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A new model of school culture: a response to a call for conceptual clarity

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Van Houtte (2005) called for clarification of the terms school culture and school climate and the role of each in school effectiveness research. This article presents a theoretical framework for school culture that asserts that it is a context-specific branch of organizational culture comprised of 4 dimensions and 3 levels. This conceptualization presents school climate as the second level of school culture. The article explains the qualitative analytical process that led to the development and verification of the Comprehensive Model of School Culture. The concept of culture presented here is contrasted with statements about school culture made by Van Houtte. Implications for research and further theoretical development are discussed at the end of the article.

Keywords: school culture; school climate; theory; cultural change; improvement; organizational culture

Introduction: a response to a call for conceptual clarity

Observations of differences in learning environments are not new, in fact, comments can be found in parts of Europe dating as far back as the late Renaissance Period (17th century), when the culture of learning experienced dramatic changes as ideas of the middle ages gave way to a rebirth of ancient Greek and Roman ideas. Thus, the link between the culture of learning environments and change is one that has persisted for centuries. Van Houtte (2005) recently provided an overview of the past few decades of research on school culture and school climate. He concluded that school culture was the better frame from which to study school effectiveness and school improvement. Based upon our own analyses that examined school culture in relation to school change, we concur, but for different reasons. From our perspective, school climate and school culture are different levels of the same construct. Van Houtte subsumes culture under climate but nonetheless concludes that it is culture that holds the most promise for future research on school improvement. The intent of this article is to describe how we arrived at a somewhat different conceptualization of school culture than that described by Van Houtte. We propose that school climate may more appropriately be thought of as subset of the broader construct of school culture.

The contemporary literatures on school culture and school climate are similar in many ways (Freiberg & Stein, 1999; Hoy, Tarter, & Kottkamp, 1991; Loup, 1994; Maslowski, 2008).
2006; Owens, 2001; Van Houtte, 2005). In fact, the terms school culture and school climate are frequently used interchangeably, as if they were synonyms. Is this the case? Are there differences between the constructs as well? What is the nature of their relationship, if any? Many have suggested that one and/or both of these are to some extent determinants of school effectiveness; can this notion be tested? These questions guided an inquiry into the nature of culture and climate in PK-12 regular educational settings. We felt a more concrete understanding of the factors that comprise culture and climate in PK-12 schools might lead to a greater awareness of how to effectively impact educational outcomes.

Loup (1994) stated that “definitions of culture have historically been fraught with conceptual complexity and confusion” (p. 63). Van Houtte (2005) recently called for research communities to clarify what is meant by these terms and what each encompasses. Our efforts to conceptualize the construct of school culture and to understand its relationship to school climate led to the generation of a new model of school culture. We offer this model in response to calls for clarity, therefore we attempt to be as explicit as possible regarding our understanding of school culture and climate; however, as is the case with any new line of inquiry, early stages often yield as many questions as answers.

Our model differs from Van Houtte’s (2005) description of culture in that he describes school culture as a component of climate, whereas we assert that climate is better understood as a level of school culture. Other notable researchers (e.g., Anderson, 1982; Hoy et al., 1991) subscribe to Van Houtte’s assessment that culture is a component of climate; however, this is not the way we read the majority of the literature that looks at internal operational aspects of school environments that potentially impact student achievement. Our intent is not to refute these authors, but rather to put forth another plausible conceptualization that seems reasonable, logical, and in concert with the way many contemporary researchers seem to be viewing culture. We initially surveyed a wide range of literature, but subsequently refined our analyses to those works that seemed most pertinent to studying the relationship between school culture and school improvement.

**Identifying relevant literature**

Theoretical sampling (Glaser & Strauss, 1967) was used to determine works included in the literature review process from which we generated our model. We focused primarily on recent research (1980 forward) using the school as the level of analysis and student academic achievement as an outcome variable. This generated numerous works in the field of education, most dealing with school effectiveness and two distinct bodies of literature in school improvement research (Teddlie & Reynolds, 2000).

Later, we expanded the parameters to include pertinent works in the disciplines of sociology, anthropology, psychology, and business management. The common denominator among the works included was that they addressed variables similar to those frequently attributed to culture or climate and looked at them in relation to student achievement or organizational effectiveness. The literature surveyed and analyzed in the predevelopment stages included research and scholarly pieces published roughly from 1980 to 2001; 64 articles, 22 chapters, 45 books, and three doctoral dissertations were consulted. Later, in the revision and verification stage, an additional 5 articles, 2 chapters, and 8 books were consulted that had either not been published or were not included in the development stages.

Initial efforts at organizing a literature review led to considerable confusion in understanding the distinction between the constructs of school culture and school climate. Other researchers have encountered similar problems; for example, Loup (1994) found
that “research on organizational climate, particularly in schools, has emerged from studies of culture or ethos of organizations and has been characterized by different conceptions of what constitutes climate” (p. 66).

Consequently, we examined pertinent works in search of clues to clarify these terms. A solid conceptual framework was not found; so we embarked on an extensive content analysis process to understand how researchers are using the terms school culture and school climate to study schools. The goal was to articulate a conceptual definition of culture that explained the difference between culture and climate. This would then be used to generate a functional research-based operational definition of culture that could be used to explore the relationship between school culture and student achievement.

Definitions of school climate

Observations of differences in learning environments is centuries old. Perry (1908, out of print – referenced by an anonymous reviewer) described “esprit de corps”, as a school atmosphere that was reflected in the reputation the school has with its students, teachers, and parents of students. He attributes the formal and informal activities of the school such as ceremonies, and traditions, programs, journals, and organizations with contributing to the common spirit of the school.

