Original Paper

Psychometric Properties of Persian Translation of School Culture Survey

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Abstract

The objective of this study was to determine psychometric properties of a Persian translation of Gruenert's School Culture Survey in a population of elementary school teachers. This instrument is to assess the extent a school culture is perceived collaborative by teachers. In order to determine psychometric properties of the tool Cronbach's alpha was employed in testing the reliability and confirmatory factor analysis to assess construct validity. The results confirmed that the six-factor model of school culture including collaborative leadership, collegial support, learning partnership, professional development, teacher collaboration, and unity of purpose fit the data.

Keywords*: validation, school culture, confirmatory factor analysis*

1. Introduction

Organizational theorists have long reported that paying attention to culture is the most important action that a leader can perform. Educational theorists have likewise reported that the principals' impact on learning is mediated through the culture of the school and is not a direct effect (Hallinger & Heck, 1998). There is substantial evidence in the literature to suggest that a school principal must first understand the school's culture before implementing change. Bulach (1999) stated that a leader must identify a school's existing culture before attempting to change it. Leonard (1999) studied the dynamics and complexities of a school culture when teacher values were compatible or in conflict with school culture, with predictable results. Mortimore (2001) warned us that we should concentrate on establishing more knowledge about the complex interactions between culture and schooling. Lakomski (2001) studied the claim that it is necessary to change an organization's culture in order to bring about organizational change and concluded that there is a causal relationship between the role of the leader and organizational learning.

Perhaps the most intriguing aspect of culture as a concept is that it points us to phenomena that are below the surface, that are powerful in their impact but invisible and to a considerable degree unconscious. In that sense, culture is to a group what personality or character is to an individual. We can see the behavior that results, but often we cannot see the forces underneath that cause certain kinds of behavior. Yet, just as our personality and character guide and constrain our behavior, so does culture guide and constrain the behavior of members of a group through the shared norms that are held in that group (Shine, 2004). The notion of school culture is far from new. In 1932, educational sociologist Willard Waller argued that every school has a culture of its own, with a set of rituals and folkways and a moral code that shapes behavior and relationships. Culture exists in the deeper elements of a school: the unwritten rules and assumptions, the combination of rituals and traditions, the array of symbols and artifacts, the special language and phrasing that staff and students use, and the expectations about change and learning that saturate the school ' s world (Peterson& Deal, 2009). Although there is no universal definition, there is a general acknowledgment of what the best school cultures do. Culture has been described as the way people do things and how they relate to each other. For this study, culture is defined as the guiding beliefs, assumptions, and expectations that are evident in the way a school operates (Gruenert, 2005).

However, principals can only impact the school culture if they understand it. They cannot accomplish change without the support of the teachers. School success depends on culture so culture cannot be ignored and must be a focus of the school.

There currently exists no reliable or validated tool for the assessment of school culture in Iran so the purpose of this study was to evaluate the psychometric properties of Persian translation of Gruenert's school culture survey and identify the rates of the collaborative school culture with regard to teachers' perceptions as a primary step in school improvement. To sum up, principals need to focus on the continuous improvement of schools equipped by shaping values, beliefs and attitudes to promote a nurturing learning environment. In order to achieve this, they need to build up supportive relationships; provide proper working conditions for teachers to enhance their professional performances. As a result, schools become places to examine new ideas, methods, and materials for all the members.

2. Review of the Literature

Cultural literature has focused on change, suggesting that an effective organization may be defined as one which creates a culture that inspires its members to pursue continuous improvement through change. Teachers who felt empowered and part of a team, and who felt supported by their principals and colleagues, enjoyed a sense of collective efficacy and higher achievement scores were the result. Administrators and teachers with a shared belief in the power to produce effects through collective action promote higher levels of academic progress (Le Clear, 2005). It is important to realize that culture is complex because it has very unique and idiosyncratic ways of working. When an organization has a clear understanding of its purpose, why it exists and what it must do and who it should serve the culture will ensure that things work well. When the complex patterns of beliefs, values, attitudes, expectations, ideas and behaviors in an organization are inappropriate or incongruent the culture will ensure that things work badly. Successful school principals comprehend the critical role that the organizational culture plays in developing a successful school (MacNeil et al., 2009). School culture is a concept developed in educational administration to explore the meaning, character, and atmosphere of educational organizations (Gruenert, 2005). Deal and Peterson define school culture as a pattern of values, beliefs, and traditions generated through history of the school. Gruenert states that collaborative school culture is an effective school culture typology of the culture typologies that influence student achievement most, since working with cooperation and a sense of confidence, purpose, and team spirit is the basis of creativity and productivity in organizations. A collaborative culture is the foundation upon which a professional learning community rests. Such a culture is an essential ingredient for long-term, continuous school improvement (Deal & Peterson, 1999). As a part of continuous school improvement, the culture must embrace on-going professional development, self-reflection, progressive thinking, and risk-taking, all in the interest of success for each student. Staff members place student success ahead of personal convenience. They are committed to a quality school for each student. Collaborative culture is the support system that permits and promotes the internalization of comprehensive, systemic change. This takes place within the school and must be personalized. The school site, not the district or the state or the nation, must be the locus of change that ensures the success of every student (Valentine, 2006).

