Designing Democratic Communities

for Trust and Learning

Lisa A. W. Kensler, Ed.D.

April 2008


Dissertation Synopsis included as background information

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Designing Democratic Communities for Trust and Learning

Lisa Kensler, Ed.D.
Auburn University

Welcome & Check-in

Name
What sparked your interest in this session?
What do you hope to take away?
Overview

• Lessons from my experience
• Lessons from the literature
• Lessons from the data
• Lessons from your experience
• Bringing it all together

My Pathway

• Ecologist
• Educator
• Systems Thinking in Education Conferences
• Dysfunctional School System
• Graduate School

What do we need to know as educational leaders to lead healthy learning communities?
Learning Communities

Need TRUST to be effective

TRUST
What is it? How do we get it?

Democratic Community

Practices that examined democratic

Continuity and team learning

Democratic Learning Communities

Student Learning

Student learning improves with organizational learning

Conceptual Foundation
Conceptual Foundation

Student learning improves with organizational learning

Continuous and team learning depends upon trust

Student Learning

Learning Communities

Conceptual Foundation

Student learning improves with organizational learning

Continuous and team learning depends upon trust

Practicing democratic principles facilitates trust

Student Learning

Learning Communities

Democratic Community
Conceptual Model

Practicing Democratic Principles → Trust → Continuous & Team Learning

WorldBlu Democratic Design System™

<table>
<thead>
<tr>
<th>Democratic Principle</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose &amp; Vision</td>
<td>When an organization and the individual know their reason for existing and have a sense of intentional direction.</td>
</tr>
<tr>
<td>Dialogue + Listening</td>
<td>When we listen and engage in conversations in a way that brings out new levels of meaning and connection.</td>
</tr>
<tr>
<td>Decentralization</td>
<td>When power is appropriately shared among people throughout the organization.</td>
</tr>
<tr>
<td>Fairness + Dignity</td>
<td>When each person is treated justly and regarded impartially.</td>
</tr>
<tr>
<td>Accountability</td>
<td>When each person and the organization as a whole is responsible to each other and their community for their actions.</td>
</tr>
<tr>
<td>Individual + Collective</td>
<td>When individuals understand the unique contribution they make towards achieving collective goals.</td>
</tr>
<tr>
<td>Transparency</td>
<td>When ideas flow freely and information is openly and responsibly shared.</td>
</tr>
<tr>
<td>Choice</td>
<td>When each person is encouraged to exercise their right to choose between a diversity of possibilities.</td>
</tr>
<tr>
<td>Integrity</td>
<td>When each person steadfastly adheres to high moral principles.</td>
</tr>
<tr>
<td>Reflection + Evaluation</td>
<td>When there is a commitment to continuous feedback and development and a willingness to learn from the past and apply lessons to improve the future.</td>
</tr>
</tbody>
</table>
Faculty Trust

<table>
<thead>
<tr>
<th>Aspect of Trust</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benevolence</td>
<td>The confidence that one’s well being, or something one cares about, will be protected and not harmed</td>
</tr>
<tr>
<td>Honesty</td>
<td>The correspondence between words and actions; the willingness to accept responsibility for one’s actions, authenticity</td>
</tr>
<tr>
<td>Openness</td>
<td>The extent to which relevant information is not withheld</td>
</tr>
<tr>
<td>Reliability</td>
<td>The confidence that another can be counted on to meet one’s or the group’s needs</td>
</tr>
<tr>
<td>Competence</td>
<td>The confidence that another has the necessary skills to do the work expected</td>
</tr>
</tbody>
</table>

Trust is one’s willingness to be vulnerable to another based on the confidence that the other (principal, colleagues, clients) is benevolent, honest, open, reliable, and competent (Tschannen-Moran, M. (2004) Trust Matters. San Francisco: Jossey-Bass.)

The Data

- Sample
- Methods
- Results

See summary of dissertation for full explanation
Trust – a mediating variable

Trust explained 71% of the relationship between Democratic Community and Continuous & Team Learning

Function that best distinguishes high and low continuous & team learning groups

Decentralization

Purpose & Vision

Transparency

Integrity
Democratic Principles in their order of correlation (from high to low) to each of the other primary variables in the study

<table>
<thead>
<tr>
<th>Trust in Principal ($r = .71 - .51$)</th>
<th>Trust in Colleagues ($r = .54 - .27$)</th>
<th>Trust in Clients ($r = .33 - .19$)</th>
<th>Continuous &amp; Team Learning ($r = .64 - .53$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accountability</td>
<td>Accountability</td>
<td>Fairness &amp; Dignity</td>
<td>Decentralization</td>
</tr>
<tr>
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<td>Integrity</td>
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Possible Stock & Flow Diagram
My Current Question

How do we best inform the **design** of healthy democratic learning communities AND how do we best prepare educational leaders as **designers** of healthy democratic learning communities?

Your Experience

- Spend the next 20 minutes (approximately 10 minutes for each of you) discussing with a partner how your experience relates to the presentation thus far.
  - What resonates with you?
  - What puzzles you?
  - What conflicts with your own mental models?

