Bridging or buffering?
The impact of schools’ adaptive strategies on student achievement

Michael F. DiPaola and Megan Tschannen-Moran
The College of William and Mary, Williamsburg, Virginia, USA

Abstract
Purpose – Rational and open system theories offer divergent sets of tactics on how best to deal with factors outside the boundary of the school. This study compared two competing strategies that emerge from these theories: bridging and buffering. The impact of how schools interact with their environments was examined in relation to student achievement.

Design/methodology/approach – The competing theories were operationalized into two survey measures that tapped teacher perceptions of their schools’ orientations toward the environment. Using schools as the unit of analysis, two competing perspectives were contrasted together with their relative impact on student achievement on standardized tests.

Findings – Multiple regression was used to assess the relative weight of each of these constructs in explaining the variance in student achievement. Bridging strategies explained a greater proportion of the variance than buffering.

Research limitations/implications – Data were limited to teacher perceptions of the strategies employed by their schools to relate to the external environments. Enactments of these strategies are generally conceived and initiated by school administrators. Schools are dependent on their environments for survival. If the community is perceived as a threat, school leaders will attempt to insulate the technical core of teaching by buffering teachers from environmental disturbances. If, however, the community is perceived as a potential resource, school leaders will attempt to build bridges and create a symbiotic interdependence. Findings suggest that the latter is a more productive strategy for school administrators to employ.

Originality/value – To date, little research has been done on these competing strategies that would guide the practice of school leaders in how to best invest their energies in relation to their external environments.

Keywords Organizational theory, Educational institutions, Community relations, Strategic management

Paper type Research paper

Those who fall in love with practice without science are like a sailor who enters a ship without helm or compass, and who never can be certain whither he is going (Leonardo da Vinci)

In confronting the challenges of the current outcomes-based reform movement, school leaders may be tempted to take a pragmatic approach that eschews reliance on science and its theories of organization. Attempts to navigate their organizations through these challenging waters without the guidance of theory is, as da Vinci reminds us, a neglect of valuable tools that can provide a clear sense of direction for action. These school leaders would be well served by attending to the lessons of organizational theory as they devise strategies to interact with the communities in their external environments.
Schools have no choice but to interact with their environments. Their boundaries, although defined, are permeable. Schools must continually exchange information and resources with the environment to survive (Katz and Kahn, 1978; Lawrence and Lorsch, 1967). Effective school leaders recognize that reciprocal influences between the school and the environment are as significant as relationships within the organization to the creation and maintenance of high functioning schools.

Environmental elements, however, can often be unstable, uncertain, and difficult to interpret. Weick (1995 p. 30) argued that in organizational life “people often produce part of the environment they face” based on their past experiences, perceptions, assumptions and actions. Consequently, they respond to it in a variety of ways and with varying degrees of sophistication and success to achieve organizational goals (Johnson and Fauske, 2000). Competing organizational theories provide alternative perspectives to guide school leaders in understanding and responding to uncertainty in their environments. For example, guided by the norms of the rational systems perspective (Thompson, 1967), practicing administrators often treat external environmental factors as threats to their organizations and attempt to seal off their core tasks (teaching and learning) from outside influences. Whether guided by theory, myth, or past practice, it seems that the instinctive response of school administrators is to buffer their core technology from disruptive influences in the environment (Daft, 1994; Pennings, 1992).

However, another theoretical perspective, resource dependence theory, suggests that the obvious interdependence that schools share with their environments and the uncertainty within those environments makes increasing coordination and information flow the wiser course, thereby creating a symbiotic interdependence (Pfeffer and Salancik, 1982). From this perspective, it is beneficial for school leaders to intentionally build bridges into the environment to attempt to control it and to garner resources from it (Aldrich and Herker, 1977; Aldrich and Mindlin, 1978). Which perspective is best? Is bridging or buffering the more productive strategy for school leaders to pursue as they seek to meet the high expectations of this outcomes-based era? This study was conducted to explore the relative impact of bridging and buffering strategies in supporting schools in their primary goal of fostering student achievement.