As instructional leaders, principals can create a positive and collaborative school culture. By helping teachers collaborate, instilling collective leadership, and communicating a shared vision, principals can contribute to developing a positive and collaborative school culture. Principals may consider providing teachers with frequent common planning and team time, and an atmosphere of lifelong learning and trusting relationships in order to establish a positive and collaborative school culture (DuPont, 2009). Fullan (1998) reported that student achievement increases substantially in schools with collaborative work cultures that foster a professional learning community among teachers and others, focus continuously on improving instructional practice in light of student performance data, and link to standards and staff development support.

The school culture gives meaning to what otherwise could be viewed as meaningless behavior. Depending on what goes on, the culture within the school will support, preserve and/or hinder different initiatives and ideas. This can lead to that some behaviors are not questioned or changed while other behaviors are easily changed. The culture is often manifested through symbols and provides the organization with an identity. Still, the responsibility and ethical dimension are connected to the individual actor, even if attitudes that become apparent in a group or an organization's culture indicate something else. Values influence the leadership process and organizational and social practice and they become visible as a school culture. Instead of seeing culture as what an organization is, it can be more

useful to look at culture as something an organization has. This includes a view that an organization's culture is emergent and changing. All actors and especially leaders can influence the existing organizational culture (Arlestig, 2008).

School culture has been found to have significant effects on the success of the organization. Barth (2002) states that a school's culture has significant influences on learning and life within the context of the school environment. Healthy school cultures can "lead to enhanced commitment and performance that are beyond expectations. As a result, the school is better able to achieve its goals" (Sergiovanni, 2006).

2.1 Purpose of the Study

The primary purpose of this study is to validate the six factors that comprise Gruenert's school culture survey in a selected sample of elementary school teachers and to determine an estimate of the internal consistency for the items contained in the school culture survey. This is based on a assumption that the description of the key factors of a collaborative school culture permits the principals and practitioners to make valid judgments.

2.2 Measuring School Culture

Measuring a school's culture is an initial step toward meaningful school improvement. Once measured, leader of the school can engage all faculty members in an analysis of the data and discussions that begin the chain of conversations necessary to become a professional community capable of identifying problematic issues, addressing them, and thus growing as a school. Therefore a valid and reliable school culture survey is the first necessary step in understanding school cultures so that educational leaders can begin to make a difference in trying to shape, mold, and strengthen them.

The data was collected from 251 elementary school teacher in 56 schools during the spring of the 2015-16 school years.

School Culture Survey (SCS), a six factor, thirty-five item survey completed by teachers about their school's culture. This instrument provides data about critical cultural variables based upon the collective perception of the faculty. The scale is a five-point Likert scale comprised of six subscales:

Collaborative Leadership: The degree to which the principal establishes and maintains collaborative relationships with school staff. The principal values teachers' ideas, seeks input, engages staff in decision-making, and trusts the professional judgment of the staff. The principal supports and rewards risk-taking and innovative ideas designed to improve education for the students. The principal reinforces the sharing of ideas and effective practices among all staff.

Teacher Collaboration: The degree to which teachers engage in constructive dialogue that furthers the educational vision of the school. Teachers across the school plan together, observe and discuss teaching practices, evaluate programs, and develop an awareness of the practices and programs of other teachers.

Professional Development: The degree to which teachers' value continuous personal development and school-wide improvement. Teachers seek ideas from seminars, colleagues, organizations, and other professional sources to maintain current knowledge, particularly current knowledge about instructional practices.