  *Please be prepared to share with the group a summary of your conversation – diagrams are welcome!*
Bringing it all Together

Dynamic exchange of ideas integrating lessons from the presentation and participants’ experience into Stock & Flow and/or Causal Loop diagrams

What is missing in school cultures then is most schools, structurally and normatively, are not places where virtually every teacher is a learner all the time. This is the missing element in standards, qualifications, professional development and so on. The latter do not by themselves represent continuous professional learning.

Michael Fullan, 2006
LISA A. W. KENSLER - DISSERTATION SYNOPSIS – APRIL 2008

THE ECOLOGY OF DEMOCRATIC LEARNING COMMUNITIES

Introduction

“Democracy is the only system of organization that is compatible with perpetual change” (Slater & Bennis, 1964, 1990, p. 169). Slater and Bennis, first in 1960 and then revisited in 1990, presented a detailed rationale for why “democracy is inevitable.” They highlighted the responsiveness and adaptability of democratic organizations, but, said little about why individuals seem to learn their way through change so effectively in democratic environments; they focused far more on the increasing rate of change as the driver necessitating democracy.

Within the field of education, democracy has long garnered attention as a fundamental purpose of American public schools, education for democracy. This study did not enter the debate about how public schools should serve our democracy, but rather, explored the reasons why “democracy becomes a functional necessity whenever a social system is competing for survival under conditions of chronic change” (Slater & Bennis, 1990, p. 168).

American public schools are facing conditions of chronic change (Fullan, 2001). Effectively operating under conditions of chronic change implies an adaptive capacity, the ability to respond to changes with new ways of working that better align with the new conditions; for example, changing teaching strategies to better meet the needs of changing student demographics and needs. For the teachers in schools, the changes to new ways of teaching and working require learning. Why might democracy be better suited for learning than other social systems, was the overarching question of this study. The journey began with the review of two bodies of educational literature, the democratic community literature and the organizational learning literature. The rich qualitative descriptions of democratic school communities often made reference to high levels of trust among the members. The organizational learning literature made
reference to the need for trust. Using a new quantitative measure of democratic community, this study brought the democratic community, trust, and organizational learning literature together for the first time and used structural equation modeling (SEM) to test two a priori models. Model A (Appendix A) predicted that Faculty Trust (latent variable), acting as a mediator between Democratic Community (latent variable) and continuous & team learning (observed variable), is the primary reason that democratic school communities are better suited for learning. Model B (Appendix B) predicted that Democratic Community and Trust, in a reciprocal relationship, both contribute to explaining higher levels of continuous & team learning.

Conceptual Framework

The central concepts of this study were democratic community, faculty trust, and organizational learning. A brief review of the literature for each concept follows. Finally, the theoretical rationale provides an explanation for the hypothesized models.

Democratic Community

Prior to the present study, the empirical work related to democratic community has been limited to rich qualitative description of democratic school communities and democratic school leaders (Blase & Blase, 2001; Blase, Blase, Anderson, & Dungan, 1995; Cate, Vaughn, & O'Hair, 2006; Reitzug & O'Hair, 2002; Rusch, 1998). In all cases, democratic community was not defined as a static state or end state, but an ideal for schools to strive towards. Furman and Starratt (2002) presented a thorough deconstruction and reconstruction that culminated with the following definition:

Democratic community is processual and moral. It is the enactment of participatory processes of open inquiry in working for the common good in regard to both local and global concerns; it is guided by a social morality that recognizes the worth of individuals
and the social value of community (however temporal and provisional), celebrates difference, and understands the ultimate and pragmatic interdependence of all. (p. 116)

Furman and Starratt’s definition emphasized the processual nature of democratic community, the associated living that Dewey (1916) also emphasized. However, there has not yet been a means to measure the degree to which a school could be considered a democratic community.

Fenton (2002), working outside the education field, introduced a principle-based system for defining and measuring the practice of organizational democracy. Her WorldBlu Democratic Design System™ (WBDDS), derived from over a decade’s worth of research, analysis, and collaboration with scholars, politicians, and leaders from all over the world, provided the foundation to build a measurable definition of democratic community for schools. The WBDDS included ten essential democratic principles and their definitions. Empirical evidence of best practice from the effective schools research aligned well with the WBDDS (Appendix C) and further supported the relevance of the WBDDS to work in schools. The pilot study of the WorldBlu School Survey (WBSS) found this instrument that measured the teacher perceived practice of the ten democratic principles at the individual, leader, and systemic levels to be highly reliable and valid (Kensler, White, Caskie, & Fenton, 2005).

