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Evaluating the Role of Enabling Conditions for Collective Efficacy and Character Strengths and Virtues of Teachers in School Effectiveness

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ABSTRACT

Objective: The present study aimed to evaluate the role of enabling conditions for collective efficacy and character strengths and virtues of teachers in the effectiveness of elementary schools from the perspective of teachers in Marvdasht, Iran (Dorudzan District) in the academic year 2020-2021.

Methods: This was a descriptive-correlational study and an applied one in terms of objective. The statistical population included all elementary teachers of the mentioned district (n=420), 201 of whom (129 women and 72 men) were selected by random cluster sampling following determining the sample size by Krejcie and Morgan's table. Data were collected using Jenni Donohoo's enabling conditions for collective teacher efficacy questionnaire, character strengths and virtues questionnaire by Peterson and Seligman, and School effectiveness questionnaire by Sergioivanni et al. In addition, data analysis was carried out in AMOS version 24 using descriptive statistics and structural equation modeling.

Results: According to the results, teachers' character strengths and virtues ($\beta=0.19$) and enabling conditions for collective efficacy ($\beta=0.71$) positively and significantly predicted school effectiveness.

Conclusions: Ultimately, the study of the obtained indicators showed a good fit for the final model of the research.

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Introduction

Education organization is one of the most important institutions and the main factor in all axes. Teachers are the key forces of this institution, the empowerment of whom plays a significant role in the academic achievement and success of students. School effectiveness issue represents persistent and fundamental challenges in managerial performance. At first, there was no consensus on the definition of school effectiveness. The second challenge was defining organizational effectiveness, whereas the third challenge was presenting different and contradictory effectiveness characteristics by each group ([Abdullahzadeh et al., 2018](#)). In his definition of school effectiveness, [Schernz \(2000\)](#) briefly mentions that school effectiveness indicates the performance of the school as an output, measured based on the assessment of academic achievement and success of school students ([Abdullahzadeh et al., 2018](#)). [Tutu \(1986\)](#) believes that organizational effectiveness is a rotating and continuous process, which involves all activities performed in line with organizational goals and determines how favorably they have been done ([Mirkiani & Razzaqi, 2017](#); [Olson et al., 2018](#)). Identification of the perceptual, technical, and political effectiveness of a school is not a simple task because various factors affect school outcomes ([Habibi et al., 2013](#)). Studies have shown the considerable role of teachers in achieving the goals of a school ([Lee & Lee, 2020](#); [Moody, 2020](#)). Therefore, “enabling conditions for collective teacher efficacy” is one of the factors affecting school effectiveness. Overall, collective efficacy is defined as the collective self-perception that teachers in a school make an educational difference to their students over and above the educational impact of their homes and communities. Fostering collective teacher efficacy should be at the forefront of planned strategic efforts in all schools and educational districts. However, when teachers believe that together, they and their colleagues can impact student achievement, they share a sense of collective efficacy ([Donohoo, 2017](#)). Not only high collective teacher efficacy leads to cooperation in problem-solving, but also it increases the chance of success and achievement ([Zincirli & Demir, 2021](#)). Collective teacher efficacy conditions are among the most important common beliefs affecting the performance of teachers in a school. Despite approaching teaching in their specific manner, the teachers of a school are like a group. Therefore, teachers’ common beliefs can affect their personal beliefs ([Veiskarami et al., 2015](#)). In general, an enabling condition for collective teacher efficacy is a school teacher’s belief in the capacity of their group as a whole as a single unit that organizes and executes a series of specific

actions to positively impact students ([Zare, 2019](#); [Derrington & Angelle, 2013](#)). In the presence of collective efficacy, students feel good about themselves, which is related to school employees' method of management. The power of self-efficacy beliefs affects how employees deal with challenges. Employees' collective beliefs affect their motivation, learning improvement, the type of learning environment created in schools, and staff behaviors observed in training ([Donohoo, 2017](#)). In this regard, [Alobiedat \(2017\)](#) showed that the difference in the effectiveness of most schools was related to factors such as differences in educational technology dimensions, exams, educational leadership, strategic planning, and collective efficacy. According to [Gray \(2016\)](#), there is a positive significant relationship between school effectiveness and collective efficacy. In addition, [Surana \(2021\)](#) declared that one of the major causes of school ineffectiveness was a lack of effective leadership and teachers and an improper school environment. In research, [Meyer et al \(2022\)](#) clarified that the collection efficacy of teachers has a positive and significant effect on their cooperation. Ultimately, it leads to the improvement of school performance and its positive effectiveness. Also, [Zare et al \(2021\)](#) conducted a study on elementary school teachers. They showed a positive and significant relationship between teachers' collective efficacy and school effectiveness. [Vakili-Yakan et al \(2019\)](#) studied that there is a direct and significant relationship between the collective efficacy of middle school teachers and the effectiveness of the school, which ultimately leads to academic success. Results obtained by [Veiskarami et al \(2015\)](#) were indicative of the importance of the mediating role of collective teacher efficacy in the relationship between school climate and the personal efficacy of teachers, which highlighted the necessity of attention to group activities of school teachers.