Unity of Purpose: The degree to which teachers work toward a common mission for the school. Teachers understand, support, and perform in accordance with that mission. It is a unifying force that not only clarifies the purpose of school but also helps to delineate the things schools are not, releasing schools from the unbounded responsibility of being everything to everybody.

Collegial Support: The degree to which teachers work together effectively. Teachers trust each other, value each other's ideas, and assist each other as they work to accomplish the tasks of the school organization.

Learning Partnership: The degree to which teachers, parents and students work together for the common good of the students. Parents and teachers share common expectations and communicate frequently about student performance. Parents trust teachers and students generally accept

responsibility for their schooling. it describes educators' relationship with parents (Gruenert, 1998, 2005).

Research studies using the School Culture Survey have documented the relationships between the factors of the SCS and numerous other school effectiveness/improvement variables such as principal instructional leadership, school climate, and teacher empowerment (Gruenert, 1998; Maher, 2000). After the adaptation of the scale into the Persian language, confirmatory factor analysis was utilized through a maximum likelihood technique in order to examine its construct validity.

3. Method

3.1 Translation Procedures

We employed a 'back translation' method for transforming the original SCS into the Persian language. The 35 statements were translated from English to Persian independently by two researchers fluent in both Persian and English. Then, the Persian copy was back translated to English and compared with the original form of the survey, in order to validate the translation process. Finally, the translated version of SCS was examined by six teachers. They were asked to read the survey and explain what they understood, what was clear and what was vague. Final revisions were made based on the feedback from the six teachers.

3.2 Data Collection

The data for this study were collected from 251 primary school teachers in 56 schools across two district of the city (Urmia). Data collection was carried out by administering a paper and pencil form of the SCS. The author visited each school and distributed survey forms to the teachers. The completed documents were collected within a week after distribution.

3.3 Data Analyses

Data analysis procedures followed the two main goals of the study: to provide reliable data for the purposes of assessing school culture in research and practice, to measure the construct as conceptualized by the researcher. Structural equation modeling (SEM) methods as implemented by LISREL were used to evaluate the factorial validity of the scale. Maximum likelihood estimation method was used and the input for analysis was the covariance matrix of the items. The number of samples could be considered adequate for carrying out a factor analysis for the value of KMO was found to be 0.963. Further, the high value obtained in the Bartlett's test indicated that the data is appropriate for factor analysis.

4. Results

This section is divided into two main sections. The first presents the results of the reliability analysis. This is followed by the results of the construct validation tests.

4.1 Reliability of the SCS Persian Form

The means, coefficients of Cronbach's Alpha and number of items for each subscale are shown in Table 1. According to Nunnally (1978), "investigations of reliability should be made when new measures are developed. Coefficient alpha is the basic formula for determining the reliability based on internal consistency and should be applied to all new measurement methods. The Cronbach Alpha reliability coefficient was calculated to gain an estimate of the internal consistency reliability for the whole Construct as well as for subscales. The estimates of internal consistency reliability attained for all subscales except the Collegial Support Subscale were above .80. The Alpha coefficient for the total school culture survey was .975.The reliability coefficients for the 6 factors ranged from 0.606 to 0.942. The reliability results suggest that the SCS Persian Form meets reliability standards.

According to table 1 factors: Unity of Purpose and Teacher Collaboration had the highest mean followed, in descending order by, Professional Development, Learning Partnership, Collaborative Leadership, and Collegial Support. The mean scores respectively imply that teachers have good understanding of the mission of school and are able to describe it in their own words.; they engage in

dialogues that furthers the vision of the school and discuss teaching practices; schools are giving moderate importance to personal development and teachers value the idea of themselves as learners; teachers and parents sometimes work together for the common good of the student; principals have established to a less degree collaborative relationships with staff and their idea are not highly sought, they are not frequently consulted when decisions are made, and finally teachers rarely work together, trust and assist each other.

Table 1. Coefficients Of Cronbach's Alpha

Factors	Mean	Cronbach's Alpha	N of Items
Collaborative Leadership	3.59	.942	11
Teacher Collaboration	4.03	.911	6
Professional Development	3.76	.880	5
Unity of Purpose	4.08	.857	5
Collegial Support	3,32	.606	4
Learning Partnership	3,62	.834	4
Whole Construct	3.73	.975	35

4.2 Construct Validation of the SCS Persian Form

Table 2 includes the means, standard deviations, factor loadings, and T and R2 values for each of the 35 items .Item means ranged from 3.16 to 4.44 and standard deviations ranged from .623 to 1.266.