Faculty Trust

The interest in trust and its influence on organizational outcomes has grown dramatically in recent years. Over 1,100 papers in fields ranging from business and management to athletics, health care, and sociology have cited the 1995 publication of Mayer, Davis, and Schoorman’s integrative model of organizational trust (Schoorman, Mayer, & Davis, 2007). Researchers in this diverse array of fields have found that trust was related, directly and indirectly, to supporting positive organizational outcomes (Covey & Merrill, 2006; Dirks, 2000; Nooteboom & Six, 2003; Putnam, 1993; Tzafrir, 2005). Within the education field, the empirical work related to trust has
reported positive relationships between trust and student achievement (Bryk & Schneider, 2002; Goddard, Tschannen-Moran, & Hoy, 2001; Kensler & White, 2007), school effectiveness (Tarter, Sabo, & Hoy, 1995), organizational health (Hoy, Sabo, & Barnes, 1996), effective implementation of complex change (Louis, 2007), and teacher collaboration (Tschannen-Moran, 2001).

Tschannen-Moran’s (1998) measure of faculty trust is now the primary measure of trust used in the educational research. Tschannen-Moran defined trust as one’s willingness to be vulnerable to another based on the confidence that the other is benevolent, honest, open, reliable, and competent. Faculty trust includes teacher’s trust in their principal, in their colleagues, and in their clients (students and parents converged onto a single factor). Extensive evidence supports the instrument’s psychometric properties.

Organizational Learning

Since Senge (1990) popularized the theoretical concept of a learning organization, much has been written within and outside the field of education related to the capacity of an organization to integrate people and structures in order to move toward continuous learning and change (Yang, Watkins, & Marsick, 2004). Marks, Louis, and Printy (2000) found a positive link between a school’s capacity for organizational learning and student achievement. Within education, multiple strategies and programs, such as professional learning communities (PLCs) (DuFour & Eaker, 1998; Hord, 2004), have spread rapidly with the intent to increase organizational learning in schools. However, these programs have not always been successful (Scribner, Hager, & Warne, 2002) and too little empirical research has documented the organizational conditions facilitating organizational learning (Larson-Knight, 2000; Leithwood, Jantzi, & Steinbach, 1998; Scribner, Cockrell, Cockrell, & Valentine, 1999). (Silins, Mulford, &
Zarins, 2002). The Dimensions of the Learning Organization Questionnaire (DLOQ) includes two factors directly related to the perception of learning (Yang et al., 2004). These two measures, continuous learning and team learning provided the measure of this study’s outcome variable, continuous & team learning.

Theoretical Rationale

Qualitative studies of democratic school communities and leaders often mentioned trust as noticeably present in these communities (Allen & Glickman, 1998; Cate et al., 2006; O'Hair & Reitzug, 1997; Rusch, 1998). Research related to the development of professional learning communities and other strategies meant to increase organizational learning in schools noted the vital importance of trust among community members for effective learning and successful systemic change regardless of the facilitating structures put into place (Hipp, 2001; Hord, 1997; Louis, 2007; Scribner et al., 1999; Scribner et al., 2002). If, as Slater and Bennis (1960) suggested, democracy is the social system best suited for learning and change, then teachers in more democratic school communities ought to also perceive high levels of continuous and team learning. Faculty trust, as a mediating variable, may actually explain why democracy creates the conditions that nurture learning.

Although educational literature promotes the importance of democratic community, faculty trust, and organizational learning to schools, no empirical studies have integrated these concepts into a single model. And, in fact, there is scant research measuring democratic practice and its effects. Using a measurable, principle-based definition of democratic community, this study tested and compared two hypothesized models. The first model suggested that trust mediates the relationship between democratic community and organizational learning. The
second model suggested that democratic community and trust, as predictive of each other, both predict organizational learning.

Research Questions (See Appendix D for summary of data and analyses aligned to questions.)
1. Does Faculty Trust mediate the relationship between Democratic Community and continuous & team learning, as perceived by Pennsylvania and New Jersey middle school teachers? (Model A)
2. Is the relationship between Democratic Community and Faculty Trust reciprocal and do they both predict continuous & team learning? (Model B)
3. Is there a significant difference between the fit of the two nested models, Model A and Model B?
4. Does Democratic Community differ between the schools scoring in the top 25% and the bottom 25% on the continuous & team learning measure?

Method

Participants

The unit of analysis for this study was the school because the three variables, Democratic Community, Faculty Trust, and continuous & team learning were all properties of the school. After extensive recruiting, seventy-nine public middle schools from Pennsylvania and New Jersey agreed and qualified to participate in the study. The 79 schools did not differ significantly from the original random sample of 600 schools on either the distribution over the eight locale codes ($\chi^2 (7, N = 600) = 11.3, p > .05$) (Appendix E) or the proxy for school size, the number of students ($t(599) = .203, p > .05$). Schools with high numbers of minority students ($t(599) = 2.46, p < .05$) and students receiving free and reduced lunch ($t(599) = 2.87, p < .05$) were slightly
under represented in the group of participating schools (Appendix F). Further demographics of the school principals are presented in Appendix G. Although direct comparisons to the population’s sample were not possible, during the 2003-2004 school year, 85% of public secondary school principals were white and 74% were male in the United States. In the present study, of the participating school principals 92% were white and 69% were male.