Conceptual framework
Open system theory notes that organizations are inextricably linked to environmental elements (Scott, 2003). As open systems, schools take in resources from the environment, process them in certain ways, and produce outputs. Schools are interdependent with their environments and school people are a part of those environments (Weick, 1995). As a result, school people contribute to the constraints and opportunities of their environments. Environments supply the materials and ingredients of which schools are composed. However, in order to access these resources, schools need legitimacy. In interviews with principals, Johnson and Fauske (2000) found that school leaders are particularly attentive to issues of legitimacy in relation to their environments. The environment significantly affects organizational performance, which in turn affects subsequent perceptions and decisions (Pfeffer and Salancik, 1982; Scott, 2003). The perceptions of organizational participants concerning potential environmental opportunities and threats influence their strategies and choices of behaviors (Weick, 1995).
Schools and their environments

Systems have boundaries that separate them from their environment. Boundaries are easier to visualize in the physical realm, for example where the boundary refers to the edge of property. But in the realm of the organizational system, boundaries are defined by the organization’s activities, such as the admission of members into the system, other imports such as resources, technical know-how, and feedback into the system. Organizational boundaries are porous, allowing organizations to be influenced by their environments. Environments infiltrate, shape, and support organizations. The boundary serves as a filtering system for the flow of information, materials, technology, and energy. Organizations rely largely on boundary filtration mechanisms because they cannot handle every environmental factor that impacts the system.

School people perform as active entities that interpret, respond to, change and create their environments (Weick, 1995). Effective school leaders develop adaptive strategies for coping with the environment. They keep a watchful eye tuned to the organization’s environment and scan for opportunities and threats. They then use the information to strategize and respond accordingly (Johnson and Fauske, 2000). The higher the level of external change and uncertainty, the more the system needs to develop adaptive strategies. As a result, greater subsystem specialization, increased and richer forms of communication, decentralization, and greater cooperation are called for (Lawrence and Lorsch, 1967; Pennings, 1992).

Adaptive strategies

The external environment is filled with elements that have an impact on schools. For instance, state and federal regulations impact the school’s day-to-day actions. The impact of the environment on schools makes it imperative that school leaders cross the organizational boundary to conduct an environmental scan for opportunities and threats. Once a school leader, acting as a boundary-spanning strategist, becomes aware of a change in the environment, such as the existence of a new regulation, an estimate of consequences must be made. The task then becomes one of deciding on a course of action. A degree of uncertainty is always an issue. By relying on the assumptions and perceptions of a scanner, an organization interprets the environment through the lens imposed by that scanner. Does the scanner know which strategy is appropriate to achieve desired results, and how to implement it? Is the scanner aware of the future effect of the element on long-term objectives? School leaders are affected by internal organizational constraints, including the current vision, mission, structure, procedures, and culture of their schools. That is, the organization’s internal strengths and weaknesses act as positive and negative constraints on the strategies selected.

Therefore, schools need to be thoughtful in their selection of boundary spanning strategies and in the selection of the individuals who determine them. Organizations are composed of people who are limited by bounded rationality, who generally suffer from limited or biased information and poor communication, and are subject to processes of social influence and reconstructions of reality (Aldrich, 1999). Therefore, it takes a person with particular skills and knowledge to be an effective boundary spanner. Boundary-spanning strategists must be sufficiently elevated in the hierarchy to act on their own perceptions, intuitions, and decisions without having to convince those with less information, situational knowledge, and systems-thinking ability, that the recommended strategy is the proper choice. A boundary-spanning strategist must...
also possess leadership qualities to implement the strategy. Otherwise the boundary-spanning strategist may become constrained by the frustration experienced as a consequence of the inability to convincingly explain his or her decisions (Senge, 1990, 2000).

Organizational leaders employ various strategies to respond to their environments. Strategies are long-term courses of action, which usually imply the allocation of resources to reach certain goals. Environmental management strategies interconnect with ongoing, routine boundary tactics and require broad-based planning and action. These strategies are tools that aid organizational leaders in adapting to their environments and in modifying themselves to thrive in a given environment. They can be grouped into three broad categories:

1. strategies aimed at reducing the dependencies between organizations and their environment (independent strategies);
2. strategies aimed at environmental adaptation to promote organization-environment relations (cooperative strategies, organizational design); and
3. strategies aimed at changing the environment to maintain the organization (strategic maneuvering, socialization) (Goldring, 1995).

The independent strategy of buffering and the cooperative strategy of bridging are the foci of this study.