Except two items, factor loadings were more than 0.30, indicating that the items were associated with their subscales. However T values indicate that all of the factor loadings are statistically significant. The squared multiple correlation coefficients (R^2), describe the amount of variance the common factor accounts for in the observed variables. A good deal of the variance in each observed variable, with the exception of items of 28 and 31, is accounted for.

Table 2. Means, Standard Deviations, Factor Loadings, T and R2

Items		Mean	Std. Deviation	Factor Loadings	t	R^2
1	Leaders value teachers' ideas.	3.75	1.091	.78	13.06	.52
2	Leaders in this school trust the professional judgments of teachers.	3.95	.976	.59	10.50	.37
3	Leaders take time to praise teachers that perform well.	3.99	1.018	.79	14.44	.60
4	Teachers are involved in the decision-making process.	3.90	.971	.66	12.15	.46
5	Leaders in our school facilitate teachers working together.	4.03	.967	.76	14.55	.60
6	Teachers are kept informed on current issues in the school.	4.04	.961	.73	14.10	.58
7	My involvement in policy or decision making is taken seriously.	4.03	.950	.75	14.90	.62
8	Teachers are rewarded for experimenting with new ideas and techniques.	3.74	1.100	.87	14.97	.63
9	Leaders support risk-taking and innovation in teaching.	3.84	1.006	.89	17.94	.79
10	Administrators protect instruction and planning time.	4.11	.925	.78	16.63	.72
11	Teachers are encouraged to share ideas.	3.88	1.067	.89	16.08	.69

12	Teachers have opportunities for dialogue and planning across grades and subjects.	4.12	.974	.76	14.37	.60
13	Teachers spend considerable time planning together.	4.13	.959	.76	14.84	.62
14	Teachers take time to observe each other teaching.	3.94	.994	.83	16.08	.69
15	Teachers are generally aware of what other teachers are teaching.	3.80	1.069	.87	15.59	.67
16	Teachers work together to develop and evaluate programs and projects.	4.07	.944	.76	15.42	.66
17	Teaching practice disagreements are voiced openly and discussed.	4.22	.875	.66	13.92	.57
18	Teachers utilize professional networks to obtain information and resources for classroom instruction.	4.25	.931	.68	13.10	.53
19	Teachers regularly seek ideas from seminars,	3.68	1.082	.90	15.87	.69
20	Professional development is valued by the faculty.	3.41	1.266	.90	12.70	.50
21	Teachers maintain a current knowledge base about the learning process.	3.60	1.107	.85	14.20	.59
22	The faculty values school improvement.	3.86	1.076	.89	15.75	.68
23	Teachers support the mission of the school.	4.20	.866	.56	11.20	.42
24	The school mission provides a clear sense of direction for teachers.	3.90	1.069	.85	14.83	.63
25	Teachers understand the mission of the school.	4.15	.871	.68	14.39	.60
26	The school mission statement reflects the values of the community.	3.73	1.123	.93	15.95	.69
27	Teaching performance reflects the mission of the school.	4.44	.732	.48	11.52	.43
28	Teachers trust each other.	3.17	.623	.13	3.26	.04
29	Teachers are willing to help out whenever there is a problem.	3.34	.844	.68	13.90	.64
30	Teachers' ideas are valued by other teachers.	3.64	.651	.40	10.14	.37
31	Teachers work cooperatively in groups.	3.16	.680	.22	5.05	.11
32	Teachers and parents have common expectations for student performance.	3.98	1.029	.74	13.03	.52
33	Parents trust teachers' professional judgments.	3.95	1.009	.86	16.67	.73
34	Teachers and parents communicate frequently about student performance.	3.35	.576	.44	13.91	.57
35	Students generally accept responsibility for their schooling, for example they engage mentally in class and complete homework assignments.	3.24	.668	.52	14.41	.60

The correlation matrices provide data necessary to support the grouping of items into the subscales presented in Table 3. The Pearson correlation was used to determine the association between items using an 8 X 8 matrix format. Significance was tested at the 0.01 level. Analysis of the Table 3 correlation coefficients supports the appropriateness of the subscales.

In theory the inter-correlations among subscales should be 1ow, as it is the case in table 3. This provides further confirmation to the test of discriminant va1idity that the subscales are measuring discrete categories. In addition, the inter-correlation between subscales measuring different categories should be lower than the subscale reliability coefficients in Table 1. This indicates that items within each subscale correlate more strongly with each other than with groups of items in other subscales; that is, items forming a subscale linked empirically as well as conceptually.