Teachers within each school responded to one of three surveys, one survey for each variable in the study, thus reducing some of the potential effects from common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Schools with fewer than fifteen teacher completed surveys did not qualify for the study because fewer than five respondents per survey did not meet the standard set by Halpin (1959) and followed by a long line of Hoy’s and others’ studies (Hoy & Kupersmith, 1984; Hoy & Tschannen-Moran, 1999; Tarter et al., 1995). A total of 3028 teachers responded to one of the three surveys.

Data Collection

Middle school principals who agreed to invite their teachers to complete one of the three surveys during ten minutes of a regularly scheduled faculty meeting received a packet of teacher surveys, directions, and a postage paid return envelope in the U.S. Mail prior to their scheduled meeting. The directions requested that a teacher leader distribute the surveys randomly to the faculty and read the promise of confidentiality then collect and return.

Measures

Three instruments were used in the study. The WorldBlu School Survey (WBSS) measured Democratic Community. The Faculty Trust Scale (FTS) measured Faculty Trust. Thirteen questions from the Dimensions of the Learning Organization Questionnaire (DLOQ) measured continuous & team learning.
The WBSS is a survey comprised of 38 questions, each with a six-point Likert-type response scale ranging from 1 to 6 (1 – almost never, 6 – almost always). For each of the ten democratic principles, there was at least one question related to the operation of the principle at the individual, positional leader, and systems and processes levels. Thus, three to five questions measured the practice of each democratic principle. The mean score of the questions for each principle provided the score for each of the ten democratic principles, the ten observed variables informing the latent variable, Democratic Community. The pilot study of the WBSS found the instrument to be reliable ($\alpha = .97$) and valid for use in public middle schools in PA and found that all ten democratic principles loaded on a single factor, Democratic Community (Kensler et al., 2005). This study confirmed the instrument’s reliability ($\alpha = .98$) and validity.

The Faculty Trust Scale has an extensive history of use in schools (Hoy & Tschannen-Moran, 1999; Tschannen-Moran, 2001, 2004). The instrument measures three factors of faculty trust, trust in their principal, their colleagues and their clients (students and parents) with 26 questions, each with a six-point Likert response scale ranging from strongly disagree to strongly agree. Reported reliability measures ranged from .90 to .98. This study confirmed the three-factor structure and the high reliability of the instrument (Trust in Principal $\alpha = .97$; Trust in Colleagues $\alpha = .95$; Trust in Clients $\alpha = .96$). The mean scores of the questions comprising each of the three factors served as the observed variables informing the latent variable, Faculty Trust.

Finally, the measure of continuous & team learning was a subset of the larger measure of organizational learning, the Dimensions of the Learning Organization Questionnaire (Yang et al., 2004). This instrument had been used in Taiwanese schools previously and found reliable ($\alpha = .96$) (Chen, 2004). However, the data in this study did not replicate the same seven-factor structure previously reported. Because the teacher perception of continuous and team learning
was of prime importance to this study, and those items loaded on a single factor, the mean score of those 13 items comprised the single observed variable, continuous & team learning. The 13 items had six-point Likert-type response scales ranging from almost never to almost always. The reliability was quite high ($\alpha = .95$).

Model Description

This study tested two nested models. Model A (Appendix H) predicted that Faculty Trust, acting as a mediating variable, would explain the positive relationship between Democratic Community and continuous & team learning. Model B (Appendix I) predicted a reciprocal relationship between Faculty Trust and Democratic Community, with both variables predicting continuous & team learning. Model B was a nonrecursive model (included the reciprocal relationship) that was unidentified. Following Bollen’s (1989) two step rule for model identification, it was clear that another variable needed to be added to the model in order for the model to be identified. The data set included a legitimate variable, the percent of female teachers on the faculty (P%FT). P%FT was positively correlated to Trust in Principal ($r = .24, p < .05$) and Trust in Clients ($r = .36, p < .01$), but not to Trust in Colleagues ($r = .05, p = .65$). These results align with past findings (Bardwick, 1977; Jeanquart-Barone, 1993; Jeanquart-Barone & Sekaran, 1994) and seemed to justify including P%FT in the models (alternative Model A (Appendix J) and alternative Model B (Appendix K)), as an observed variable predicting Faculty Trust.

Maximum Likelihood (ML) estimation in Amos Graphics (7.0.0) was used throughout (Arbuckle, 2006). A two-step process of model testing was followed (Anderson & Gerbing, 1988). Appendix L presents the ML estimates and fit indices for the Democratic Community measurement model.
Results

Assumptions

The assumptions of univariate normality, multivariate normality, multicollinearity, homogeneity of variance-covariance matrices, and homogeneity of variances were examined and met. Although slight deviations from multivariate normality were suspected, SEM and MANOVA are robust to this violation (Stevens, 2002).

Typically, SEM requires larger sample sizes than present in this study, at least 100 (Schumacker & Lomax, 2004). However, some studies have shown sample sizes as low as 50 producing stable results, especially when high factor loadings were present (> .80) (Barrett & Kline, 1981; Guadagnoli & Velicer, 1988). Only two of the 13 factor loadings in the model were below this .80 criterion. Additionally, some justification in the literature existed for accepting smaller sample sizes with aggregated data because of the more stable means associated with the organizational groups (schools) (Hofstede, Bond, & Luk, 1993).