Teachers' character strengths and virtues are other factors affecting school effectiveness. Therefore, a successful teaching profession requires three components of knowledge and attitude. Character strengths and virtues consist of a set of positive traits in the form of a good personality. Meanwhile, it is not a series of separate mechanisms that affect behaviors automatically. It actually involves virtual activities, and virtue is chosen in the light of satisfying a life plan ([Bibak et al., 2014](#)). A capable teacher is one who believes in their personal knowledge, skills, and abilities and attempts to improve them. A capable teacher's features include the level of environmental conditions, level of competencies, level of beliefs, identity, and mission. It is notable that the level of mission, identity, and beliefs determine the level of competencies. Therefore, teachers'

character strengths and virtues are one of the factors that could considerably affect schools' effectiveness. This plays a role in students' academic achievement as well.

Teaching is a specialized profession in today's community, and the more capable the teachers in terms of character strengths and virtues, the greater the results of their teaching. [Dahiru and Gbolahan \(2022\)](#) considered that there is a positive and significant relationship between teacher empowerment and school effectiveness; they suggest managers adopt appropriate leadership methods to empower teachers to achieve an effective school system. According to [Uğurlu et al., \(2018\)](#), a school's educational quality depends on its teachers' character strengths and virtues and collective efficacy. Only those with high character strengths and virtues and collective efficacy can enhance school effectiveness. [Dahiru \(2017\)](#) investigated that there is a significant relationship between teacher abilities and school effectiveness. Moreover, Dahiru believes that if teachers are given autonomy to make decisions about their jobs, influence school decisions, and receive training on how to perform their duties, as a result, school effectiveness will be greater. In a study, [Bibak et al \(2014\)](#) found a positive significant relationship between teachers' character strengths and virtues and educational quality. It is worth mentioning that education is one of the most difficult issues in people's lives. It doubles the necessity and importance of the capabilities of teachers so that they could handle this significant responsibility in a great way. Moreover, teachers are the fundamental factor in creating desirable situations in education. A teacher's attitude and philosophy of life extremely affect their work, such that they would convert teachers from a person who merely teaches to a thoughtful person who has the great responsibility of educating human beings ([Bibak et al, 2014](#)). The enabling conditions for collective teacher efficacy is one of the topics that few researches have been done in our country and its relationship with a small number of variables such as teaching emotions ([Qadampour et al., 1400](#)), team performance ([Bagheri et al., 2013](#)) and the effectiveness of the school ([Zare et al., 2021](#)) have been investigated. Therefore, the enabling conditions for collective teacher efficacy is one of the topics that needs a lot of investigation and studies from a theoretical point of view.

Since schools are important institutions and are considered the second home of students because they spend half of their day in these places, they should have standard quality and effectiveness. Overall, collective teacher efficacy, teachers' character strengths and virtues, and school effectiveness are three important factors affecting education quality in any community. On the

other hand, our findings provide a clearer picture of the relationship between enabling conditions for collective efficacy and school effectiveness, which can help teachers achieve better effectiveness. With this background in mind, the present study aimed to evaluate the relationship between enabling conditions for collective efficacy and teachers' character strengths and virtues and the effectiveness of elementary schools in Marvdasht, Iran (Dorudzan District).

Material and Methods

This was a basic study in terms of purpose and in terms of data collection in descriptive research and more precisely correlation of the type of structural equations.