The Organizational Climate Descriptive Questionnaire (OCDQ) (Halpin & Croft, 1963) is an example of an early instrument to measure school climate. The survey focuses on teacher perceptions of four areas of teacher behavior (disengagement, hindrance, esprit, and intimacy) and four areas of principal behavior (aloofness, production emphasis, trust, and consideration). The introduction of the OCDQ began a long tradition of using psychological methods to study school climate. This influence is reflected in contemporary definitions of climate that focus on measurement of perceptions of specific variables within the context of the school. Consider a contemporary definition offered by Teddlie and Stringfield:

School Climate refers to a number of variables in the school social environment including, but not limited to, student sense of academic futility, student perception of teacher push, student academic norms, teacher ability, teacher expectations for students, teacher-student efforts to improve, perceptions of the principal’s expectations, parental concern for quality of education, perceptions of present school quality, and efforts of the principal to improve. Brookover and colleagues (1978) concluded that much of the variance in mean school achievement was due to variables associated with school climate. (Teddle & Stringfield, 1993, pp. 18–21)

While other researchers defined climate slightly differently, definitions typically included a set of internal school attributes that were measured via survey. Creemers and Reezigt (1999) state that school climate has been studied by four different research traditions:

- School effects research (Brookover et al. 1979; Edmonds, 1979), which includes such factors as orderliness (Scheerens, 1992) and concludes that climate is a distinguishing factor between effective and ineffective schools.
- Classroom effects research, which identifies climate factors defined as managerial techniques (Doyle, 1986).
- Psychological research on classroom learning environments which links student perceptions of classroom conditions, such as the way the teacher behaves, to student outcomes (e.g., Fraser, 1991; Houtveen, Vermeulen, & Van de Grift, 1993; Wubbels, Brekelmans, & Hooymayers, 1991).
• Effectiveness research that looks at teaching aimed at high cognitive outcomes (Creemers & Reezigt, 1999).

The Creemers and Reezigt (1999, p. 35) model of school climate includes:

• the physical environment of the school (buildings, corridors, etc.);
• the social system (relationships and interactions between those in the school and agreements concerning behavior);
• an orderly school environment;
• the expectations about teacher behavior and student outcomes.

Hoy et al. (1991) said that schools and classrooms are more than the sum of their effectiveness factors; schools have personalities of their own. They advocate the use of metaphors (i.e., healthy schools) to describe climate. Anderson (1982) described school climate research as a step child of organizational climate research and school effects research.

Definitions of school culture
The origins of the use of the term culture to describe life inside schools began with Waller (1932), who noted that schools have an identity of their own, with complex rituals of personal relationships, a set of folkways, mores, irrational sanctions, and moral codes (see Maslowski, 2006). The concept of organizational culture began to receive attention in the research communities (e.g., Deal & Kennedy, 1982; Ouchi, 1981; Pascale & Athos, 1981; Peters & Waterman, 1982) as a factor associated with organizational performance in the 1980s. Lack of early attention by researchers may be because culture is associated with taken-for-granted values, underlying assumptions, expectations, collective memories, and definitions in an organization (Cameron & Quinn, 1999, p. 14).

Cultural influences on organizational behavior have been studied by a number of researchers, yielding a wide range of definitions. Some of these involve very broad interpretations of culture, with a global perspective, in which differences between continents and countries have been noted along various dimensions (e.g., Hofstede, 1980; Tromperaars, 1992) to more narrowly focused studies of cultural influences that examine differences in between the cultures of societal subgroups based on gender (e.g., Martin, 1990), race (e.g., Cox, 1991), occupation (e.g., Van Maanen & Katz, 1976), and region (e.g., Blauner, 1964). Still others have looked at the culture dominant within a particular organization (e.g., Cameron & Quinn, 1999). This last perspective has been used to study schools in an attempt to describe differences that exist between the internal cultures of schools (e.g., Deal & Kennedy, 1983; Deal & Peterson, 1999); this interorganizational perspective on culture is the one we espouse.

Within this perspective, school culture has been defined frequently (e.g., Hoy & Miskel, 1991; Mortimore, Sammons, Stoll, Lewis, & Ecob 1988; Murphy, 1992; Sammons, 1999; Scheerens & Bosker, 1997; Teddlie & Reynolds, 2000). Deal and Peterson (1999) state that there is no single universally agreed upon “best definition of school culture”. Several of the more commonly accepted definitions include:

• [School] Culture consists of the shared beliefs and values that closely knit a community together (Deal & Kennedy, 1982, 1983).
• It [school culture] is the lens through which participants view themselves and the world (Hargreaves, 1994).
School culture is comprised of “Unwritten rules and traditions, norms, and expectations that permeate everything: the way people act, how they dress, what they talk about, whether they seek out colleagues for help or don’t, and how teachers feel about their work and their students” (Deal & Peterson, 1999, pp. 2–3).

While these definitions are helpful in providing a general notion of the types of things associated with the concept of culture, we find them characteristically ambiguous, defining the concept in very broad nonspecific terms.

Ambiguity in definitions of culture may be due in part to the elusive, intangible nature of the construct, rendering it difficult to define or directly observe (e.g., Halsall, 1998; Stoll & Fink, 1996). For example, how does one assess “the lens through which one views the world” (Hargreaves, 1994) or how does one compare “bodies of solutions” (Owens, 2001)?

Rationale for developing a new model of culture

Many researchers have linked the terms school culture, school climate, or organizational culture to school effectiveness or school improvement in some fashion. Both school culture and school climate have been researched as mediating variables, which ultimately affect student achievement (e.g., Deal & Kennedy, 1983, 1994; Deal & Peterson, 1999; Lieberman, 1990; Little, 1982; Sarason, 1971, 1990, 1996; Stoll & Myers, 1997). Several researchers have identified research on school culture and/or climate as a vital part of school improvement (Stoll & Fink, 1996). However, when the uses of the terms school culture and school climate are explored, across various literatures and disciplines, the need for conceptual clarity becomes all too clear.

The concepts of climate and culture are very similar, though they emanate from different research traditions and research communities. Hoy et al. (1991) noted that school and organizational climate are typically viewed from a psychological perspective, while school culture is viewed from an anthropological perspective. Freiberg (1999) asserts that both traditions, the psychological with its use of validated survey instruments and the anthropological with its reliance on data sources such as stories discussions, student drawings, teacher and student journals, interviews, videos, and ambient noise, have merit. Some organizational studies distinguish between climate and culture by defining climate in terms of behavior and culture in terms of values and norms (Heck & Marcoulides, 1996; Hoy, Tarter, & Bliss, 1990).

We observed that many, though not all, climate definitions were more specific and explicit, while most culture definitions tended to be more general and holistic. We believe this has much to do with the research orientations from which they emanate. Research on school climate tends to involve quantitative analyses, while school culture is more frequently researched qualitatively (Hoy et al., 1991; Owens, 2001).