Descriptives and Intercorrelations

Appendix M presents the correlation and covariance matrix and the standard descriptive statistics.

Research Questions

1. Does Faculty Trust mediate the relationship between Democratic Community and continuous & team learning, as perceived by Pennsylvania and New Jersey middle school teachers? (Model A)

Yes, Faculty Trust met the criteria for mediation, following Brown (1997). See Figure 1 for Model A and Appendix N for the ML estimates and fit indices. Appendix O 1 presents the conditions for mediation.
2. Is the relationship between Democratic Community and Faculty Trust reciprocal and do they both predict continuous & team learning? (alternative Model B)

   No, this data set did not provide evidence for a reciprocal relationship between Democratic Community and Faculty Trust. When controlled for each other, neither Democratic Community nor Faculty Trust explained substantial additional variance, suggesting that the two variables share a lot of variance. See Appendix P for the ML estimates and fit indices.

3. Is there a significant difference between the fit of the two nested models, alternative Models A and B?

   No, there was not any significant difference between their fit, \( \chi^2 (1, 79) = 1.624, p = .203 \).

4. Does Democratic Community differ between the schools scoring in the top 25% and the bottom 25% on the continuous & team learning measure?

   A MANOVA was conducted to assess differences among four groups of schools defined by their mean continuous & team learning scores in their teacher reported practice of the ten democratic principles (1-lower performing (n = 18); 2-low performing (n = 19); 3-high performing (n = 21); and 4-higher performing (n = 21)). A significant difference among the four groups was found, Wilks’ \( \lambda = .32, F(30, 194) = 3.05, p < .001 \), multivariate \( \eta = .56 \) (Box’s \( M = 254.4, F (165, 11805) = 1.16, p = .08 \)). The Descriptive Discriminant Analysis follow-up found only one significant function (1: \( \chi^2 = 80.32, p < .001 \); 2: \( \chi^2 = 26.60, p = .087 \); and 3: \( \chi^2 = 3.43, p = .904 \)) that explained 72% of the variance between the groups. The Tukey post hoc test, following the one-way ANOVA on the discriminant scores of function one, found that groups 1 and 2 were significantly lower performing than groups 3 and 4 on
the continuous & team learning measure. Appendix Q presents the standardized function coefficient for each variable and the correlations of each variable to the single discriminant function. Decentralization, purpose & vision, integrity, and transparency contributed the most to separating the four groups. The low values for the other democratic principle standardized function coefficients suggested they may be redundant. All ten democratic principles were moderately to highly correlated to the function.

Discussion

In summary, the proposed models adequately fit the data. Faculty Trust did appear to mediate the relationship between Democratic Community and continuous & team learning. Although the reciprocal model also adequately fit the data, the parameter estimates for the reciprocal pathways were nonsignificant, suggesting a stronger unidirectional pathway. There was no significant difference in the fit of the two models. The MANOVA and DDA found that the schools scoring in the top two groups differed significantly from the schools scoring in the bottom two groups on the continuous & team learning measure. A single discriminant function explained 72% of the variance between the groups, with all democratic principles correlating significantly to the function. Decentralization, purpose & vision, integrity, and transparency contributed the most to separating the groups.

The overarching purpose of this study was to test the proposition that democracy is the best social system for learning (Slater & Bennis, 1964) and then to test whether faculty trust might explain the reason why. It was the first empirical study to integrate these three constructs into a single model. In these public middle schools that were fairly representative of Pennsylvania and New Jersey public middle schools, teachers perceived higher levels of continuous & team learning in the schools where the perceived practice of the democratic
principles was also high. Faculty trust explained much of, but not all of that relationship, suggesting that some unique aspects of democratic community also contribute to a vibrant learning environment.

This larger scale empirical finding that democratic school communities are strongly associated with higher levels of teacher perceived learning supports the calls for democracy as education (Glickman, 1993, 2003; O'Hair, McLaughlin, & Reitzug, 2000). The results also lend support to Murphy’s (2002) call for re-centering the field of educational leadership around democratic community, social justice and school improvement. In fact, the results suggest that school improvement might very well proceed more quickly and effectively in democratic learning communities, as teachers need to learn continuously and in teams in order to consistently improve their practice and thus, the educational outcomes for students. Fullan (2006), in an article expressing some level of frustration that the professional learning community movement had not yet resulted in the expected improvements, pointed out that

What is missing in school cultures then is most schools, structurally and normatively, are not places where virtually every teacher is a learner all the time. This is the missing element in standards, qualifications, professional development, and so on. The latter do not by themselves represent continuous professional learning. (p. 13)

The professional learning community movement has not paid enough attention to the conditions that nurture the teachers’ continuous learning. The results presented here suggest specific recommendations for practice and for future research. A very brief list of recommendations follows.