Buffering
Using independent strategies, organizations respond to the environment through organizational self-control directed to increasing levels of independence and autonomy in relation to its environment. Independent strategies are means by which the organization can draw on its own resources and ingenuity to reduce uncertainty and dependence on external factors which may threaten its existence (Galbraith, 1977). Buffering is one way principals attempt to keep their school independent from the environment. Principals who prefer this strategy reduce environmental influence as much as possible to protect the core tasks of teaching and learning from environmental influences.

In schools, buffering is exemplified when principals proactively move to control as many environmental elements as possible rather than reacting to environmental pressures. Principals achieve this by creating formal procedures to respond to outside requests. Buffering might include principals’ insistence that community groups, social service agencies, businesses, or parents make their initial contact with them rather than with teachers. Formal rules and regulations serve as buffers and are enforced when parents attempt to directly interfere with the professional judgments of teachers or principals. Schools with high parental involvement may create formal procedures to protect teachers from unwarranted demands (Hollister, 1979). Although there is little research on the use of buffering strategies, it is common in practice and seems to be the preferred tactic for many school principals. Ogawa (1996 p. 3) reviewed the literature and concluded: “Research consistently demonstrates that teachers expect principals to shield them from undue parental influence and that principals do perform this function.”

One line of research that has examined the impact of buffering on both elementary and secondary schools has been the work of Hoy and his colleagues. They have
investigated schools’ success at buffering disruptive elements of their environments through a construct they have labeled institutional integrity, which is one dimension of a larger school health index. Institutional integrity is defined as the school’s ability to cope with its environment in a way that maintains the educational integrity of its programs and in which teachers are protected from unreasonable community and parental demands (Hoy et al., 1991). These researchers have consistently found, however, that institutional integrity (or buffering) was negatively related to student achievement in middle and high schools (Hoy and Sabo, 1998; Hoy et al., 1991). In cases in which schools were successful in keeping disruptive elements from the environment at bay, student achievement tended to be lower; and in cases in which teachers perceived greater intrusiveness from parents and other members of the community, student achievement tended to be higher. Although teachers do not like interference from parents and the community and expect their principals to protect them from these pressures, negative consequences in terms of achievement do not seem to ensue. The researchers noted, “It seems likely that some press from the community is functional for increased achievement in basic skills” (Hoy et al., 1991, p. 88). These results raise questions about buffering as an effective strategy for schools in relation to their environments.

**Bridging**

Bridging strategies are cooperative strategies that schools employ to increase the interdependence of the organization with elements in its environment. Scott’s (2003 p. 29) definition of organizations as, “congeries of independent flows and activities linking shifting coalitions of participants embedded in wider material-resource and institutional environments” certainly appears to support the bridging tactic. The survival of the school depends on its environment, and on interactions between its component parts or subsystems.

Bridging strategies to cultivate parental support have been found to be influential in fostering student achievement (Epstein, 1987, 1991; Griffith, 1996). These strategies include involving family members in the development of workshops, providing tutoring, and assisting teachers in classrooms or with after school activities. Bridging strategies are associated with improved student performance and attendance, and decreased student dropout and delinquency rates. Fostering parental support was found to be second only to classroom management in relation to improved student learning (Wang et al., 1994).

Although high parent involvement is often associated with higher-income communities, it may be of particular value in addressing the needs of low-income students (Epstein, 1991). Among the strategies that top performing high-poverty schools use to improve student achievement is a focus on efforts to involve parents in helping students meet standards. Other strategies include a focus on changing instructional practice and monitoring student progress regularly. One study found that 81 per cent of high-performing low-SES schools were dedicated to the use of early support systems that focused primarily on parental involvement campaigns related to curricular activities and remediation interventions and comprehensive systems of monitoring student data (Barth et al., 1999).

A growing body of research supports the contention that bridging strategies that actively engage parents in the life of the school have positive consequences for the
school. Parental involvement was found to be significantly related to student achievement, even when other factors such as leadership, instruction, expectation, order, and collaboration were included in the analysis (Bulach et al., 1995). A meta-analysis of 51 studies conducted from 1995-2002 found:

... a positive and convincing relationship between family involvement and benefits to students, including improved academic achievement. This relationship holds across families of all economic, racial/ethnic, and educational backgrounds and for students of all ages. Although there is less research on the effects of community involvement, it also suggests benefits for schools, families, and students, including improved achievement and behavior (Henderson and Mapp, 2002, p. 24).