Participants

The statistical population included all teachers (women and men) of elementary schools in Dorudzan District in 2020-2021 (n=420). That among them, 201 teachers (129 women and 72 men) were selected by random cluster sampling. In this way, 10 schools were randomly selected from the total of 20 primary schools in Darudzen and the questionnaires were completed by all the teachers of the selected schools.

Instruments

School effectiveness questionnaire: developed by [Sergiovanni and Starratt \(1992\)](#), the tool encompasses 25 phrases and four sub-scales (goal achievement, internal integration, adaptation to the external environment, and cultural patterns). The items are scored based on a five-point Likert scale (from completely disagree=1 to completely agree=5). Therefore, the score range of the tool is 25-125. In a research, [Sergiovanni and Starratt \(1992\)](#) reported the reliability of the tool using the Cronbach's alpha method of 0.79.

In a study by [Sabet Eghlidi\(2011\)](#), the tool's reliability was confirmed at a Cronbach's alpha of 0.94. In the current research, reliability was approved at a Cronbach's alpha of 0.92.

Enabling conditions for collective teacher efficacy questionnaire: designed by [Donohoo \(2017\)](#), the instrument comprises 18 items and six sub-scales (Advanced teacher influence, Goal consensus, Teachers' knowledge about one another's work, Cohesive staff, Responsiveness of leadership, Effective systems of intervention). The items are scored based on a six-point Likert scale (from completely disagree=1 to completely agree=6). [Donohoo \(2017\)](#) investigated and

confirmed the validity of the tool using confirmatory factor analysis and also obtained the reliability of the tool using Cronbach's alpha method of 0.96.

[Taqavi et al. \(2020\)](#) reported the tool's reliability at a Cronbach's alpha of 0.94. Moreover, the validity of the tool was approved using confirmatory factor analysis. In the present study, reliability was confirmed at a Cronbach's alpha of 0.93.

Character strengths and virtues questionnaire: This questionnaire was developed by [Peterson and Seligman \(2004\)](#) in the form of 24 items, which includes six global virtues of wisdom, humanity, courage, justice, temperance, and transcendence. The items are scored based on a five-point Likert scale (from never/rarely=1 to always=5). [Peterson and Seligman \(2004\)](#) reported Cronbach's alpha of the tool as 0.79 in their research.

In the study by [Bibak et al \(2014\)](#), the tool's reliability was reported at a Cronbach's alpha of 0.89. In the current research, the reliability of the instrument was confirmed at a Cronbach's alpha of 0.91.

Data Analysis

Data analysis was performed in AMOS version 24 using the correlation method based on the structural equation modeling (SEM) approach.

Results

Frequency and percentage of participants' gender is presented in table 1 and descriptive indices of Research Variables is provided in table 2.

Table 1. Frequency and Percentage of Participants' Gender

Gender	Frequency	Percentage	The cumulative percentage
Female	129	64.2	64.2
Male	72	35.8	100
Total	169	100	

According to Table 1, 129 of the teachers were female and the rest (n=72) were male.

Table 2. Mean and Standard Deviation of Research Variables

Variables	Mean	Standard deviation	Lowest amount	Most amount
Character strengths and virtues	94.02	13.23	51	119
School effectiveness	91.1	15.51	39	123
Enabling conditions for collective efficacy	18	73.33	15.56	18

Table 3. Matrix of Correlation between Research Variables

Row	Variables	1	2	3
1	Character strengths and virtues	1		
2	Enabling conditions for collective efficacy	0.45**	1	
3	School effectiveness	0.51**	0.75**	1

According to Table 3, there was a significant relationship among research variables. Therefore, it was possible to evaluate the research model. It should be noted that before examining the structural model of the research, the measurement model of the research was examined first. The results showed that all items have a factor load above 0.3. Also, the fit indices showed that the research measurement model is suitable.