Recommendations for practice

1. The WorldBlu Democratic Design System holds the potential to serve as a training tool and an ongoing reflective tool for school leaders to learn how to lead and sustain the development of democratic learning communities.
2. In this study’s group of participating middle schools, the democratic principles of decentralization, purpose & vision, integrity, and transparency contributed the most to distinguishing the high performing learning groups from the low performing learning groups. It may be that these four principles are especially important to the design of democratic learning communities.

3. Democratic Community holds much promise as the centralizing paradigm for the educational leadership field (Furman & Shields, 2005; Murphy, 2002). Of the related constructs that have high visibility in schools and are intended to increase a system’s capacity for learning (e.g. professional learning communities), democratic community is the only one that carries with it the moral imperative for social justice; the essential dignity of each individual is a fundamental assumption of democracy. Democratic communities are trusting environments where continuous learning thrives, they encompass doing things right for learning. Most importantly, however, democratic communities call for us to continuously improve our capacity to do the right things – to strive towards the ideal of democracy, “liberty and justice for all.”

Recommendations for research

1. Because this cross-sectional study could not answer questions of causality, further testing of the model is needed with data collected over time (Schneider, Carnoy, Kilpatrick, Schmidt, & Shavelson, 2007).

2. Quantitative studies have the capacity to capture a picture of relationship patterns over a large scale. Qualitative follow-up in select schools will add rich details to these relationship patterns. How do the MANOVA and DDA results relate to the real work in the schools that did score high and low on the continuous & team learning measure?
3. How might the WBDDS provide a framework for training school leaders as designers or architects (Reeves, 2006) of democratic learning communities? Would this training account for improving school performance over more traditional training?

4. Do more democratic school communities also correlate to organizational citizenship?
   Teacher satisfaction and retention? Student learning and achievement? Does trust also mediate these relationships?

References


Appendix A

Figure 1. Model A predicted trust as a mediating variable between democratic community and continuous & team learning.
Appendix B

Figure 2. Model B predicted democratic community and trust as reciprocally predictive and both predictive of continuous & team learning.
### Appendix C

**Table 1. The WorldBlu Democratic Design System™ (WBDDS) © 2006 WorldBlu, Inc.**

<table>
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<th>Definition</th>
<th>Research Based Evidence of Effective School Practices</th>
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<td><strong>Purpose &amp; Vision</strong></td>
<td>When an organization and the individual know their reason for existing and have a sense of intentional direction.</td>
<td>Professional leadership is purposeful; shared vision and goals develop collaboratively; focus on learning.</td>
</tr>
<tr>
<td><strong>Dialogue &amp; Listening</strong></td>
<td>When we listen and engage in conversations in a way that brings out new levels of meaning and connection.</td>
<td>Professional dialogue and listening to multiple perspectives is necessary for change.</td>
</tr>
<tr>
<td><strong>Decentralization</strong></td>
<td>When power is appropriately shared among people throughout the organization.</td>
<td>Leadership takes a participatory approach. Professional development is provided to support effective participation.</td>
</tr>
<tr>
<td><strong>Fairness &amp; Dignity</strong></td>
<td>When each person is treated justly and regarded impartially.</td>
<td>Individuals are provided the necessary resources and support for doing quality work.</td>
</tr>
<tr>
<td><strong>Accountability</strong></td>
<td>When each person and the organization as a whole is responsible to each other and their community for their actions.</td>
<td>High expectations exist at and for all levels. Clear and fair discipline characterizes positive reinforcement.</td>
</tr>
<tr>
<td><strong>Individual &amp; Collective</strong></td>
<td>When individuals understand the unique contribution they make towards achieving collective goals.</td>
<td>Individuals in effective schools have a strong sense of responsibility for collective goals.</td>
</tr>
</tbody>
</table>

(Table continues next page)
Table 1 (cont.). *The WorldBlu Democratic Design System™ (WBDDS) © 2006 WorldBlu, Inc.*

<table>
<thead>
<tr>
<th>Democratic Principle</th>
<th>Definition</th>
<th>Research Based Evidence of Effective School Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transparency</td>
<td>When ideas flow freely and information is openly and responsibly shared.</td>
<td>Frequently share information related to the schools expectations, purpose, and progress throughout.</td>
</tr>
<tr>
<td>Choice</td>
<td>When each person is encouraged to exercise their right to choose between a diversity of possibilities.</td>
<td>Individuals have the opportunity to choose learning opportunities within an appropriate context and relevant to their personal interest.</td>
</tr>
<tr>
<td>Integrity</td>
<td>When each person steadfastly adheres to high moral principles.</td>
<td>Individuals consistently practice what they have agreed to do. They do what they say they will do.</td>
</tr>
<tr>
<td>Reflection &amp; Evaluation</td>
<td>When there is a commitment to continuous feedback and development and a willingness to learn from the past and apply lessons to improve the future.</td>
<td>Evaluation takes place at all levels. Feedback provided regularly. Reflective dialogue is critical to collective improvement.</td>
</tr>
</tbody>
</table>
Table 3. Summary of research question, data gathered, and data analysis performed.

