

The Reliability and Validity of the Chinese School Version of the Denison Organizational Culture

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Abstract. The purpose of the study was to evaluate the applicability of the Denison Organizational Culture Survey in a Chinese school context. The survey is consisted of four culture traits: involvement, consistency, adaptability, and mission. Each trait is divided further into three indexes, each of which is derived from three items. The sample included 424 teachers in six Chinese primary and middle schools. All traits and indexes showed acceptable internal consistency. Confirmatory factor analyses tested how well the same factor structure fit the present data. The results of acceptable goodness of fit indices showed the same pattern with the original structure of four traits and twelve indexes. Higher correlation between school culture and school effectiveness indicated good external validity of the present survey. The Chinese school version of the Denison Organizational Culture Survey has satisfactory psychometric properties.

Keywords: school culture; Chinese school; Denison Organizational Culture Survey

Introduction

Organizational culture

Organizational culture is defined as shared values, and underlying expectations and assumptions exhibited in an organization (Cameron & Quinn, 2006; Louis, 1985). There is a long history of research on organizational culture. Many researchers have investigated organizational culture from a strategic perspective and have examined it as an important source of competitive advantage (Barney, 1986; Wilkins & Ouchi, 1983). However, although the relationship between

organizational culture and organizational effectiveness has drawn attention from researchers for many years, most of the current literature can be traced back only as recently as the early 1980s. Research on Japanese competitiveness in car and electronics manufacturing fields (Ouchi, 1981; Peters & Waterman, 1982) is among this pioneering research.

The research field of organizational culture has been dominated by qualitative studies (Schein, 2004; Yauch & Steudel, 2003). Many researchers thought that cultures could not be measured and compared (Schoen & Teddlie, 2008). After many years of debate, some researchers determined that organizational culture consisted of different levels, some of which could potentially be measured. Schein (1992) described the organizational culture as three levels: basic assumptions, espoused beliefs, and artifacts. Schein considered assumptions to be the base level of his theory. According to Schein, basic assumptions were taken-for-granted and unconscious perceptions, beliefs, feelings, and thoughts that were shared by the organization members. The third level, artifacts, refers to visible organizational structures and processes. To examine the base and third levels, the appropriate research methods are observation and interviews. The second, or intermediate, level in Schein's theory is espoused beliefs. Schein described these as strategies, goals, and philosophies of the organization. This level should be investigated through the use of surveys and structured interviews. The second level of organizational culture, then, can be seen as measurable.

Many questionnaires or instruments have been developed in line with Schein's theory. For instance, the Organizational Culture Inventory by Cooke and Rousseau (1988) was designed to measure culture in terms of behavioural norms. Three kinds of cultural styles were identified by this inventory: constructive style, passive/defensive style, and aggressive/defensive style. Hofstede (1993) summarized six dimensions of organizational culture: process/results orientation, employee/job orientation, parochial/professional orientation, open/closed system, loose/tight control, and normative/pragmatic orientation. In addition to the use of these instruments to measure differences in organizations, some questionnaires were developed to aid in employees' selection and socialization. For instance, Chatman's (1989) work was used to investigate the degree of fit between employee and organization and to predict employees' satisfaction.

Each questionnaire was developed in specific context, to be used for specific purposes. Ashkanasy et al. (2010) and Jung et al. (2009) have conducted systematic review on quantitative studies of organizational culture. As concluded in Jung et al.'s recent review, each approach offers different insight for exploring organizational culture (Jung et al., 2009).

Denison Organizational Culture Survey

The Denison Organizational Culture Survey (DOCS) was created to focus directly on the aspects of organizational culture which could influence organizational effectiveness (Denison, Janovics, Young, & Cho, 2006). The model

is designed on four organizational cultural traits: involvement, consistency, adaptability, and mission. Each of these four culture traits consists of three component indexes. Involvement consists of empowerment, team orientation, and capability development. Consistency includes core values, agreement, and coordination and integration. Adaptability consists of creating change, customer focus, and organizational learning. Mission consists of strategic direction and intent, goals and objectives, and vision. Each of these twelve indexes is measured by five items. There are 60 items on the Denison Organization Culture Survey. This model and survey structure was confirmed by confirmatory factor analysis by using 35,474 participants in 160 organizations from all over the world. This survey also showed high reliability, indicated by high alpha coefficients. The validity of this survey is also good, indicated by six measures of organizational performance. The survey was recently proved to be a very good measurement in this field (Denison, Nieminen, & Kotrba, 2014).