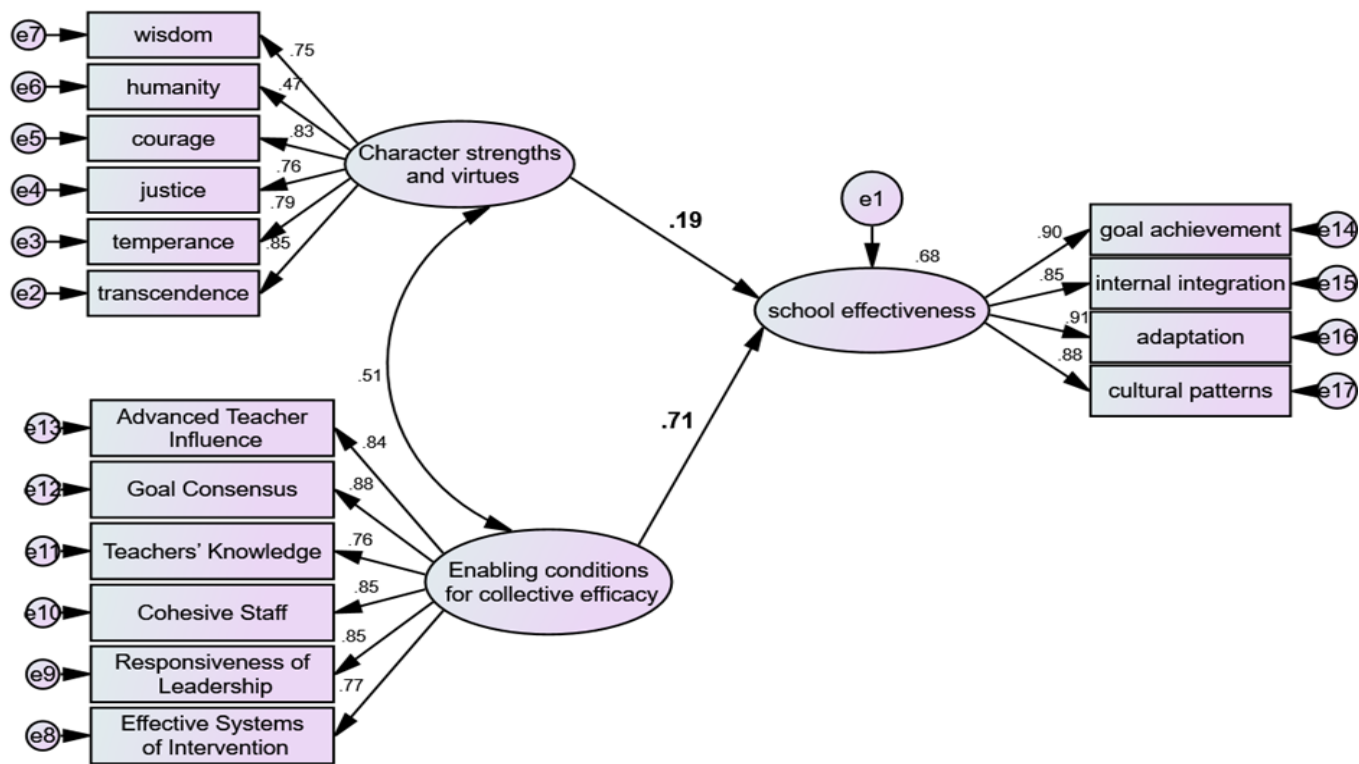


Fig. 1. Final research model

Table 4. Standard and Non-Standard Coefficients of Direct Paths in Research Structural Model

Path		Non-standard coefficients	Standard coefficients	The standard error	Critical ratio	p
Character strengths and virtues	→	0.27	0.19	0.09	2.92	0.003
Enabling conditions for collective efficacy	→	1.13	0.71	0.13	8.61	0.001

According to the standardized coefficient (beta) mentioned in Table 4, character strengths and virtues and collective teacher efficacy had a positive significant effect on school effectiveness. Overall, the variables of character strengths and virtues and enabling conditions for collective efficacy determined 59% of the variance of the school effectiveness variable. According to the table 5, the research structural model had an acceptable fit.

Table 5. Fit Indexes of Research Structural Model

RMSEA	GFI	NFI	CFI	CIMIN/DF
0.07	0.86	0.91	0.95	1.93

Discussion

Education is the greatest and most difficult issue in every human being's life. This doubles the importance and necessity of teachers' capabilities to properly perform their responsibility. Teachers are the most fundamental factor for the favorable achievement of educational goals. A teacher's belief and philosophy of life affect their work, such that they convert them from a person who merely teaches to a thoughtful person who has the responsibility of educating people ([Bibak et al., 2014](#)). Therefore, the present study aimed to evaluate the effect of collective teacher efficacy and character strengths and virtues on the level of efficiency of teachers. According to the results, teachers' character strengths and virtues had a positive significant effect on school effectiveness. The study was in line with the finding of [Dahiru and Gbolahan \(2022\)](#), [Uğurlu, Beycioğlu and Abdurrezzak \(2018\)](#), [Dahiru \(2017\)](#), and [Bibak et](#)