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Data Gathered</th>
<th>Data Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does trust mediate the relationship between democratic community and organizational learning?</td>
<td>Teacher survey responses to the WBSS, FTS, DLOQ aggregated to the school level</td>
<td>Structural Equation Modeling (Amos Graphics, ver. 7.0.0)</td>
</tr>
<tr>
<td>Do trust and organizational learning have a reciprocal relationship and do they both predict organizational learning?</td>
<td>Teacher survey responses to the WBSS, FTS, DLOQ aggregated to the school level</td>
<td>Structural Equation Modeling (Amos Graphics, ver. 7.0.0)</td>
</tr>
<tr>
<td>Of the two proposed models, which model do the data fit best?</td>
<td>Teacher survey responses to the WBSS, FTS, DLOQ aggregated to the school level</td>
<td>Structural Equation Modeling (Amos Graphics, ver. 7.0.0)</td>
</tr>
<tr>
<td>How does democratic community differ between the Pennsylvania middle schools scoring in the top 25% and bottom 25% on the continuous &amp; team learning measure?</td>
<td>Teacher survey responses to the WBSS and the DLOQ aggregated to the school level</td>
<td>MANOVA (SPSS, ver. 15.0.1)</td>
</tr>
</tbody>
</table>
Appendix E

Table 4. Locale distribution of participating schools and the total sample

<table>
<thead>
<tr>
<th>Locale description as presented in the NCES database</th>
<th>Percent of Participating Schools (n = 79)</th>
<th>Percent of Total Sample (n = 521)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large City</td>
<td>2.5</td>
<td>6.3</td>
</tr>
<tr>
<td>Mid-Sized City</td>
<td>3.8</td>
<td>6.8</td>
</tr>
<tr>
<td>Urban Fringe of Large City</td>
<td>40.5</td>
<td>47.5</td>
</tr>
<tr>
<td>Urban Fringe of Mid-sized City</td>
<td>25.3</td>
<td>14.0</td>
</tr>
<tr>
<td>Large Town</td>
<td>0.0</td>
<td>0.2</td>
</tr>
<tr>
<td>Small Town</td>
<td>5.1</td>
<td>5.5</td>
</tr>
<tr>
<td>Rural (Outside CBSA)</td>
<td>5.1</td>
<td>5.0</td>
</tr>
<tr>
<td>Rural (Inside CBSA)</td>
<td>17.7</td>
<td>14.8</td>
</tr>
</tbody>
</table>

Note. The distribution of the participating schools across the different locales was not significantly different than in the total sample $X^2 (7, N = 600) = 14.07, p > .05.$
Appendix F  

Table 5. Descriptive data of participating schools (n = 79) and total sample (n = 521) 

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Teachers on staff</td>
<td>79</td>
<td>50</td>
<td>18.4</td>
<td>20</td>
<td>111</td>
</tr>
<tr>
<td>%Teacher Response to survey</td>
<td>79</td>
<td>70.7</td>
<td>22.1</td>
<td>20.2</td>
<td>100</td>
</tr>
<tr>
<td>% Female Teachers on staff</td>
<td>79</td>
<td>69.3</td>
<td>11.9</td>
<td>23</td>
<td>97</td>
</tr>
<tr>
<td>% Male Teachers on staff</td>
<td>79</td>
<td>30.7</td>
<td>11.9</td>
<td>3</td>
<td>77</td>
</tr>
<tr>
<td>% White Teachers on staff</td>
<td>79</td>
<td>95.1</td>
<td>12.4</td>
<td>20</td>
<td>100</td>
</tr>
<tr>
<td>Total Students†</td>
<td>79</td>
<td>663</td>
<td>254</td>
<td>285</td>
<td>1275</td>
</tr>
<tr>
<td></td>
<td>521</td>
<td>683</td>
<td>333</td>
<td>14</td>
<td>2546</td>
</tr>
<tr>
<td>% Non-White Students*</td>
<td>79</td>
<td>19.1</td>
<td>20.9</td>
<td>0.8</td>
<td>99</td>
</tr>
<tr>
<td></td>
<td>521</td>
<td>26.6</td>
<td>30.0</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>% Free and Reduced Lunch*</td>
<td>79</td>
<td>23.7</td>
<td>21.9</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>521</td>
<td>27.4</td>
<td>24.7</td>
<td>0</td>
<td>100</td>
</tr>
</tbody>
</table>

Note. †No significant difference between the means of the participating schools and the total sample (p > .05); *Significant difference between the means of the participating schools and the total sample (p < .05). If no designation, then the data were not available to make the comparison between the means of the participating schools and the total sample.
### Appendix G