The Denison Organization Culture Survey has been used in a variety of organizations, including health care, energy, financials, technology. It is popular in many countries, including Australia, France, Japan, Great Britain, Switzerland, and the United States. A recent study was conducted in a Nigerian Breweries Plc Ibadan by employing two hundred employees (Akanbi, 2014). The adapted version of the Denison Organization Culture Survey was used to investigate the effect of organizational culture on company's effectiveness (Akanbi, 2014). The results showed all four culture traits, involvement, consistency, adaptability and mission, could predict company's effectiveness (Akanbi, 2014). The Denison Organization Culture Survey was also taken to measure the unit culture in nursing units of hospitals (Casida, Crane, Walker, & Wargo, 2012). It was found that unit culture may provide additional value to explain the performance in the nursing units (Casida, Crane, Walker, & Wargo, 2012). A study, which was carried out in Yemeni banking industry by using the Denison Organization Culture Survey, confirmed the significant role of organizational culture in management and performance (Al-Swidi, & Mahmood, 2012).

Some researchers have translated and adapted the Denison Organization Culture Survey into their own language and tested its reliability and validity. Fey and Denison applied the Denison Organization Culture Survey in Russia (Fey & Denison, 2003), using participants from foreign firms in Russia. The survey items were translated into Russian. As in the original version, there were four traits, each with three indexes. In this version, each index was measured by three items instead of five. Factor analysis confirmed the four-traits model. Cronbach's alphas showed good internal reliability for all these four traits. All four traits were significantly related with organizational effectiveness. Thus, the Russian version showed good reliability and validity.

School culture

School culture is a specific kind of organizational culture situated in an educational context (Schoen & Teddlie, 2008). Schein's (1992) three levels of

organizational culture align with Corbett et al.'s (1987) work in school culture. Hence, accepted organizational theory could be used to understand and explain phenomenon and researches on instructional organizations such as schools (Schoen & Teddlie, 2008). School culture is considered as a holistic entity (Seashore, 2009) and refers to how people feel, think, and see about things relating a school (Erickson, 1987). School culture refers to the shared assumptions, basic norms and values, and espoused cultural artifacts in a school which are agreed by school members (Ralf Maslowski, 2001). School culture demonstrates itself in rituals, traditions, stories, and how to treat each other (Stoll, 1999). Van Houtte (2005) has reviewed research on both school climate and school culture from the past several decades. He summarised that compared with school climate, school culture was a better conceptual framework to study school improvement, school effectiveness, and so on. School culture plays an important role in teachers' behaviour and attitudes as well as in educational innovations (Seashore, 2009).

School culture plays an important role in school related fields, such school effectiveness, students' behaviours, teachers' perception, and leadership. For example, school culture was correlated with educational attainment (Guerrero, De Fraine, Cueto, & Leon, 2013), teenage substance use, such as drinking, smoking, and drug use (Markham, 2014). Perceived school culture was positively associated with self-esteem and job satisfaction, was negatively associated with mental health complaints in kindergarten teachers in Hong Kong (Wong, & Zhang, 2014). School culture had effect on high school students' identity formation, which in turn had effect on students' perceptions and behaviour on sexual health (Brotman & Mensah, 2013).

Previous studies have identified some fundamental factors which are important for school culture including leadership behaviour (Hoy & Tarter, 1997), participative decision-making (Devos, Bouckenooghe, Engels, Hotten, & Aelterman, 2007), official and unofficial relations among staff and teachers (Hoy & Tarter, 1997), innovation orientation (Ralf Maslowski, 2001), and shared vision (DuFour & Berkey, 1995). One study validated these dimensions of school culture and investigated their impact on teachers' well-being and organizational commitment (Zhu, Devos, & Li, 2011). Their results indicated that goal orientation, shared vision, and leadership had larger affect on teachers' organizational commitment compared with other school culture dimensions. Another study defined school culture as being composed of four dimensions, namely, professional orientation, quality of the learning environment, organizational structure, and student-centered focus (Schoen & Teddlie, 2008).