Coalition building is one form of cooperation used by boundary spanners. In this case, the leader joins elements from the school organization and the environment for a common purpose. Each unit retains independence, and the school retains some control over the means used to achieve the common goals with their environmental partners. Safety, survival, and improved bargaining position are the sought-after prizes that motivate bridge building rather than simply increased certainty for the organization’s operations. Principals use coalition building which is aimed at fostering cooperation between the school and the parents when the principal and parents work together to achieve common goals. Principals view parents as important allies who share similar aims and interests and seek to involve them. Principals also work with groups whose aims may be incongruent with the school’s, and seek to influence them by bringing them into alignment with the school’s missions and goals. These principals are adept in using persuasive arguments to maneuver the groups to support the school’s agenda. Both strategies solicit allies who share similar aims and interests. The school absorbs elements from the environment to reduce threats by exchanging some degree of control, including control of information for some commitment of continued support from the community.

The time, energy, and resources at their disposal limit principals. They have to make choices as to where to invest their energies so that they may enhance the schools’ mission of fostering student achievement. In this study, we sought to explore principals’ use of bridging or buffering strategies to determine which was the more useful guide to practice.

Methods
Organizational theory should not be simply the playground for scholars and theorists, but should serve as a guide to practice for school leaders. An understanding of systems theories can provide strategic options for school leaders as they scan and strategize to interface with their environments. In using theory instead of intuition or past practice to interpret the environment, a principal has a better chance of selecting strategies that will have a positive impact on student achievement. Principals and other school leaders need guidance as to which theories provide the most useful advice as to coping with the environments of their schools. This study was conducted to test the competing strategies of bridging and buffering and their relationship to student achievement.

Sample of schools
The study investigated the relationships between the bridging and buffering in 74 middle schools throughout the state of Virginia. The schools were selected on the basis of availability and accessibility.
basis of their willingness to participate in the study. Although this was not a random sample, it was a large and diverse sample. Schools were diverse in size, socio-economic status, and racial composition, as well as setting (urban, suburban, and rural). A total of 1,083 teachers were surveyed. With the permission of the principal, researchers administered the surveys during a regularly scheduled faculty meeting at each school.

A member of the research team explained the general purpose of the study, assured the confidentiality of all responses, and asked teachers to complete the questionnaires. Because this project was part of a larger study of organizational properties, and because the unit of analysis was the school, a random group of the teachers in each school was selected to respond to the measures. No attempt was made to gather data from faculty who were not present at the meeting, but virtually all teachers in attendance returned usable questionnaires.

**Measures**

Three measures were used in this study:

1. a measure of buffering;
2. a measure of bridging; and
3. a measure of student achievement.

Each of these measures is described below.

*Buffering.* Schools’ choice of buffering strategies was measured using the institutional integrity sub-scale of the Organizational Health Index (Hoy and Sabo, 1998). It assessed the extent to which the schools were buffered from the intrusion of vocal parents and citizen groups. Low institutional integrity suggests that both teachers and principals feel unprotected and are put on the defensive. Items are assessed on a five-point scale with anchors that read, “Never”, “Rarely”, “Sometimes”, “Often”, and “Always”.

The scale consists of five items and had a relatively high alpha reliability score of 0.87. Sample items include:

- the school is vulnerable to outside pressure; and
- a few vocal parents can change school policy.

*Bridging.* Schools’ choice of bridging strategies was measured using the community engagement measure developed for this study. The measure consists of seven items. Items are assessed on a five-point scale with anchors that read, “Never”, “Rarely”, “Sometimes”, “Often”, and “Always”. The reliability score for the scale was relatively high, with an alpha of 0.87. Sample items include:

- parents and other community members are included on planning committees; and
- school people are responsive to the needs and concerns expressed by community members.

Construct validity of the bridging and buffering measures was established through factor analysis. Factor analysis unites psychometric notions to theoretical notions in order to demonstrate construct validity (Kerlinger and Lee, 2000).
Student achievement

Student achievement was measured by the state developed Virginia Standards of Learning test. Data were drawn from two of the eighth grade tests:

1. mathematics; and
2. English, reading, research and literature.