We also noted that many climate variables seemed to be things that could also have been studied under the definitions provided for culture. For example, could not perceptions of academic futility or degree of teacher push (Teddlie & Stringfield, 1993) also be considered manifestations of sets of shared beliefs that closely knit a community together (from Deal & Peterson’s 1999 definition of culture)? One possibility that might explain the similarity in between writings about these concepts and consequently lead to their confusion was that climate and culture were not actually separate constructs, but components of one broader construct that had been explored separately, in different ways by diverse research communities. The more we explored the literature on culture and
climate, the more this possibility seemed to be a plausible explanation for the seeming overlap or blurring (Hoy et al., 1991) of these terms.

J. van Maanen (personal communication, 1997, quoted in Cameron & Quinn, 1999, p. 17) explained that a major problem in organizations needing to change their cultures is that “no key elements or dimensions have been identified, and no common perspective is available to even help the conversation get started. Change doesn’t occur because it is difficult to know what to talk about and what to focus on.” Though the framework presented here is still in the developmental stages, we feel that it might be useful to those interested in studying the internal characteristics of schools by providing a common language to discuss and compare school culture. This is essential if one wants to test the validity of assertions that school culture is a major determinant of school improvement.

Our framework is primarily applicable to the study of school culture at the level of the individual organization and is not suitable for the study of culture at smaller units such as classrooms or subcultures within the school, nor is it appropriate for studying culture at broader levels such as the national level. We do not assert that this is the only valid way to understand school culture, but offer the model as a means of understanding key elements of school culture in a way that could be instrumental in fostering changes and improving student academic achievement.

Methods for developing the model

Overview of the conceptualization process

Literature reviews were conducted in stages, first with a very broad situative perspective (Borko, 2004), that spanned several disciplines, to arrive at a broad general understanding of what various disciplines and research communities mean when they speak of culture or climate. Then, the focus narrowed to include only recent works within the field of education that examined culture or climate in relation to increasing student academic achievement in greater depth. Early conceptualization efforts included extracting definitions, identifying and clustering aspects of culture and climate found in the literature. Little, if any, attention was paid at this time to theoretical relationships between components of culture, as we were still trying to understand concretely what had been studied in the name of culture or climate.

It was only once we were well into this process that it became evident that there was little available in terms of theory explaining how these elements might be related. We then returned to the literature to search for theoretical works that would provide a key to understanding how these concepts might be related. The work of Schein (1985, 1992) on organizational culture seemed to unify culture and climate as levels of the same construct (see section on levels of culture). This led to the organization of the data into a crude model.

Finally, we returned to the literature to search for frameworks used by educational researchers to assess the comprehensiveness of our model against the comprehensiveness of other reputable frameworks for studying the internal operations of schools. We formally compared 10 frameworks to the new model of culture; half of these had not been consulted in any meaningful way prior to the validation phase of the study. The ones that had been used previously had been used in a completely different fashion, in that we only initially examined the variables listed in order to compile a “master list” of components of culture. In the final analyses, we considered intact frameworks. These comparisons helped us to identify possible oversights or deficits of our model. Our model appeared to incorporate most aspects of the 10 frameworks used for comparison and was more inclusive than most of them.
We also examined various aspects of the works studied, including terminology, definitions, descriptions, clues as to meaning of the concept, research methods employed, types of data used, indicators, attributes, characteristics, or component parts mentioned, and conclusions reached. Extracting these elements helped us assess the consistency among the works examined (Kuhn, 1977) and to arrive at a better understanding of how these terms have been most frequently used across the disciplines over the past 25 years.

The Constant Comparative Method (CCM) (Glaser & Strauss, 1967; Lincoln & Guba, 1985) was used to “continually compare specific incidents in the data and simultaneously code and analyze data in order to develop and refine concepts, identify their properties, explore their relationships to one another, and integrate them into coherent theory” (Taylor & Bogdan, 1998, p. 137). The CCM allowed us to compare different pieces of data, to “tighten up” the categories, and proceed to higher levels of conceptualization.

CCM also worked well because we did not begin with a specific model in mind, but collected data on the phenomenon of interest (i.e., school culture and school climate, as they relate to school improvement) and then employed inductive reasoning to generate a model. The CCM has been referred to as one of the most thoroughly inductive processes available to the qualitatively oriented researcher (e.g., Berg, 2004; Glaser & Strauss, 1967; Le Compte & Preissle, 1993).

**Research traditions and methods associated with the terms**

Across the literatures surveyed, striking similarities were noted in the treatment of school culture, organizational culture, and school climate, although they are associated with different research communities and traditions. A question emerged as to whether these concepts are substantively different or whether they are close enough in essence to be considered different treatments of the same construct by different research communities. An initial overview of the literature led to the following four generalizations:

- The term *climate* is used more consistently by those engaging in quantitative investigations (e.g., school effectiveness researchers), while the term *culture* is used more frequently by those who utilize more qualitative methods (anthropologically oriented educational researchers).
- Considerable overlap exists in the types of variables examined by school effectiveness researchers studying school climate (e.g., Brookover et al., 1978; Levine & Lezotte, 1990; Teddlie & Stringfield, 1993) and more anthropologically oriented educational researchers studying school culture (e.g., Deal & Kennedy, 1982; Deal & Peterson, 1999; Sarason, 1971, 1990).
- There is considerable overlap in the definitions of school climate and school culture among different researchers, even within the same tradition.
- The terms school climate and school culture are frequently used interchangeably in much of the published educational literature (e.g., Levine & Lezotte, 1990, pp. 9–10), as if they were commonly thought of as synonyms.

These generalizations were insufficient evidence for drawing reliable assumptions about the nature of the constructs and determining whether these terms represented separate constructs or differing aspects of the same theoretical construct; therefore, we turned to Kuhn’s (1977) work on analyzing and comparing theories, for help in making this determination.
Consistency and congruence of the findings

Kuhn (1977) lists consistency as a major consideration in choosing between theories (Bernstein, 1983). Therefore, we examined the extent to which the ideas presented in the literatures are consistent with each other. We found that the conclusions of many works on climate seemed to resemble the conclusions reached by those researching culture (e.g., Argyris & Schon, 1976; Deal & Peterson, 1999; Hargreaves, 1994; Schein, 1985) (see Figure 1, step 3B, 1). This lent credibility to the hypothesis that the various bodies of research describe different aspects of the same construct and that they all fit together in a complementary fashion. This hypothesis was qualitatively tested by attempting to tie together conceptually consistent bodies of work to ascertain the extent to which the theories fit together logically to create a more complete construct.