Present study

Concerning school culture, although there are vast empirical researches in Western countries, the number of literature in non-Western countries is still quite limited. Relatively little research has focused on issues in Chinese school culture. The Chinese educational system has been carrying out reforms for years. One aim of such educational reform has been to increase school effectiveness.

Investigating or diagnosing school culture, therefore, seems to be a reasonable starting point to improve school effectiveness.

The Denison Organizational Culture Survey is a popular questionnaire used in the researches of organizational culture and has proven is useful in other countries. However, findings were based on samples of companies that were mostly in Western countries. The application of the Denison Organizational Culture Survey in the Chinese school context is of question. Research on this topic is valuable to both theory and practice. The present study aims to investigate the reliability and validity of the Denison Organizational Culture Survey in a Chinese school context.

Method

Participants

The investigation was carried out in 2013. Participants from six primary and high schools in Beijing, China took part in the survey and answered the questionnaire. There were 424 (95%) valid questionnaires included in the final data analysis. Those 5% participants were excluded because of incomplete questionnaires. Of these participants, 326 were female (76.9%), 90 were male (21.2%), and 8 questionnaires were missing data (1.9%). The female dominated characteristic of the sample is a typical characteristic of teacher population in Chinese schools. Of those surveyed, 378 were teachers (89.2%), 33 were in middle leadership positions (7.8%), and 13 surveys were missing data (3.1%). The investigation included 95 participants with less than six years teaching experience (22.4%), 151 participants with six to fifteen years teaching experience (35.6%), 168 participants with more than fifteen years teaching experience (40.6%), and 10 surveys missing this relevant data (2.4%).

Instrument

The Denison Organizational Culture Survey was translated and used with the approval of Denison Consulting, the survey's publisher. The Denison Organizational Culture Survey was translated into Chinese and revised by educational experts in order to adapt it to Chinese school culture and context. Similar to the original version, there were four traits used in the Chinese school version. Those traits were involvement, consistency, adaptability, and mission. Each trait consisted of three indexes. Involvement consisted of empowerment, team orientation, and capability development. Consistency comprised core values, agreement, and coordination and integration. Adaptability encompassed creating change, customer focus, and organizational learning. Mission trait consisted of strategic direction and intent, goals and objectives, and vision. Unlike in the original version, each index consisted of three items after deleting those items which are not suitable for Chinese school context. Thus, there were a total of thirty-six items in the Chinese school version of the Denison Organizational Culture Survey.

There were five self-designed items for measuring school effectiveness in the present study. These items address teaching quality, ethical education, leadership, characteristics, and parent satisfaction.

All of the items are 5-point Likert-type scale. Participants were asked to evaluate to what extent they agreed with a statement on a scale of 1 to 5, with 1 being “totally disagree” and 5 being “totally agree.” An example of a questionnaire item is “Everyone believes that he or she can have a positive impact.”

Data analysis

Internal consistency was calculated by SPSS 15.0. Chronbach’s alpha was used to indicate the internal consistency of each trait and index. Chronbach’s alpha ranges from 0 to 1, where $\geq .70$ is good and $\geq .60$ is acceptable for basic research purpose in educational context. Item discrimination indexes are correlations between item and index scores. The item-total correlation was calculated; a correlation of $\geq .30$ is good. Moreover, confirmatory factor analysis was conducted by AMOS 7.0. The method of estimation was maximum likelihood (ML). Chi-square, df, and CMIN/DF were reported. CFI (comparative fit index), IFI (incremental fit index), and RMSEA (root mean square error of approximation) were used to assess the fit between data and structure. Results for CFI and IFI range from 0 to 1, where $\geq .90$ indicated acceptable fit. RMSEA $\leq .05$ is deemed as a good fit, while between $.05$ -. 08 is considered as an acceptable fit.