This assessment provided a useful means for comparison because the standards of learning (SOL) tests are administered annually to every eighth grade middle school child in the state of Virginia. SOL test scores were aggregated at the school level using mean scaled scores. The multiple-choice test questions were criterion referenced against state standards. The SOL test was considered a valid measure of state standards by the Content Review Committee process. Reliability for the SOL grade eight tests, determined using the Kuder-Richardson Formula 20 (KR-20) were as follows: Mathematics reliability = 0.92 and English reliability = 0.88 (Hambleton et al., 2000).

Results

Bridging and buffering strategies are separate constructs, not two ends of a single continuum. They function independently of one another. This was evident in the finding that the use of buffering strategies and bridging strategies were not correlated for the schools in this study. That is, the extent to which a school engaged in one of these strategies had no predictive power as to the extent to which it used the other. A school might be high in both bridging and buffering, that is, it builds bridges to helpful elements in the parent community and seeks to include them but at the same time is able to withstand the attempted influence of disruptive elements in the community. It could also be high in bridging but low in the buffering or the reverse, low bridging and high buffering. Finally, a school might not be successful in either bridging or buffering in its relationship to parents and community members, so that positive parents and community members who share the schools goals are not brought into relationship in meaningful ways and disruptive parents have a great deal of influence.

There was a difference in the relationship between the use of buffering and bridging strategies and student outcomes. Buffering was uncorrelated with math achievement and was only moderately correlated with English achievement ($r = 0.31$, $p < 0.05$). Bridging, however, was more strongly correlated with both math and English achievement ($r = 0.64$ and 0.63, respectively, $p < 0.01$). See Table I for details.

<table>
<thead>
<tr>
<th>Buffering</th>
<th>Bridging</th>
<th>Math</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buffering</td>
<td>(3.11)</td>
<td>0.11</td>
<td>0.23</td>
</tr>
<tr>
<td>Bridging</td>
<td>(3.56)</td>
<td>0.64**</td>
<td>0.63**</td>
</tr>
<tr>
<td>Math</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Notes:</td>
<td>* $p &lt; 0.05$; ** $p &lt; 0.01$; Means are on the diagonal</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table I. Intercorrelations of bridging, buffering, and student achievement
Multiple regression analysis

Next, we considered the relative impact of the set of bridging and buffering strategies in predicting student achievement. We found that a school's ability to cope with environmental factors was a moderate predictor of student achievement. Bridging and buffering together explained about 42 per cent of the variance in student achievement in both math and English. Only bridging strategies had a significant independent effect on explaining student achievement in both math and English, with a beta weight of 0.62 for math and 0.59 for English (see Table II).

Discussion and implications

School leaders need to engage in both bridging and buffering strategies to have effective schools. But they must make choices as to investment of time and energy in executing these strategies in relation to parents and the community. Whether guided by rational systems theory, myth, or past practice, buffering strategies seem to be the most commonly employed by school administrators. Results from the study of schools in our sample suggest that being guided by open systems theory and investing greater energy and resources in bridging strategies will positively impact student achievement. While a certain amount of buffering may be necessary to prevent disruption to the core teaching and learning tasks of a school, a school that is too successful at keeping parents and other community members from influencing its policies and directions may ultimately pay a price in student learning. Schools that build positive connections with their communities through bridging strategies are more likely to achieve their goal of fostering student learning.

Our findings should be interpreted in light of the limitations of our methods. The inclusion of schools that declined to participate in this study may have influenced our findings if they varied in a systematic way from the schools we studied. In addition, our data were based on the perceptions of teachers concerning their school's relations to their environments and the behaviors of their principals in that regard. Other measures of schools' interactions with their external environments may have produced differing results.