One inconsistency in the literatures was the way the two communities seemed to perceive their relationship to each other. Anderson (1982) listed four groups of climate factors, one of which was culture (defined as belief systems and values). Several other climate researchers seemed to build their research upon this concept of climate (e.g., Creemers & Reezigt, 1999; Hoy et al., 1991). However, if one looks back to the definitions of culture presented previously, it is easy to see that culture researchers view culture as the broader, all-inclusive concept. Hoy et al. (1991) noted that both concepts are attempts to identify significant properties in organizations, with culture focusing on shared assumptions and climate focusing on shared perceptions; they also say that, although

Figure 1. The process of conceptualizing school culture.
this difference is not large, they find it real and meaningful. However, Schein’s (1985, 1992) description of the levels of culture seems to incorporate perceptions of values (the primary method used to study climate) in what he referred to as the second level of culture, espoused values (see levels of culture). Ultimately, it was our determination that, given the specific definitions of climate and the broad definitions of culture, most of the climate studies could fit neatly inside of the concept of culture, although the reverse was not necessarily true. Attributes studied and findings of many culture studies were too broad to fit the specific ways in which climate was frequently defined. Figure 1 provides an overview of the process that guided this research.

Kuhn (1976) also pointed out that, while theories may be incommensurable (i.e., share no common language or method of point-by-point comparison), this does not mean they cannot be compared. CCM (e.g., Glaser & Strauss, 1967; Lincoln & Guba, 1985; Strauss & Corbin, 1998) was used to unitize and categorize the non-numeric information and helped us understand similarities and differences in the usage of the terms school climate, school culture.

The works of researchers examining organizational culture in non-educational contexts were explored, because some seemed complementary to their counterparts in the field of education. We identified established theory (Schein, 1985, 1992) in business management and the sociology of organizations that seemed pertinent to gaining a better understanding of school culture. The concepts and the findings discussed as aspects of organizational culture appeared highly relevant to the study of the internal organizational culture of schools. Hence, we determined that school culture is a context-specific branch of organizational culture and that accepted organizational theory, such as that of Schein, can help inform and interpret research on culture in educational organizations (e.g., schools).

The levels of culture

Schein’s (1985, 1992) work on organizational culture and organizational change, particularly his description of the levels of culture (i.e., artifacts, espoused beliefs, basic assumptions, see Figure 2), provided the key framework for piecing together the school effectiveness findings on the importance of the psychosocial construct of school climate (Levine & Lezotte, 1990; Teddlie & Reynolds, 2000) and the more anthropological concept of school culture found in works such as by Deal and Kennedy (1982, 1983) and Deal and

![Figure 2. Uncovering the levels of culture. Source: Schein (1992, p. 17).](image-url)
Peterson (1999). Schein indicates that organizational culture manifests itself at three distinct levels: artifacts, espoused beliefs, and basic assumptions (see Table 1). Schein’s theory is consistent with the findings of other researchers (e.g., Corbett, Firestone, & Rossman, 1987) who studied organizational culture in educational settings.

Schein’s (1985, 1992) second level, espoused beliefs, involves participant perceptions and has been researched extensively in the school effectiveness tradition by using psychometric methods to survey participants’ beliefs and attitudes. These data are typically aggregated at the level of the school and used to describe the psychosocial construct of school climate.

The base level of Schein’s (1985, 1992) theory of organizational culture is Basic Assumptions, which are a complex set of shared tacit understandings about the nature of things and the best ways to handle situations and problems that occur in the organization. Schein says that these are typically so taken for granted that the organization members may not even be conscious of them, much less be able to articulate them on a survey or in an interview. Hence, the study of this level of culture necessitates the use of more anthropological methods, such as ethnographic observations and interviews. Figure 3 illustrates the congruence of the separate but similar bodies of research in school effectiveness and organizational culture, which we subsequently came to view as related, despite the different research traditions from which they emanate.

Table 1. Schein’s (1985, 1992) levels of organizational culture and associated research methods.

<table>
<thead>
<tr>
<th>Schein’s Levels of Organizational Culture</th>
<th>Conceptually Similar Constructs</th>
<th>Social Science Discipline Associated With This Type of Inquiry</th>
<th>Appropriate Research Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Artifacts</td>
<td>Symbolic Representations</td>
<td>Anthropology</td>
<td>Observation, Interviews, Surveys, Structured Interviews</td>
</tr>
<tr>
<td>Espoused Beliefs</td>
<td>Organizational Climate</td>
<td>Psychology, Social Psychology, Sociology</td>
<td>Observations, Loosely or Non-structured Interviews</td>
</tr>
<tr>
<td>Basic Assumptions</td>
<td>Organizational Culture</td>
<td>Anthropology</td>
<td></td>
</tr>
<tr>
<td></td>
<td>School Culture</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 3. Integration of school effectiveness research into Schein’s (1985, 1992) levels of organizational culture.
Differing terms, research traditions, and methods: same construct

When the literature on school climate was examined in conjunction with the organizational management theory of Schein (1985, 1992), it was noted that descriptions of school climate resembled Schein’s description of espoused values as ideas and values that participants articulate when asked what they believe about their organization or work (Schein, 1992). It seemed probable that psychometric surveys of perceptions frequently used to study school climate are ways of eliciting espoused beliefs.

Likewise, writings on school culture closely resemble what Schein (1985, 1992) refers to as basic assumptions. Schein’s definition of artifacts and their role in organizational culture again fits with established anthropological methods typically associated with the study of school culture. Table 1 shows how Schein’s levels of culture match up with methods typically associated with studies of school culture and school climate.

Applying Schein’s (1985, 1992) theory to the school context lends support to the idea that school culture and school climate are component parts of the same construct, which has been studied differently within separate research traditions. Schein (2004, p. 13) lists school climate as a category used to describe culture. We found the findings from the research bases for both of these terms extremely consistent. Therefore, we conclude that the concepts of school culture and school climate have little substantive difference but are different levels of culture that have been researched differently in various research communities.