Results

Reliability

Descriptive statistics (mean and standard deviation (SD)) of items, internal consistency, and item-total correlation are reported in Table 1. Results showed acceptable internal consistency for all the traits and indexes (0.67-0.95). Item discrimination was assessed by item-total correlation. All item-total correlations for the 36 scale items were acceptable ($r \geq .30$).

Table 1. Items’ descriptive statistics, item-total correlation and internal consistency of factors and indexes

Factor	Index	Item no.	Item-total correlation	Mean	SD
Involvement $\alpha = 0.93$	Empowerment $\alpha = 0.81$	1	0.61	4.38	0.80
		2	0.72	4.13	0.95
		3	0.66	4.27	0.93
Team orientation $\alpha = 0.86$		4	0.72	4.45	0.79
		5	0.74	4.35	0.90
		6	0.76	4.39	0.79
Capability Development		7	0.44	3.81	1.06
		8	0.64	4.50	0.71

	$\alpha = 0.73$	9	0.63	4.33	0.87
Consistency		10	0.76	4.37	0.78
$\alpha = 0.95$	Core values	11	0.81	4.42	0.75
	$\alpha = 0.90$	12	0.81	4.47	0.72
		13	0.79	4.35	0.82
	Agreement	14	0.76	4.34	0.81
	$\alpha = 0.87$	15	0.71	4.31	0.81
		16	0.72	4.32	0.87
	Coordination & Integration	17	0.74	4.23	0.86
	$\alpha = 0.87$	18	0.77	4.41	0.80
Adaptability		19	0.77	4.11	0.92
$\alpha = 0.91$	Creating Change	20	0.76	4.37	0.76
	$\alpha = 0.88$	21	0.81	4.34	0.79
		22	0.35	3.48	1.01
	Customer Focus	23	0.60	4.12	0.80
	$\alpha = 0.67$	24	0.51	4.38	0.74
		25	0.67	4.19	0.82
	Organizational Learning	26	0.71	4.27	0.88
	$\alpha = 0.80$	27	0.59	4.60	0.65
Mission		28	0.53	3.96	1.00
$\alpha = 0.94$	Strategic Direction & Intent	29	0.65	4.37	0.81
	$\alpha = 0.77$	30	0.66	4.50	0.72
		31	0.78	4.34	0.79
	Goal & Objectives	32	0.74	4.50	0.74
	$\alpha = 0.87$	33	0.74	4.34	0.84
		34	0.74	4.42	0.76
	Vision	35	0.76	4.50	0.72
	$\alpha = 0.86$	36	0.74	4.25	0.89

Validity

Confirmatory factor analysis was carried out on all 36 scale items. The second-order factor structure was tested. In this structure, each scale item loaded on its index and each index loaded on its trait. Chi-square is 1852.734, df is 576, and CMIN/DF is 3.217. CFI and IFI is 0.913 and 0.912 respectively. RMSEA is 0.072. Results indicated acceptable goodness of fit for all indices.

Table 2 shows the correlation between school culture and school effectiveness. Chronbach's alpha of the school effectiveness items is 0.92. All the four cultural traits and twelve indexes of the model are correlated with all five school effectiveness items. All correlations among the varied aspects of school culture and school effectiveness were statistically significant at 0.01 level.

Table 2. Correlations of school culture and effectiveness

	Overall	Teaching quality	Ethical education	Leadership	Characteristics	Parent satisfaction
<i>Involvement</i>	0.86	0.75	0.77	0.78	0.79	0.76
Empowerment	0.81	0.69	0.74	0.73	0.75	0.72
Team Orientation	0.84	0.74	0.76	0.77	0.75	0.75
Capability Development	0.77	0.70	0.66	0.70	0.74	0.67
<i>Consistency</i>	0.90	0.81	0.81	0.81	0.82	0.79
Core Values	0.90	0.80	0.79	0.83	0.83	0.77
Agreement	0.82	0.74	0.75	0.73	0.74	0.73
Coordination and Integration	0.82	0.73	0.75	0.73	0.74	0.72
<i>Adaptability</i>	0.82	0.72	0.74	0.74	0.71	0.76
Creating Change	0.83	0.74	0.75	0.76	0.73	0.77
Customer Focus	0.63	0.53	0.57	0.57	0.56	0.59
Organizational Learning	0.78	0.70	0.69	0.71	0.67	0.72
<i>Mission</i>	0.87	0.78	0.77	0.79	0.77	0.79