[al., \(2014\).](#)

To elaborate, it should be noted that wisdom and knowledge are some of the capabilities of teachers. This virtue is a cognitive ability required for learning. A teacher who owns this ability shows new and constructive thinking for doing things, interest in doing experiences, thinking through a comprehensive review, mastery of knowledge of new skills and topics, and the ability to provide wise advice to others. Humanity is another ability of teachers. It is a type of interpersonal ability that includes affection and accompanying others. Efficacy in this area has positive outcomes for both teachers and students, which results in evaluating close relationships with others, doing good deeds for others, and being aware of others' emotions and motivations. Studies have introduced humanity efficacy as an important predictor for adaptation and health of the teacher and a factor for reducing burnout ([Schwarzer & Halum, 2018](#)). Furthermore, there is a positive relationship between humanity efficacy and job satisfaction, choosing adaptive coping strategies, life quality, goals of mastery, and successful teacher intelligence ([Karimzadeh Shirazi et al., 2008](#); [Chan, 2016](#)).

Another capability of teachers, courage is an emotional ability and includes activities defined to achieve goals regardless of internal and external factors. Teacher efficacy in this area is associated with positive outcomes for students and can increase motivation, educational achievement, self-esteem, self-direction, self-efficiency, and positive attitude of students toward the school. Moreover, it encourages the fight against threats, challenges, difficulties and pain, finishing what is started, talking about reality and presenting oneself in a noble way, and living life with energy and excitement ([Moran and Hoy, 2016](#); [Skaalvik & Skaalvik, 2018](#)).

Another type of character strength and virtue, justice is global and includes a healthy social life. According to [Moran and Hoy \(2016\)](#), teachers' belief in the effectiveness of justice is based on two related judgments: evaluation of the tasks required to teach and assessment of the teacher's character strengths and virtues in relation to those tasks. Evaluation of the tasks required for teaching is a teacher's beliefs about the variables required for teaching, which are outside them. These variables include issues related to the school's texture, such as school climate, collective efficacy, treating people equally based on concepts of fairness and justice, working as a team member and organizing group activities, and observing the incidents

([Akbari & Moradkhani, 2009](#)).

Another individual effectiveness of teachers is that temperance prevents going to extremes. Therefore, this virtue enables people to do extraordinary work by using their skills in dealing with obstacles. Accordingly, perceived self-efficacy in the area of temperance is an important factor for successful performance and the use of necessary basic skills. Transcendence is the last character strength and virtue, which is a progressive capability and involves a connection with a bigger world and making life meaningful ([Schultz & Schultz, 2020](#)). Therefore, teachers who have high personal abilities make the best decisions for their work and in sensitive situations, treat their students and colleagues based on justice and fairness. Also, the teachers have good interpersonal relationships with students, colleagues, and the principal, they work hard to achieve their educational goals, and they respond creatively to specific situations. Furthermore, the teachers participate in school-related decisions and try to increase her knowledge and skills. It should be noted that such characteristics in the teacher improve the performance of the school. It makes the school more successful in achieving its educational goals. In addition, the internal integrity of the school will increase, and ultimately all these things will increase the effectiveness of the school.

According to the SEM results, collective teacher efficacy had a positive significant impact on school effectiveness. This study was in line with the finding of [Zare et al \(2021\)](#), [Vakili-Yakan et al \(2019\)](#), [Veiskarami et al \(2015\)](#), [Alobiedat \(2017\)](#), [Gray \(2016\)](#) And [Meyer et al \(2022\)](#). It is notable that collective efficacy includes a number of subscales, one of which is the high effectiveness of teachers. Regarding the relationship between this component and school effectiveness, teachers will have a great effect when they are given certain leadership roles. They have the power to make decisions about different parts of school management. Regarding the relationship between consensus on the purpose and school effectiveness, it could be expressed that having a set of clear objectives is crucial for success in any area, including school performance improvement. Determining measurable and challenging goals for the school helps students reach their objectives, especially when employees have reached a consensus on the goals.