Table 6. *Gender, race, and tenure of participating schools’ principals.*

<table>
<thead>
<tr>
<th></th>
<th>Percent of Participating Principals (N = 79)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female Principals</td>
<td>31.2</td>
</tr>
<tr>
<td>Male Principals</td>
<td>68.8</td>
</tr>
<tr>
<td>Non-White Principals</td>
<td>7.9</td>
</tr>
<tr>
<td>Principal Tenure</td>
<td></td>
</tr>
<tr>
<td>1-3 years</td>
<td>37.7</td>
</tr>
<tr>
<td>4-6 years</td>
<td>27.3</td>
</tr>
<tr>
<td>7-10 years</td>
<td>16.9</td>
</tr>
<tr>
<td>11-15 years</td>
<td>11.7</td>
</tr>
<tr>
<td>16-20 years</td>
<td>5.2</td>
</tr>
<tr>
<td>21+ years</td>
<td>1.3</td>
</tr>
</tbody>
</table>

*Note.* Principal gender, race, and tenure data were not available for the total sample.
Appendix H

Figure 3. *Full structural equation model A.*

**Key**
- Indicators of Democratic Community
- INTG: Integrity
- ACCT: Accountability
- CHO: Choice
- INDCOL: Individual & Collective
- DECEN: Decentralization
- TRAN: Transparency
- DIALIS: Dialogue & Listening
- FAIDIG: Fairness & Dignity
- REFEVAL: Reflection & Evaluation
Appendix I

Figure 4. Full structural equation model B.

Key
Indicators of Democratic Community
INTG: Integrity
ACCT: Accountability
CHOI: Choice
INDCOL: Individual & Collective
DECEN: Decentralization
TRAN: Transparency
DIALIS: Dialogue & Listening
FAIDIG: Fairness & Dignity
REFEVAL: Reflection & Evaluation
Appendix J

*Alternative Model A*
Appendix K

*Alternative Model B*
### Table 8. ML estimates and fit indices for the Democratic Community measurement model

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Standardized Parameter Estimate</th>
<th>Unstandardized Parameter Estimate</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose &amp; Vision ← DC</td>
<td>.912</td>
<td>.558</td>
<td>.053</td>
</tr>
<tr>
<td>Integrity ← DC</td>
<td>.873</td>
<td>.417</td>
<td>.043</td>
</tr>
<tr>
<td>Accountability ← DC</td>
<td>.916</td>
<td>.401</td>
<td>.038</td>
</tr>
<tr>
<td>Choice ← DC</td>
<td>.817</td>
<td>.454</td>
<td>.052</td>
</tr>
<tr>
<td>Individual &amp; Collective ← DC</td>
<td>.931</td>
<td>.555</td>
<td>.051</td>
</tr>
<tr>
<td>Decentralization ← DC</td>
<td>.903</td>
<td>.524</td>
<td>.051</td>
</tr>
<tr>
<td>Transparency ← DC</td>
<td>.921</td>
<td>.507</td>
<td>.047</td>
</tr>
<tr>
<td>Dialogue &amp; Listening ← DC</td>
<td>.946</td>
<td>.583</td>
<td>.052</td>
</tr>
<tr>
<td>Fairness &amp; Dignity ← DC</td>
<td>.886</td>
<td>.415</td>
<td>.042</td>
</tr>
<tr>
<td>Reflection &amp; Evaluation ← DC</td>
<td>.941</td>
<td>.542</td>
<td>.049</td>
</tr>
<tr>
<td>Purpose &amp; Vision error variance</td>
<td></td>
<td>.063</td>
<td>.011</td>
</tr>
<tr>
<td>Integrity error variance</td>
<td></td>
<td>.054</td>
<td>.009</td>
</tr>
<tr>
<td>Accountability error variance</td>
<td></td>
<td>.031</td>
<td>.006</td>
</tr>
<tr>
<td>Choice error variance</td>
<td></td>
<td>.103</td>
<td>.017</td>
</tr>
<tr>
<td>Individual &amp; Collective error variance</td>
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<td>.009</td>
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<tr>
<td>Decentralization error variance</td>
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<td>.063</td>
<td>.011</td>
</tr>
<tr>
<td>Transparency error variance</td>
<td></td>
<td>.046</td>
<td>.008</td>
</tr>
<tr>
<td>Dialogue &amp; Listening error variance</td>
<td></td>
<td>.040</td>
<td>.008</td>
</tr>
<tr>
<td>Fairness &amp; Dignity error variance</td>
<td></td>
<td>.047</td>
<td>.008</td>
</tr>
<tr>
<td>Reflection &amp; Evaluation error variance</td>
<td></td>
<td>.038</td>
<td>.007</td>
</tr>
</tbody>
</table>

*(Table continues next page)*
Table 8 (cont.). *ML estimates and fit indices for the Democratic Community measurement model*

<table>
<thead>
<tr>
<th>Fit Indices</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>$X^2$</td>
<td>104.793</td>
</tr>
<tr>
<td>df</td>
<td>35</td>
</tr>
<tr>
<td>$p$ value</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>$X^2/df$</td>
<td>2.994</td>
</tr>
<tr>
<td>CFI</td>
<td>.938</td>
</tr>
<tr>
<td>TLI</td>
<td>.921</td>
</tr>
<tr>
<td>RMSEA</td>
<td>.160</td>
</tr>
</tbody>
</table>

*Note: All parameter estimates were significant at $p < .01$.  