Strategic Direction & Intent	0.80	0.72	0.71	0.73	0.72	0.71
Goals & Objectives	0.83	0.74	0.74	0.76	0.73	0.75
Vision	0.85	0.76	0.75	0.77	0.75	0.79

Discussion

The principle aim of this study was to investigate the reliability and validity of the Chinese school version of the Denison Organizational Culture Survey. The Chinese version consisted of four traits. Each trait had three indexes, and each index was measured by three items. The internal consistency of all traits and indexes were within an acceptable range. The item-total correlation of each item and their corresponding indexes showed good item reliability. Confirmatory factor analysis indicated that the overall structure of Chinese school version was similar, as in the original version of the Denison Organizational Culture Survey (Denison et al., 2006). The high correlations between all four traits, the twelve indexes, and the effectiveness items demonstrated the good external validity of this survey.

The Chronbach's alpha coefficients of traits and indexes were higher than 0.60, indicating acceptable internal consistency. Item-total correlation between each item and its corresponding index was taken as item reliability. Most items showed very high reliability ($r \geq .50$) and all items showed acceptable correlation ($r \geq .30$). The item, "Parent comments and recommendations often lead to changes" had the lowest item-total correlation ($r = .35$). This item was adapted from the item "Customer comments and recommendations often lead to changes" on the Denison Organizational Culture Survey with the purpose to suit the school context. The original survey was primarily designed for use in companies. The organization and management of companies and schools is quite different, particularly in relation to the characteristics which would determine responses to this item. Companies may be faster in reacting or making adjustments according to the market and. Schools, on the other hand, may be required to follow the schedule of the curriculum and the directions given by the ministry of education. Thus, it is possible that parents have less influence in a school than customers have on a company. For future studies, this item could be changed or other items could be added concerning customer focus.

The structure validity of the survey was evaluated by the fitness of Denison's original survey model, the second-order factor structure with three items loaded on its index and each index loaded on its trait. The model has acceptable goodness of fit on all indices. Thus, the Chinese school version of Denison's Organizational Culture Survey has good structure validity.

The survey's external validity was measured by the association between school culture and school effectiveness. All the four cultural traits and twelve indexes of the model were correlated with perceptions of school effectiveness, which were indicated by teaching quality, ethical education, leadership characteristics, parent satisfaction, and overall effectiveness in the present sample. These results were in line with the original and Russian versions of the Denison Organizational Culture Survey (Fey & Denison, 2003). These results indicated good external validity of the Chinese school version. This survey could be used to predict school effectiveness.

The Denison Organizational Culture Survey is widely used in organizations as a diagnostic instrument (Kordshouli, Baneshi, & Rezaei, 2013). When innovation or reformation is about to happen, organization leaders would consider organization culture, since it is very helpful to make new strategies by evaluating and understanding organizational culture within the organization first (Jofreh & Masoumi, 2013).

Although, there are some questionnaires and scales to measure school culture, most research in school culture has been primarily based on qualitative research. This study has provided some powerful insights from a quantitative perspective. Considering the significant role of school culture on teacher behavior, educational reform, and school improvement, constructing a sound school culture is both a goal and a method for education modernization and school development. The present survey could be used as a diagnostic tool for school culture and to help school leaders to enhance the weaker indexes or traits of their school culture.

Most theories of organizational culture and effectiveness (Denison et al., 2006; Kotter John & Heskett James, 1992) have focused almost exclusively on the American context. Cross-cultural researchers have suggested that most management theories should be modified according to national contexts (Hofstede, 1980). Researchers in the field of school culture have also pointed out that empirically validating of school culture questionnaires is needed in other educational frameworks and contexts, since the application of questionnaires have often been limited to the countries in which they were developed (Maslowski, 2006; Rousseau, 1990). The present study proves that the adapted Chinese school version of the Denison Organizational Culture Survey is applicable in the Chinese school context.