Analyses of the indicators yield the dimensions of culture

To arrive at a concrete understanding of what constitutes culture or climate, we compiled a list of indicators of culture from variables, attributes, characteristics, terms, and concepts found in the literature. Indicators were clustered into groups based on similar concepts. Groups were separated and/or collapsed so that similar terms or attributes remained together. Once the groupings seemed more or less stable, we articulated the theme that was central to each of the clusters of indicators. This process was useful in helping to name and define the dimensions of culture.

Four separate groups of indicators of culture emerged across the works surveyed. These groups are henceforth referred to as “The Dimensions of Culture”. These processes led to a new definition of school culture as the shared basic assumptions and espoused beliefs that exist in the Professional Orientation, Organizational Structure, Quality of The Learning Environment, and Student-Centered Focus of the school that determine and sustain the norms of behavior, traditions, and processes particular to a specific school. This definition incorporates the elements of both culture and climate studies and addresses the levels of culture, though it does not make explicit mention of artifacts, since these are simply physical representations of espoused values or shared assumptions.

Results: the new model of school culture

Defining the dimensions of school culture

The new integrated model of culture describes school culture as being comprised of four different dimensions: (I) Professional Orientation, (II) Organizational Structure, (III) Quality of the Learning Environment, and (IV) Student-Centered Focus. Definitions of these dimensions of culture are provided in Figure 4.
I. Professional Orientation

Professional Orientation involves the professional lives of the teachers. It specifically refers to indicators that faculty members are individually or collectively involved in professional growth and development centered on student learning. Professional Orientation incorporates what has been referred to as “professionalism” (Louis, Kruse, & Associates, 1995), “professional learning community” (DuFour & Eaker, 1998; Newmann & Wehlage, 1995), “norms of collegiality” (Little, 1982), “teacher professionalization” (Darling-Hammond, 1990; Little, 1990), “collaborative cultures” (Lieberman, 1990), “organizational learning” (Argyris & Schon, 1976), and “learning organizations” (Senge et al., 2000).

The name Professional Orientation was selected over other possible choices, such as “professional learning community”, because the term orientation connotes the inclusion of psychological and attitudinal constructs. Such intangibles as the teachers’ expectations for students (Brookover et al., 1978; Teddlie & Stringfield, 1993), teachers’ sense of self-efficacy (Bandura, 1977), teacher beliefs about academic futility (Brookover et al., 1978), motivation (Bandura, 1977, 1999), and commitment have been studied and identified as characteristics of effective schools. Reynolds and Teddlie (2000, p. 153) state the need for the inclusion of these types of factors in future research on effectiveness processes: “… Most studies have used formal organizational factors but few of these, and few in total have used the culture of schooling in terms of teachers’ attitudes, perceptions, goals etc.”

II. Organizational Structure

Organizational Structure takes into account organizational level factors affecting the way business is conducted at the school. This includes the type of leadership that exists at the school (Harris et al., 2003; Leithwood, Jantzi, & Steinbach, 1999; Senge, 2000), who is involved in leadership activities, the development of vision and/or mission statements, the formulation of goals or action plans, the degree of consensus and commitment regarding organizational goals, school policies, internal accountability (Newmann & Associates, 1996), the importance placed upon externally imposed mandates and accountability, implementation of policy and the development of school policies and protocols, including the degree of formality among organizational members (Halpin & Croft, 1963),
communication patterns and relationships within the school, the way time, space, and other resources are used, and patterns of communication with those outside the school.

Numerous researchers (Deal & Peterson, 1999; Leithwood et al., 1999; Schein, 1992) have indicated that these formal organizational level elements of leadership, governance, structure, roles, relationships, and responsibilities (Murphy, 1991) can either block or facilitate a school’s capacity to sustain meaningful change (Hargreaves, 1995). Hence, the organizational structure is an important component in the school culture, because these leadership and managerial elements directly impact internal operations of the school.

**Dimension III: Quality of the Learning Environment**

The quality of a student’s learning experiences is a major factor in determining the extent to which a student achieves academically (Slavin, 2000). Dimension III of school culture is concerned with student construction and utilization of knowledge (American Psychological Association [APA], 1997). Observations of school functions in Dimension III are aimed at documenting and describing the extent to which students are routinely involved in meaningful, cognitively challenging experiences. The intent here is not to determine how well teachers teach, nor whether students are engaged on task, but rather to get a feel for the intellectual rigor (Newmann & Associates, 1996; Newmann & Wehlage, 1995) that exists across the classes at the school. High-quality learning environments are those which offer opportunities for students to interact with each other, teachers, and others beyond the class and to manipulate information and use it for real world purposes (APA, 1997; Newmann & Associates, 1996, Schoen, in press).

**Dimension IV: Student-Centered Focus**

This dimension is concerned with assessing the extent to which the needs of individual students are met by the school’s programs, policies, rituals, routines, and traditions. Literature on effective schools (Levine & Lezotte, 1990; Teddlie & Reynolds, 2000) indicates that parents in these schools are actively involved in a number of ways. Dimension IV examines the type and extent of parental involvement, student support services, and differentiated instructional strategies (Gregory & Chapman, 2002) based on students’ unique interests and abilities. This dimension also includes the extent to which achievement data are disaggregated and analyzed at the level of the individual student, as well as the extent to which student data are used to make decisions about instruction. These types of considerations affect students’ sense of self-efficacy (Bandura, 1977, 1999) and can affect the achievement of individual students.

**Discussion**

**Putting it all together**

Piecing together the results of our analyses yielded a conceptualization of school culture as a complex construct comprised of four dimensions that exist at three different levels of abstraction: artifacts, espoused beliefs, and basic assumptions (Schein, 1992). The new concept of culture is graphically represented in Figure 5. The interlocking puzzle pieces symbolize the overlapping and complementary nature of the dimensions. One example of an overlap of the dimensions can be found if one looks at the concept of teacher (or distributive) leadership: This could be considered a Dimension I, Professional Orientation indicator or a Dimension II Organizational Structure indicator, depending on what type of
teacher leadership was being considered. Teachers leading inquiries to improve curriculum or instruction would be considered Dimension I, while teacher participation in shaping policy, shared decision-making, or strategic planning would more appropriately be considered an indicator of Dimension II.