According to Table 1 the subscale reliability coefficients was larger than the inter-correlation coefficients in all cases in Table 3. This supports the earlier evidence suggesting that the items grouped conceptually as subscales belong together and are measuring different functions.

Table 3. Correlation Coefficients

	CL	TC	PD	UP	CS	LP	W
CL	1						
TC	.886**	1					
PD	.842**	.813**	1				
UP	823**	.868**	.807**	1			
CS	.675**	.660**	.634**	.618**	1		
LP	.882**	.837**	.823**	.793**	.631**	1	
*W	.964**	.945**	.914**	.908**	.734**	.916**	1

** Correlation is significant at the 0.01 level (2-tailed).

* W stands for the whole construct.

Table 4 presents the fit indices of the scale. The results indicated that there existed a first-order six-factor structure. All indices were above the suggested cut-off value for a good model fit.

Table 4. Fit Indices

χ^2	$\chi 2$/df	NFI	NNFI	CFI	RFI	IFI	RMSEA	RMR
1497.6	2.74	0.97	0.98	0.98	0.96	0.98	0.08	0.042

According to Figure 1 the measure assessed six facets of the school culture construct: (1) Collaborative Leadership (items L1-L11), (2) Teacher Collaboration (items TC1-TC6), (3) Professional Development (items PD1-PD5, (4) Unity of Purpose (items UP1-UP5, (5) Collegial Support (items CS1-CS4), (6) Learning Partnership (items LP1-LP4). Figure 1 presents standardized estimates and an acceptable fit of the model.