Discussion

In conclusion, the overall results of this pilot study demonstrate satisfactory psychometric properties for the Chinese school version of the Denison Organizational Culture Survey. Moreover, the current study supplements the theory around organizational culture as it has been carried out in Western context and provides empirical support from a Chinese context. The present adapted survey can be used as a basis for future explorations in this research area.

References

- Akanbi, P. A. (2014). Nexus between organizational culture and perceived firm effectiveness in a manufacturing firm in Nigeria. *Journal of Culture, Society and Development*, 4, 32-37.
- Al-Swidi, A. K., & Mahmood, R. (2012). TQM and organizational performance: The role of organizational culture. *African Journal of Business Management*, 6(13): 4717-4727.
- Ashkanasy, N., Broadfoot, L. E., & Falkus, S. (2010). Questionnaire measures of organizational culture. In N. Ashkanasy, C. P. M. Wilderom & M. F. Peterson (Eds.), *Handbook of Organizational Culture and Climate* (pp. 131-146). Thousand Oaks, CA: Sage Publications.
- Barney, J. B. (1986). Organizational culture: can it be a source of sustained competitive advantage? *Academy of Management Review*, 11(3), 656-665.
- Brotman, J. S., & Mensah, F. M. (2013). Urban high school students' perspectives about sexual health decision-making: the role of school culture and identity. *Cultural Studies of Science Education*, 8(2), 403-431.
- Cameron, K. S., & Quinn, R. E. (2006). *Diagnosing and changing organizational culture: Based on the competing values framework*. San Francisco: John Wiley & Sons.
- Casida, J. M., Crane, P. C., Walker, T. L. & Wargo, L. M. (2012). Elaboration of leadership and culture in high-performing nursing units of hospitals as perceived by staff nurses. *Research and Theory for Nursing Practice*, 26(4), 241-261.
- Chatman, J. A. (1989). Matching people and organizations: Selection and socialization in public accounting firms. Paper presented at the Academy of Management Proceedings.
- Cooke, R. A., & Rousseau, D. M. (1988). Behavioral norms and expectations: A quantitative approach to the assessment of organizational culture. *Group & Organization Management*, 13(3), 245-273.
- Corbett, H. D., Firestone, W. A., & Rossman, G. B. (1987). Resistance to planned change and the sacred in school cultures. *Educational Administration Quarterly*, 23(4), 36-59.
- Denison, D., Nieminen, L., & Kotrba, L. (2014) Diagnosing organizational cultures: A conceptual and empirical review of culture effectiveness surveys. *European Journal of Work and Organizational Psychology*, 23(1), 145-161.
- Denison, D. R., Janovics, J., Young, J., & Cho, H. J. (2006). Diagnosing organizational cultures: Validating a model and method. Document of Denison Consulting Group.
- Devos, G., Bouckennooghe, D., Engels, N., Hotton, G., & Aelterman, A. (2007). An assessment of well-being of principals in Flemish primary schools. *Journal of Educational Administration*, 45(1), 33-61.
- DuFour, R., & Berkey, T. (1995). The principal as staff developer. *Journal of Staff Development*, 16(4), 2-6.
- Erickson, F. (1987). Conceptions of school culture: An overview. *Educational Administration Quarterly*, 23(4), 11-24.
- Fey, C. F., & Denison, D. R. (2003). Organizational culture and effectiveness: Can American theory be applied in Russia? *Organization Science*, 14(6), 686-706.
- Guerrero, G., De Fraine, B., Cueto, S., & Leon, J. (2013). The effect of school climate on students' cognitive and socio-emotional results at the end of secondary education. The case of urban high schools in Peru. *International Congress for School Effectiveness and Improvement (ICSEI)* location: Santiago, Chile.
- Jofreh, M., & Masoumi, E. S. (2013). Diagnosing organizational culture: An empirical investigation. *Management Science Letters*, 3(9), 2461-2466.
- Hofstede, G. (1980). Motivation, leadership, and organization: do American theories apply abroad? *Organizational Dynamics*, 9(1), 42-63.