Verifying the new model of school culture

Intellectual validation involved comparing this model to existing frameworks with established utility. Theoretically, culture is a distinguishing factor between effective and ineffective schools; therefore, if these dimensions embody the essence of school culture, they should have predictive validity for determining the effectiveness of school
improvement efforts. The new dimensions of school culture were specifically compared to and found to be consistent with the following works (Schoen, 2005):

- Getzels and Guba’s organizational theory (1957);
- Murphy’s descriptions of restructuring (1991, 1992);
- Levine and Lezotte’s characteristics of effective schools (1990);
- Stoll and Fink’s categories of effective schools (1996);
- Teddlie and Reynolds’s processes of effective schools (2000);
- Newmann and Associates’ authentic pedagogy (1995, 1996);
- Fullan’s inside story of school improvement (2000);
- Hopkins’ Improving the Quality of Education for All (IQEA) propositions (1994);
- Hopkins and Ainscow’s relationships between school and classroom conditions (1993);
- Schein’s levels of organizational culture (1985, 1992).

A representative sample of some of these comparisons is provided in the following section.

Organizational theory and the dimensions of school culture

Getzels and Guba (1957) set forth the concept that organizations serve both nomothetic (organizational) purposes and ideographic (individual) purposes. Senge et al. (2000), among others, have built on the idea that change processes are most successful when they address the needs of the organization as well as those of the individuals in the organization. While there are multiple and diverse players who play vital roles in schools, the primary players involved in instructional exchanges in schools are the students and the faculty, both of which have collective and individual needs; therefore, our study concentrated most heavily on understanding the perceptions of these groups. Table 2 illustrates how the design of the dimensions of school culture takes into account the individual and organizational aspects of both teachers and students.

Figure 6 shows how this concept of culture incorporates both individual (ideographic) and organizational (nomothetic) aspects of the culture (Getzels & Guba, 1957). Dimensions I and III deal more with the experience of individual teachers and students, while Dimensions II and IV focus more on the functions of the school as an organization. Furthermore, Dimensions I and II, displayed on the top of the grid, involve the experiences of the faculty, while Dimensions III and IV pertain more to the experiences of the students and parents. However, as noted previously, there are some areas of overlap that require researcher discretion: for example, parental participation could be an indicator in any dimension, depending on the type of participation that was being considered. Finally, Figure 6 shows the interrelationships of the dimensions, in that

<table>
<thead>
<tr>
<th>Focus</th>
<th>Ideographic (individual level)</th>
<th>Nomothetic (school level)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meeting Faculty Needs</td>
<td>Dimension I. Professional Orientation</td>
<td>Dimension II. Organizational Structure</td>
</tr>
<tr>
<td>Meeting Student Needs</td>
<td>Dimension III. Quality of the Learning Environment</td>
<td>Dimension IV. Student-Centered Focus</td>
</tr>
</tbody>
</table>
Dimension I should have a direct bearing on Dimension III; likewise, Dimension II should affect Dimension IV.

**Categories of effective school characteristics and the dimensions of culture**

Stoll and Fink (1996) outline 12 attributes of effective schools, grouped into three broader categories: A Common Mission, an Emphasis on Learning, and A Climate Conducive to Learning. When compared to Stoll and Fink’s broad categories of characteristics, the dimensions of school culture include similar features. Table 3 shows how Stoll and Fink’s (1996) categories correspond to the dimensions of school culture.

**Effective school processes and the dimensions of culture**

Reynolds and Teddlie (2000) describe the processes utilized by effective schools and group them into nine functions. Their work is based on a synthesis of literature in the United States and the United Kingdom. The processes of effective schools are presented in table form, with the corresponding dimension of school culture to the right of each component. Table 4 illustrates that the design of the proposed dimensions of school culture takes these school processes into account.

![Figure 6. Observing the four dimensions of school culture.]

<table>
<thead>
<tr>
<th>Characteristic of Effective Schools (Stoll and Fink, 1996)</th>
<th>The Dimensions of School Culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Common Mission</td>
<td>II. Organizational Structure</td>
</tr>
<tr>
<td>Emphasis on Learning</td>
<td>I. Professional Orientation</td>
</tr>
<tr>
<td>A Climate Conducive to Learning</td>
<td>III. Quality of the Learning Environment</td>
</tr>
<tr>
<td></td>
<td>IV. Student-Centered Focus</td>
</tr>
</tbody>
</table>
Table 4. Processes of effective schools and the dimensions of school culture.

<table>
<thead>
<tr>
<th>Processes of Effective Schools (Teddlie &amp; Reynolds, 2000, p.143)</th>
<th>The Dimensions of School Culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Effective Leadership</td>
<td></td>
</tr>
<tr>
<td>a. being firm and purposeful</td>
<td>II, I, III</td>
</tr>
<tr>
<td>b. involving others in the process</td>
<td>II</td>
</tr>
<tr>
<td>c. exhibiting instructional leadership</td>
<td>I, II</td>
</tr>
<tr>
<td>d. frequent personal monitoring</td>
<td>I, III, IV, II,</td>
</tr>
<tr>
<td>e. selecting and replacing staff</td>
<td>II, I</td>
</tr>
<tr>
<td>2. Effective Teaching</td>
<td></td>
</tr>
<tr>
<td>a. maximizing class time</td>
<td>III, II</td>
</tr>
<tr>
<td>b. successful grouping &amp; organizing</td>
<td>I, III, IV</td>
</tr>
<tr>
<td>c. exhibiting best teaching practices</td>
<td>I, III</td>
</tr>
<tr>
<td>d. adapting practice to particulars of the classroom</td>
<td>III, IV</td>
</tr>
<tr>
<td>3. Developing &amp; Maintaining a Pervasive Focus on Learning</td>
<td></td>
</tr>
<tr>
<td>a. focusing on academics</td>
<td>I, III</td>
</tr>
<tr>
<td>b. creating an orderly environment</td>
<td>IV, III, II</td>
</tr>
<tr>
<td>c. emphasizing positive reinforcement</td>
<td>IV, III, II</td>
</tr>
<tr>
<td>4. Producing a Positive School Culture</td>
<td></td>
</tr>
<tr>
<td>a. creating a shared vision</td>
<td>II</td>
</tr>
<tr>
<td>b. creating an orderly environment</td>
<td>IV, III, II</td>
</tr>
<tr>
<td>c. emphasizing positive reinforcement</td>
<td>IV, III, II</td>
</tr>
<tr>
<td>5. Creating High &amp; Appropriate Expectations for All</td>
<td></td>
</tr>
<tr>
<td>a. for students</td>
<td>I, III, II</td>
</tr>
<tr>
<td>b. for staff</td>
<td>II, I</td>
</tr>
<tr>
<td>6. Emphasizing Student Responsibilities &amp; Rights</td>
<td></td>
</tr>
<tr>
<td>a. responsibilities</td>
<td>III, IV, I,</td>
</tr>
<tr>
<td>b. rights</td>
<td>IV, II</td>
</tr>
<tr>
<td>7. Monitoring Progress at all Levels</td>
<td></td>
</tr>
<tr>
<td>a. school level</td>
<td>II, IV</td>
</tr>
<tr>
<td>b. classroom level</td>
<td>I, III</td>
</tr>
<tr>
<td>c. student level</td>
<td>III, IV</td>
</tr>
<tr>
<td>8. Developing Staff Skills at the School Site</td>
<td></td>
</tr>
<tr>
<td>a. site based</td>
<td>I, II</td>
</tr>
<tr>
<td>b. integrated with ongoing professional development</td>
<td>I, II</td>
</tr>
<tr>
<td>9. Involving Parents in Appropriate &amp; Productive Ways</td>
<td></td>
</tr>
<tr>
<td>a. buffering negative influences</td>
<td>II</td>
</tr>
<tr>
<td>b. encouraging productive interactions with parents</td>
<td>IV, II</td>
</tr>
</tbody>
</table>

