills in their field of work. For this purpose, the needs assessment and educational planning should be performed with the participation of colleagues and the results of the training should be evaluated appropriately. This can be analyzed according to the data obtained at the following three levels:

**1. Needs assessment:** The analysis and determination of educational needs tailored with the level of knowledge, experience, skills and motivation of colleagues with their own participation is an important factor that should be carried out prior to teaching in the school. If the educational needs do not fit with the training

courses, the colleagues will not participate in the courses with sufficient motivation and sufficient knowledge will not be achieved.

**2. Educational plan:** The determination of educational content with appropriate scientific authenticity for more effectiveness and provision of educational contexts in different ways (workshops, meetings, groups, etc.) in the school, are factors that can enhance the training process usefulness.

**3. Evaluation of the results:** The evaluation of training effectiveness through assessing the performance quality of the colleagues is an effective factor in the pathology of the training process.

**B) Organizational health:** As one of the strategic and process factors in the quality of the excellence program implementation, the organizational health causes the interactions of members in an organization. It can also be effective in achieving the desired consequences inspired by the context and interfering factors. The identified indicators are given as below:

**1. Principal's infiltration:** The relationship between principal and superiors and attracting their attention to help the school more, maintaining the independence of the school despite the principal's proper cooperation with superiors are factors that indicate the amount of principal's influence on them.

**2. Fundamental structure:** Justification and explanation of the program and expectations from the beneficiaries by the principal, organization of the planning affairs and scheduling of affairs with the necessary standards by the principal are among the factors indicating the fundamental structure.

**3. Resources support:** The availability of required facilities and equipment is an important indicator in the resources support.

**4. Scientific emphasis:** The school's emphasis on learning and honoring those who strive for learning and students' serious attempts to learn were identified as indicators of scientific emphasis in the school.

**5. Colleagues' spirit:** The intimacy, empathy and good feelings of colleagues towards each other, friendly behavior of the principal with beneficiaries and use of incentives for more activity, indicate the spirit of colleagues in the school.

**C) Teachers' usefulness:** The teachers' usefulness or effectiveness is the amount of motivation, interest, knowledge, skills, capabilities and activities of teachers being used to achieve career success. This factor can determine the consequences of the excellence program inspired by the context and interfering conditions. The identified indicators are listed as follows:

**1. Teachers' motivation:** The teachers' interest and satisfaction with their activities in the school was identified as an incentive factor.

**2. Teachers' knowledge and skills:** The conformity of teachers' skills and knowledge to the assigned tasks, teachers' efforts for continuous learning, having the necessary professional qualifications and presence of a suitable professional model for them were among the factors identified for the teachers' knowledge and skills.

**3. Teachers' success:** The effectiveness of teachers' activities in the quality of students' performance, teachers' hardworking and overcoming the existing obstacles and limitations in the school were reported as the identified factors for teachers' success.

Based on the obtained results, among the components of organizational health and teachers' usefulness, the highest factor loadings are associated with the scientific emphasis (0.832) and teachers' success (0.929), respectively. These findings are consistent with the results of Aldaihani (2014), Choo et al. (2007), Sergioivanni (2007), Fernando Díez et al. (2018), Susan (2011), Tolley & Flecknoe (2016), Brown (2013) and Nodehi et al. (2009).

According to the present achievements, the research results and consequences are analyzed at four levels of program-centric, school-centric, self-assessment and total quality described as below:

**1) Program-centric:** The excellence program serves as a roadmap for achieving the goals of the Fundamental Transformation Document, and also concludes all school affairs and educative areas. These two identified factors, if implemented with high quality, will lead to the development of program-centric in the school.

**2) Self-assessment:** The excellence program is the most appropriate tool to evaluate the performance of schools and a development factor of self-assessment.

**3) School-centric:** Delegating the authority of higher officials to school agents and promoting the professional merit of the principal in the excellence program implementation are the factors that indicate the school-centric.

**4) Total quality:** The desirable implementation of the excellence program will bring the school out of the crisis and leads to the improved productivity as well as continuous quality improvement in the school performance system process.

Among the above-mentioned components, the highest factor loading was found to be associated with self-assessment (0.867), which is in fact the existential philosophy of the school excellence program. This finding is in line with the results presented by the studies of Aldaihani (2014), Choo et al. (2007), Cartmell et al. (2011), Susan (2011), Brown (2013) and Nodehi et al. (2009).

Regarding the second finding of the research, according to the statistical analyses and tests of Table 4, there is a significant difference between the identified factors according to the performance of successful and unsuccessful schools, all of which are significant at a level of 0.01. Explaining the above results, it can be said that the effects of the identified factors on the quality of the excellence program implementation are also confirmed in this way. Also, regarding the low difference between the mean values corresponding to the effort of custodians and human resources training, it can be said that since the education programs are centralized, less difference is observed in the attention of authorities to the successful and unsuccessful schools. In addition, the highest mean difference is observed in the management and leadership, which highlights the effective role of management and leadership in the performance of schools implementing the excellence program compared to other factors. According to the experts, this factor might play the most important role in the functional evolution of the schools. This finding is consistent with the results of Twigg et al. (2007) and Brown (2013).

Based on the present findings and the questionnaire, it is suggested that the custodians evaluate the context factors of the school in order to implement the program, and if the necessary conditions are not provided, focus their actions on providing the prerequisites. Also, it is suggested to modify the method of implementing the program and evaluate the performance of schools in accordance with the type and conditions of the school, use of the research findings as facilitating factors for training and justifying the executive factors of the excellence program in special sessions and workshops, employ the identified indicators while appointing the principals and also make attempts in order to create the necessary substructure for the implementation of management and leadership style in accordance with research findings (participation, power distribution, transformationalism, compatibility) and create, maintain and enhance the organizational culture with indicators such as involvement in the work, integration, adaptability and organizational mission in the schools. Further to these, it is suggested that the program supervisors perform clinical and process monitoring of the program implementation continuously throughout the year and process and assist the executives with practical solutions in detecting and coping with the problems. One of the limitations of this study was the concentration of samples in Ardabil province, therefore, the findings generalization should be done with caution and more research should be conducted to complete it.

## Acknowledgements

I would like to thank all education experts, school principals, professors and teachers for their participation in this research.

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