- Hofstede, G., Bond, M. H., & Luk, C. (1993). Individual perceptions of organizational cultures: A methodological treatise on levels of analysis. *Organization Studies*, 14(4), 483-503.
- Hoy, W. K., & Tarter, C. J. (1997). *The road to open and healthy schools: A handbook for change*. Thousand Oaks, CA: Corwin Press
- Jung, T., Scott, T., Davies, H. T. O., Bower, P., Whalley, D., McNally, R., et al. (2009). Instruments for exploring organizational culture: A review of the literature. *Public Administration Review*, 69(6), 1087-1096.
- Kordshouli, H., Baneshi, E., & Rezaei, B. (2013). Depicting favorite organizational culture: An empirical case study. *Management Science Letters*, 3(11), 2839-2846.
- Kotter John, P., & Heskett James, L. (1992). *Corporate Culture and Performance*. New York: Free Press.
- Louis, M. R. (1985). An investigator's guide to workplace culture. In P. Frost, Moore, M. Louis, C. Lundberg & J. Martin (Eds.), *Organizational culture* (pp. 73-94). California: Sage Publications.
- Markham, W. A. (2014). School culture and teenage substance use: a conceptual and operational framework. *Educational Review*, (ahead-of-print), 1-18.
- Maslowski, R. (2001). School culture and school performance: an explorative study into the organizational culture of secondary schools and their effects. Twente: University Press.
- Maslowski, R. (2006). A review of inventories for diagnosing school culture. *Journal of Educational Administration*, 44(1), 6-35.
- Nunnally, J. C., Bernstein, I. H., & Berge, J. M. F. t. (1967). *Psychometric theory* (Vol. 226): McGraw-Hill New York.
- Ouchi, W. (1981). Theory Z: How American business can meet the Japanese challenge. *Business Horizons*, 24(6), 82-83.
- Peters, T. J., & Waterman, R. H. (1982). *In search of excellence: Lessons from American best-run companies*: New York, Harper and Row.
- Rousseau, D. M. (1990). Assessing organizational culture: The case for multiple methods. In B. Schneider (Ed.), *Organizational climate and culture* (pp. 153-192). San Francisco: Jossey-Bass.
- Schein, E. H. (1992). *Organizational culture and leadership* (2nd Edition).
- Schein, E. H. (2004). *Organizational Culture and Leadership*. San Francisco: Jossey-Bass.
- Schoen, L. T., & Teddlie, C. (2008). A new model of school culture: a response to a call for conceptual clarity. *School Effectiveness and School Improvement*, 19(2), 129-153.
- Seashore, K. R. (2009). Leadership and change in schools: Personal reflections over the last 30 years. *Journal of Educational Change*, 10(2-3), 129-140.
- Stoll, L. (1999). School culture: Black hole or fertile garden for school improvement? In J. Prosser (Ed.), *School Culture*. London Paul Chapman.
- Van Houtte, M. (2005). Climate or culture? A plea for conceptual clarity in school effectiveness research. *School effectiveness and school improvement*, 16(1), 71-89.
- Wilkins, A. L., & Ouchi, W. G. (1983). Efficient cultures: Exploring the relationship between culture and organizational performance. *Administrative Science Quarterly*, 28, 468-481.
- Wong, Y. P., & Zhang, L. F. (2014). Perceived school culture, personality types, and wellbeing among kindergarten teachers in Hong Kong. *Australasian Journal of Early Childhood*, 39(2), 100-108.
- Yauch, C. A., & Steudel, H. J. (2003). Complementary use of qualitative and quantitative cultural assessment methods. *Organizational Research Methods*, 6(4), 465-481.
- Zhu, C., Devos, G., & Li, Y. (2011). Teacher perceptions of school culture and their organizational commitment and well-being in a Chinese school. *Asia Pacific Education Review*, 12(2), 319-328.