*When two or more dimensions are listed, they are in order of relevance to the corresponding effective schools process.

The Improving the Quality of Education for All (IQEA) project, highlighted in *The International Handbook of School Effectiveness Research* (Teddlie & Reynolds, 2000), was a school change initiative to help implement centralized policy and create conditions within schools to sustain the teaching-learning process. The IQEA program of capacity building was a great success and helped to document factors that contributed to a “moving schools” ethos (Rosenholtz, 1989). A series of propositions were developed to describe ways a school deals with problems or circumstances and establishes a school culture that meaningfully empowers teachers (Hopkins, 1995). Table 5 details the IQEA propositions and the dimension(s) of school culture that deal specifically with the presence or absence of these conditions.
Implications for research and further theoretical development

The new model of school culture seems to bring with it the need for research designs that include a variety of data sources and methods that include data on all the dimensions and levels of culture. Level 1, Basic Assumptions of culture are defined as a complex set of shared, but tacit understandings about the nature of things and the best ways to handle situations and problems; these are not directly observable but must be inferred from a combination of data sources. Since basic assumptions elude conscious awareness (Schein 1985, 1992), it is doubtful that they would be adequately documented in self-report data such as responses on a survey. Hence, the study of this level of culture necessitates the use of anthropological methods such as ethnographic observations over extended time to note behavioral norms. Follow-up interviews may be helpful in interpreting what observed norms mean to participants.

However, Schein’s (1985,1992) second level, espoused beliefs, involves participant perceptions and statements of espoused beliefs. This suggests the use of psychometrics, such as the surveys that have been used extensively to study climate in the school effectiveness tradition. This seems to remain a valid way of studying the second level of culture. It may also be advisable to include analyses of written statements published by the school or written by the faculty (e.g., mission statements, school improvement plans, handbooks, and websites).

<table>
<thead>
<tr>
<th>IQEA Propositions (Hopkins, 1994)</th>
<th>Dimensions of School Culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Schools will not improve unless teachers, individually and collectively, develop. While teachers can often develop their practice on an individual basis, if the whole school is to develop then there need to be many staff development opportunities for teachers to learn together.</td>
<td>I</td>
</tr>
<tr>
<td>2. Successful schools seem to have ways of working that encourage feelings of involvement from a number of stakeholder groups, especially students.</td>
<td>II, IV</td>
</tr>
<tr>
<td>3. Schools that are successful at development establish a clear vision for themselves and regard leadership as a function to which many staff contribute, rather than a set of responsibilities vested in a single individual.</td>
<td>I, II</td>
</tr>
<tr>
<td>4. The coordination of activities is an important way of keeping people involved, particularly when changes of policy are being introduced. Communication within the school is an important aspect of coordination, as are the informal interactions that arise between teachers.</td>
<td>I, IV</td>
</tr>
<tr>
<td>5. Those schools which recognize that inquiry and reflection are important processes in school improvement find it easier to gain clarity and establish shared meanings around identified development priorities and are better placed to monitor the extent to which policies actually deliver the intended outcomes for pupils.</td>
<td>I, IV</td>
</tr>
<tr>
<td>6. Through the process of planning for development, the school is able to link its educational aspirations to identifiable priorities, sequence those priorities over time, and maintain a focus on classroom practice.</td>
<td>I, III</td>
</tr>
</tbody>
</table>

*I = Professional Orientation, II = Organizational Structure, III = Quality of the Learning Environment, IV = Student-Centered Focus.

Table 5. IQEA propositions and the dimensions of school culture.
Owens (2001) recommends using a combination of self-report/perceptual data and observations to document the manifestations of culture that include stories, myths, hero/heroines, values, beliefs, traditions, rituals, history, and behavioral norms (Owens, 2001; Owens & Steinhoff, 1988). Maslowski (2006) also suggests triangulating a variety of qualitative and quantitative data sources to study culture, because the weaknesses of one method are compensated by similar findings with other methods.

This model, along with research designs that embrace both traditional psychological methods and ethnographic traditions derived from anthropology, may assist researchers in understanding school culture in a more comprehensive way and provide a common language that can be used to assist practitioners to improve undesirable aspects of their culture.