Organizational theory is not constructed only for residents of the “ivory tower.” The theories taught and promoted in school leadership preparation programs and disseminated through mentoring and other more informal learning avenues shape the way in which school leaders make sense of the complex world of schools. Theories do in fact guide our thinking as to what to pay attention to and how to interpret the events

<table>
<thead>
<tr>
<th>Math achievement</th>
<th>R square</th>
<th>Adjusted R square</th>
<th>Std error of the estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent variables</td>
<td>Std Beta</td>
<td>t</td>
<td>Sig</td>
</tr>
<tr>
<td>Buffering</td>
<td>0.078</td>
<td>0.792</td>
<td>0.431</td>
</tr>
<tr>
<td>Bridging</td>
<td>0.624</td>
<td>6.312</td>
<td>0.000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>English achievement</th>
<th>R square</th>
<th>Adjusted R square</th>
<th>Std error of the estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent variables</td>
<td>Std Beta</td>
<td>t</td>
<td>Sig</td>
</tr>
<tr>
<td>Buffering</td>
<td>0.163</td>
<td>1.625</td>
<td>1.09</td>
</tr>
<tr>
<td>Bridging</td>
<td>0.589</td>
<td>5.86</td>
<td>0.000</td>
</tr>
</tbody>
</table>
around us. It is important to test our theories through research so that outdated or unhelpful theories can be replaced with those that have been found to be more successful and useful.

Guided by the norms of the rational systems perspective, principals often view the environment as hostile and potentially disruptive to the attainment of school goals. As a result, they have buffered their schools from the influences of parents and community members by employing tactics that exclude parents and community members and limit their ability to impact the school program. When guided by open systems theory however, principals view the elements of their external environment quite differently. They recognize the interdependence that schools share with their environments and the uncertainty within those environments makes increasing coordination and information flow the prudent course, thereby creating a symbiotic interdependence. This dependence on the external environment for resources and support creates a milieu in which alliances are critical for goal attainment and even survival. As a consequence, they build bridges and attempt to forge alliances with parents and community members. These competing theories impact the behaviors of principals in contrasting ways and shape their attitudes about their external environments.

Hence, depending on the guiding theory, schools employ both bridging and buffering strategies as they interface with their environments (Ogawa, 1996). Realistically, principals must engage in both buffering and bridging strategies. They must protect the teaching-learning process from disruptive elements in the external environment. They lock school doors, institute sign-in procedures, and run interference for teachers who are in conflict with parents. Likewise, all principals must, to some degree, engage in bridging activities with parents and communities. They attend PTA meetings, schedule parent-teacher conferences and back-to-school nights, and sponsor public student performances. Given the time constraints and complexities of having multiple constituencies, principals have to make choices as to where to invest their energies. Both open and rational systems perspectives provide useful guidance to principals. Buffering strategies are most appropriate when external environmental elements intend to disrupt the functioning of the school. However, our data suggest that bridging strategies are more effective when it comes to fostering student learning. These strategies enable the principal to forge alliances and garner the resources and support of external elements that have congruent goals and benefit from the work of the school.

This study was conducted within a particular context – schools within one of the United States of America. Although the sampling methods do not allow generalization beyond the population of schools within that state, they raise important questions for schools across a broader context. The results of this study suggest that the behavior of school leaders is influenced by the theories, both formal and informal, that they have assimilated during their preparation programs and early years in the field. More research needs to be done in other contexts to test the utility of buffering and bridging strategies. If the results found here hold up in other cultures and contexts, both in the USA and other countries and regions of the world, then those who prepare school leaders and provide professional development training ought to emphasize open systems theory that encourages bridging strategies.
Conclusions
As in most things, a good balance is key: parents and community members have the potential to be assets, as long as they can be enlisted to support the school goals for student achievement and development. Our study indicates that theories that guide school leaders to view parents and community members as potential resources and to build bridges to productively engage these people in the work and life of the school are more likely to help them achieve their goal of fostering student learning.

A knowledge and understanding of both rational and open systems theories is an important component of a principal’s toolbox. But theories that guide school leaders to see all parents and other community members as threatening elements of the environment and consequently that lead schools to develop strong and effective buffering strategies to keep them at bay may not be the most useful. If further research across a variety of contexts confirms our findings, then open systems theory, that encourages bridging strategies, appears to be the more productive when it comes to fostering student achievement.

References
Galbraith, J. (1977), Organizational Design, Addison-Wesley, Reading, MA.
Henderson, A.T. and Mapp, K.L. (Eds) (2002), A New Wave of Evidence: The Impact of School, Family, and Community Connections on Student Achievement, Southwest Educational Development Laboratory, Austin, TX.


Further reading


Galbraith, J. (1973), Designing Complex Organizations, Addison-Wesley, Reading, MA.