In a study by [Leithwood and Sun \(2009\)](#), leaders had a positive impact on critical conditions of schools, including culture, common decision-making process, satisfaction, commitment, empowerment, and efficacy of teachers, through consensus on goals. In terms of the relationship between teachers' awareness of each other's work and school effectiveness, what is happening in other classrooms in the school affects teachers' perception of their colleagues' abilities ([Donohoo, 2017](#)). Regarding the relationship between employee cohesion and school effectiveness, it could be marked that cohesion is defined as the level of teachers' consensus on fundamental and organizational issues. A school's employees can have aligned or inconsistent beliefs about goal priorities, essential learning needs of students, promising learning approaches, correct assessment strategies, and performance expectations of students. In the presence of employee cohesion, "social processes that lead to the support of co-workers reduce the possibility of negative emotions toward collective efficacy beliefs". Regarding the relationship between leadership responsibility and school effectiveness, leaders know that it is their responsibility to help others do their jobs efficiently. They are responsible leaders and this behavior shows their concern and respect for employees. Accountable leaders are aware of the personal affairs of their teachers and can solve problems that reduce teachers' teaching time and concentration. This includes providing materials and learning opportunities required for a successful teaching experience. Teachers feel supported when their needs are responded to by managers. This, ultimately, increases their belief in the effect of collective capability on students' results. In addition, it generates hard-working employees.

Regarding the relationship between the efficient intervention system and school effectiveness, it could be stated that employees feel collective efficacy in schools that have efficient intervention systems. Efficient interventions help ensure the academic achievement of all students. Everyone plays a crucial role in different aspects of the program to guarantee high learning levels. In addition, school employees play a vital role in the formation of conditions for success in the school. They realize that they can help students achieve their goals and make changes in school through collective efforts ([Donohoo, 2017](#)). [Gray \(2016\)](#) concluded that there was respectively 78%, 65%, and 51% correlation between collective trust, collective efficacy, and activation of school structures with organizational effectiveness, which was

significant. As a result, a positive significant relationship was found between school effectiveness and the components of collective trust, collective efficacy, and activation of school structures. Therefore, the collective efficacy of teachers, which indicates the collective understanding of teachers about the ability to make fruitful changes in the field of education, affects their collective performance. It improves the performance of teachers, learners, and schools. Also, teachers who have high collective efficiency believe that they can implement new and effective teaching methods in the classroom in cooperation with each other; in addition, they make decisions to improve the school's performance, which will increase the effectiveness of the school as a result of these changes. Finally, according to the opinion of [Fathi et al \(2020\)](#), it can be claimed that teachers' understanding of their collective efficacy is an important variable in ensuring the progress of students and improving the effectiveness of teachers and schools. Generally, it is important to understand collective efficacy from the point of view of the possibility of school progress.

Clearly, any research has limitations, and the current study was no exception. First of all, this study was only performed on teachers of elementary schools in Mardvasht, Dorudzan District. Therefore, the results cannot be easily generalized to teachers of other educational grades or regions. In addition, data were collected by self-reporting tools, which might have caused bias. It should be noted that although the relationships between variables can be understood by using the modeling method, causality cannot be inferred from the results.

According to the results of the study, teachers must develop a school structure that emphasizes solving problems, encouraging innovation, supporting employees, increasing trust, and learning from mistakes. Such a structure enables teachers to be optimistic about their job and activities at the school. Also, the structures have a positive attitude toward students' academic achievement and school performance. Administrators should create an atmosphere in which high academic goals, a regular and safe learning environment, and high expectations are provided for all students. In this environment, the existence of academic achievement is considered important for the student himself. In addition, school principals must convince teachers that their success is synonymous with school success and better school-wide outputs.

Principals should use whatever may be helpful in strengthening the collective efficacy of teachers, by providing experiences of mastery and succession experiences, using verbal persuasion, and promoting positive situations. Principals should use whatever may be helpful in strengthening the enabling conditions for the collective efficacy of teachers, by providing experiences of mastery and succession experiences, using verbal persuasion, and promoting positive situations. They should pay attention to teachers' trust in students and parents and ensure that the valuable resonance of education is echoed throughout the school. These actions will increase school effectiveness and lead to the academic achievement of students.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Ethics statement

The studies involving human participants were reviewed and approved by ethics committee of Yazd University.

Author contributions

All authors contributed to the study conception and design, material preparation, data collection and analysis. All authors contributed to the article and approved the submitted version.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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