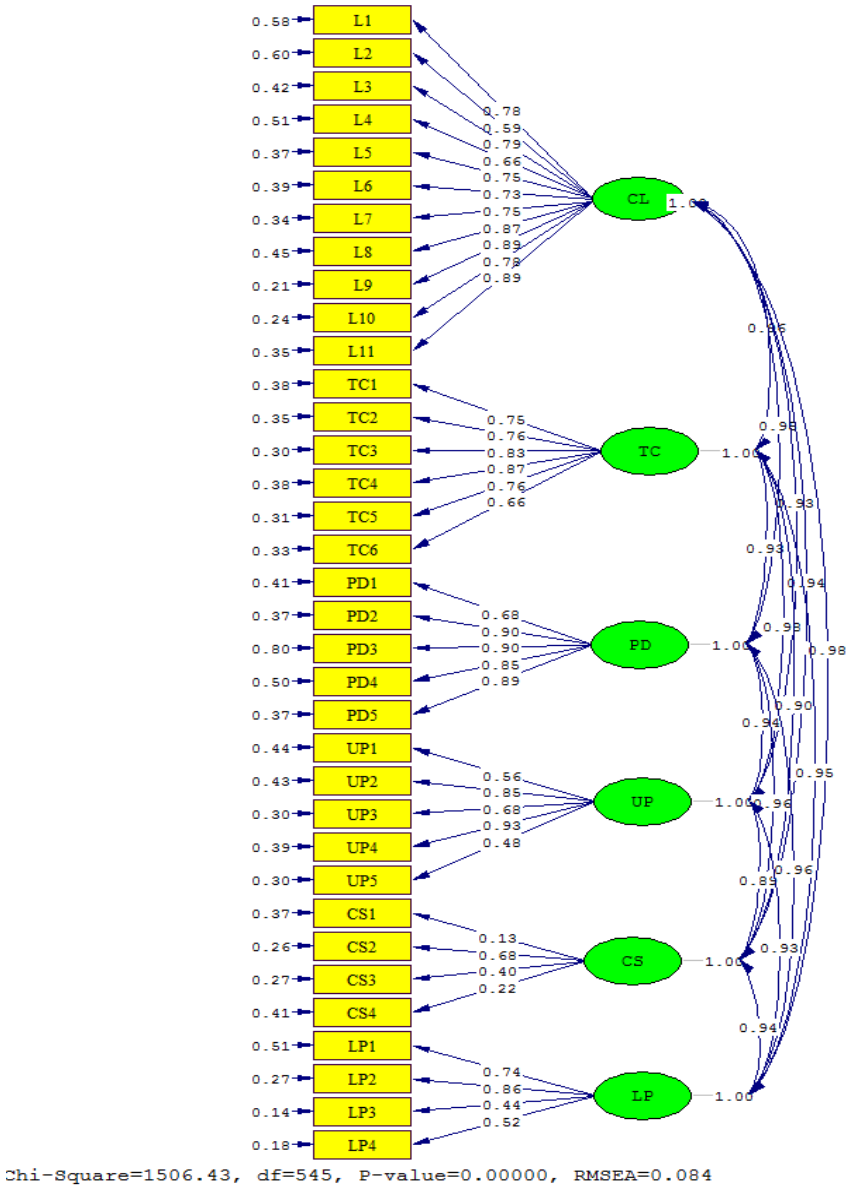

Figure 1. Standardized Solutions

5. Discussion and Conclusion

Our study assessed the psychometric properties of the SCS measure in Iranian elementary schools and provided some evidence in favor of its reliability and construct validity. The study findings indicate that the SCS tool is an acceptable and psychometrically robust measure to assess school culture.

The data in this study was presented in terms of school teachers' perceptions on School Culture Survey (SCS).On the basis of the confirmatory factor analysis, the factor structure of the measure was similar to the original validation study showing that 35 items loaded uniquely onto their respective 6 subscales. Moreover, similar to the validation study, the analyses provided evidence for acceptable reliability of all the subscales for this sample. Alpha coefficients exceeded 0.80 both for the whole scale and six dimension-level subscales. Based upon the standards of reliability, we conclude that the SCS can be used reliably for the purposes of either research or principal needs assessment.

The structure of the SCS as determined in this study is consistent with the theoretical framework

underlying the SCS. The 6-factor structure explained 55% of the total variance in the model. The findings are supported by previous research (e.g., Butucha, 2013; Gumuseli & Eryilmaz, 2011; Karadag et al., 2014; Mees, 2008), which contended the Gruenert school culture survey across their countries. Brinton (2007) reported lack of construct validity of the instrument. He believed, as the findings were derived from two different populations so lack of construct validity could be expected.

The highest mean scores of Unity of Purpose and Teacher Collaboration found in this study is congruent with the findings of Lucas and Valentine (2002), revealing greatest influence of principals upon teacher collaboration and unity of purpose..

According to Gruenert (2005) Collaborative school cultures-schools where teacher development is facilitated through mutual support, joint work, and broad agreement on educational values -have been presented as the best setting for learning for both teachers and students. School leaders that shape their cultures to become more collaborative should reap the benefits of greater teacher performance and satisfaction and greater student performance.

Strong school cultures have better motivated teachers. Highly motivated teachers have greater success in terms of student performance and student outcomes. School principals seeking to improve student performance should focus on improving the school's culture by getting the relationships right between themselves, their teachers, students and parents. Measuring school culture and using this assessment to focus the school's goals on learning is important for the process of improving the school's academic performance (MacNeil et al., 2009).

Westhuizen et al. (2008) draws attention to attribute of organizational culture, namely, the uniqueness of every organization's culture. When studying an organization's organizational culture, the interest should be directed toward the unique features of the social entity under investigation.

In conclusion, as the principal's role is a significant factor in any kind of collaborative effort at schools. Thus, the prominent role of the principal is to stimulate colleagues' professional learning communities and create working teams to improve the quality of the school. We must not overlook the fact that shaping a school's culture is a complex process and a mixture of leadership, relationships, trust, student focus, values, beliefs, etc. develops and nurtures over months and years. The more we collaborate together to study and problem-solve our issues that impact student success, the more we build the trust and relationships that produce a collaborative culture. It begins with the formal leadership, evolves through a nucleus of teacher leaders, and eventually permeates the whole faculty and thus the school community. In the end, we have a collaborative, professional, learning community.

This study confirmed that the SCS is an adequate measure of school culture that can be used in the Iranian context. We hope that the introduction of this questionnaire stimulates further research on school culture in Iran.

Scholars are advised to replicate the validation procedures employed in this study for confirmation.

Despite its contributions, this study has certain limitations. The study was limited to elementary schools, so the generalization of high schools can also be done. Another limitation may be the study setting in an urban region of Iran, which may not be representative of more rural areas. Furthermore as Maslowski (2006) quoted school culture questionnaires are best suited for diagnosing specific cultural elements but in the case of research they can be used along with other, more qualitative methods to study school culture. Such a triangulation of methods compensates for the weaknesses inherent in any single method and generates data that are sensitive to the more latent aspects of culture and gives necessary insights to describe a culture.

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