Limitations

The current study does not address external influences upon school culture, possible variations in school culture across types of societies, or non-PK12 school settings. Maslowski (2006) identifies three aspects of culture that can be studied including content (the substance – usually organized into dimensions or typologies), homogeneity (the extent to which assumptions, values, or norms are shared by the staff), and strength (the extent to which the culture exerts pressure upon school personnel to behave in concert with its dictates). The new model of culture explicitly addresses content through the proposed dimensions, but suggests the use of mixed-method studies (triangulating quantitative and qualitative data) to determine the homogeneity and strength of aspects of the culture. Nor does this article present a specific instrument or inventory but rather focuses on the theoretical aspects of culture, as it relates to climate and to school improvement. The framework is intended for use as a guide to be used to develop inventories and research designs to assess and compare school cultures. The concept of school culture in this article is predicated upon the presumption that a dominant pattern of behaviors and set of beliefs exists in each school. Though we acknowledge the possibility that subcultures may also exist within schools, the role of co-existing subcultures is not explored here. This topic may be explored in future research.

Further, since we are interested in school improvement, this article looks at culture with regard to its role in school change. We do recognize, however, that one of the primary functions of culture in a school is to provide stability. The intent of our research was to investigate the relationship between school culture and school improvement; consequently, we screened out works predicated upon the stabilizing aspects of school or organizational culture. This meant that certain bodies of work were set aside and not included in the final phases of our analyses. This specifically included works that focused upon organizational health or well-being (e.g., Hoy et al., 1991; Miles, 1969; and similar studies). While we acknowledge the importance of these works, they were omitted from these analyses because a healthy organization is defined as one that “not only survives in its environment, but continues to cope adequately over the long haul” (Miles, 1969 p. 378) – a definition that is built upon the stabilizing aspects of climate, rather than its role in organizational change. Interestingly, many of these works considered culture as a subdivision of climate. It is acknowledged that these frameworks are credible models of climate; however, their existence does not preclude the possibility that climate is more appropriately subordinate to the more overarching and inclusive construct of culture.

Our analyses focused on academic achievement as an outcome variable, as this was the most frequent outcome in the literature we consulted. However, we do not discount the
importance of other outcomes of schooling and see no reason why our model would not be predictive of student achievement across a wide spectrum of educational outcomes.

Future work on this framework will focus on contrasting it with competing frameworks (e.g., works that focus on cultural stability and health). This may yield interesting insights, since one could assume an inverse relationship might exist between the dynamics of change and the forces that determine stability. Hence, we submit this model not as an overriding “grand theory” that attempts to explain all aspects of school culture but as a viable option for understanding some of the more salient groupings of internal operational aspects of schools that may have a bearing on student performance.

School culture is a very broad construct. There are many aspects relevant to culture not addressed by this work; however, to reduce the project to manageable proportions, certain parameters were set, as discussed previously. We acknowledge the coexistence of competing frameworks and wonder if the construct of school culture is not large enough and complex enough that it can be understood in multiple ways. Therefore, we submit this model as one plausible way to study and explain certain phenomena, internal to schools, related to improving student outcomes.

Conclusion

Many researchers (Deal & Peterson, 1999; Halsall, 1998; Hopkins, 1995; Stoll & Fink, 1996) agree that school culture is a crucial variable in school improvement. Halsall (1998, p. 29) summarized that “one of the most consistent messages from the school improvement literature is that school culture has a powerful impact on any change effort.” Hopkins (1995, p. 85) asserted, “unless we address the issue of school culture ... there is little chance that school improvement will be achieved.” Therefore, we examined the construct of school culture, because it may hold answers as to how we might improve student learning in low-performing schools, a perpetual challenge for educational leaders across many contexts.

The new model of school culture (Figure 5) offers promise for developing studies that are comprehensive in nature but still specific enough to help practitioners and researchers alike to isolate broad areas for closer inspection. The model offers a framework for describing, discussing, and comparing school functions across four dimensions of school culture. The model also allows culture to be examined across three levels at which culture is manifested (Schein, 1985, 1992). Future research based on this model might be useful in generating thick descriptions (Geertz, 1973) and may produce more comprehensive understandings of sociocultural or organizational factors at the school level that facilitate or impede school improvement. Specifically, the new model of school culture may be useful in determining processes and functions associated with improving and non-improving schools and ascertaining the strength of the prevailing norms. This knowledge is the logical precursor to reculturing schools to achieve and sustain desired changes.

The dimensional structure allows for easier cross-school comparisons of culture, which could assist in ascertaining the primary areas of difference between effective and ineffective schools or improving and non-improving schools. Subsequent validation of the model will involve using it to describe school cultures in a variety of contexts, assessing how well it allows for generalizations about the relationship between school culture and school improvement, using results of cultural assessments to guide recultration processes and tracking changes in beliefs, processes, and learning outcomes. Thus, we hope to ascertain the predictive validity of the model as a viable tool for school improvement.
While this model may be general enough to be applicable to a wide range of PK-12 educational contexts, it should be noted that here to date, it has only been used to examine elementary level public schools in the USA. Future research is needed in use of this model to study schools across various contexts and settings to determine its usefulness in articulating the relationship between school culture and school improvement. It has been suggested that this model may prove useful for studying districts, as the organizational unit of analysis (Fullan, 2005); a study of this is already under way. Subsequent steps in validation of this model will include extending the comparisons to other models of organizational culture in non-educational settings.

Van Houtte (2005) and others have called for a clarification of the concept of school culture. We have set forth our ideas based on a synthesis of the existing literature, as it pertains to our research interests regarding school improvement. We believe the dimensional model presented here contributes to the knowledge base by providing a unified definition of what culture comprises across research traditions.

We also advance the propositions that climate constitutes one of the levels of culture and that both climate (defined here as espoused beliefs) and culture (assumptions) form school norms in four dimensions that collectively influence student achievement at the school level. This model of school culture offers practical utility for researchers, as well as for practitioners, looking for ways to increase student achievement. It is hoped that this model might provide a step forward toward bridging the gap between theory/research and policy/practice, by providing concrete feedback as to which aspects of the culture are most problematic in low-performing schools. Examples of its practical utility might include training leaders to develop school improvement plans that address all the dimensions of culture or using cultural assessments based on the new model to highlight dimensions of culture inhibiting school improvement and using cultural data to plot out a course of school rejuvenation and improvement. We hope this line of inquiry provides insights instrumental in transforming toxic cultures (Deal & Peterson, 1999) into effective schools.

Note
1. Earlier versions of this framework were presented at the 2004 American Sociological Association (Schoen, 2004) and the 2005 American Educational Research Association (Schoen & Teddlie, 2005).

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