Handbook of Design Research Methods in Education
Innovations in Science, Technology, Engineering, and Mathematics Learning and Teaching

Edited by

Anthony E. Kelly
George Mason University

Richard A. Lesh
Indiana University

John Y. Baek
Center for Advancement of Informal Science Education
14 A Design Research Approach to Investigating Educational Decision Making

S. David Brazer
George Mason University

L. Robin Keller
University of California, Irvine

Introduction

Two hundred parents, a few students, and a handful of science teachers settled as comfortably as they could in the high-school band room, waiting for the meeting to begin. The issues were how to create the right combination of entry-level, college preparatory, honors, and advanced placement (AP) science courses to serve the needs of this diverse high school. Two weeks before the meeting, the principal and the science department chair sent letters to every household explaining the purpose of the meeting, laying out their preferred science curriculum, and urging all interested parents to attend the meeting to provide feedback on the courses offered. Despite their attempts to bring in parents with a wide range of views, the band room contained nearly exclusively parents most concerned about honors and AP, with a few parents interested in establishing stimulating courses for college preparatory students. Only the school's staff thought about the needs of students with low skills, learning disabilities, or limited proficiency in English.

Several constituent groups had specific objectives that they hoped to achieve through the decisions made at the meeting. The department chair and the principal were concerned primarily with providing a set of course offerings that would meet a wide range of student needs. Nearly as important was the administration’s desire to make this the first and last meeting to settle some long-standing science curriculum issues. The principal and the department chair also shared one of the primary objectives of the science teachers—keeping course preparations to a minimum. Many parents came to the meeting prepared to advocate for the inclusion of specific courses that they wanted to see in the curriculum. These compatible and conflicting objectives were promoted that evening.

The predictable outcome of the meeting is that the principal and the department chair made some modifications to their original curriculum proposal that addressed the objectives of parents concerned about honors and AP. They thought they got the kind of final agreement they sought. All of the signs looked good for satisfying the major interested parties. Unfortunately, the principal and the department chair misread the situation to some degree. After they publicized a final decision that resulted from the meeting, the principal was subjected to intense private lobbying by parents of students in the middle, who ultimately prevailed on him to put back one course that was cut from the original proposal. This small change upset the delicate balance achieved with the teachers and led to a chain of reactions that eroded some of the agreements made about the course of study in life science. Many people who had been satisfied
became dissatisfied. The end result was that the administration felt compelled to conduct similar meetings and to tinker with the science curriculum in each of the next two years.

The above scenario could be seen as a simple case of poor decision making—the original public agreement should never have been adjusted. Unfortunately, life in schools is not so simple, particularly because school leaders are expected to be responsive to the needs and desires of their school communities (Bolman & Deal, 2003; Lambert, 1995; Schlechty, 2001). When many constituents are involved in decision making, decisions made at one point can be adjusted, unmade, or ignored at a later point. Parents often disagree with one another as they advocate for what is best for their own children. Principals and teachers, if not at odds with one another, frequently have goals that compete or conflict with those of parents. Typically, decisions have been treated as one-time events with specific consequences, but the science curriculum scenario helps to reveal more of an evolutionary, drawn-out process.

To understand and aid decision making in educational contexts requires a research method that captures decision-making processes over time, allows for ambiguity and variation, and permits the researcher to study decision making as it happens. The purpose of this chapter is to demonstrate how a model that incorporates the multiple objectives of multiple interested parties can be used as a design research tool to describe, intervene in, and improve decision processes. Following a brief analysis of the gaps in current educational leadership literature, we describe a model we have developed in order to explain decision making more completely. Then, we use an example research site to explain how a methodology combined with a design research approach would test and allow for modification of our model. In conclusion, we review the above scenario to explain how the principal, with assistance from researchers, could factor the multiple objectives of the many constituents into his decision-making process.

Current Treatment of Decision Making

Three books used widely in educational leadership courses represent current thinking about how schools and school districts should be led. All three books are written by giants in the leadership field and all three contain a great deal of wisdom and insight. They also share a common problem, however. These books neither provide an explanation of how decisions are made nor do they prescribe how decisions ought to be made. This seems surprising in light of the fact that making decisions is a frequent leadership behavior.

The primary goal of *Leading in a Culture of Change* (Fullan, 2001) is to develop a prescriptive theory that, if followed, will cause "more good things to happen" and "fewer bad things to happen" (p. 10). Fullan focuses on the kinds of things that educational leaders should know and how they should behave generally. For example, leaders must act in a manner consistent with the moral purpose they espouse and they should build relationships throughout the organization. There is no doubt that this is sound advice. But Fullan is silent about the kind of process that effective leaders engage in when they sit down with others to decide how the school or school district should change to improve itself. Fullan leaves the reader with the impression that if leaders start with the right mind-set, build strong relationships with many interested parties, and communicate well, education will improve. Ambiguity is the great spoiler here, however. If it is not clear what kinds of changes should be made, honorable people will disagree, causing conflict. How a leader should make decisions under conflicted circumstances Fullan does not tell us.
Sergiovanni (2001) dwells largely in the same realm as Fullan, advocating for ways in which principals ought to perceive their roles in schools. He touches briefly on decision making by emphasizing that, in making choices, principals create opportunities for themselves and their schools to improve. Creating more decision opportunities is a hallmark of good leadership. How these decisions are made, or how they should be made, is never discussed. The rest of The Principalship: A Reflective Practice Perspective describes Sergiovanni’s “New Theory for the Principalship” that emphasizes the development of a positive school culture, strong relationships in a community of practice, and responsiveness to the needs of students and their families. Similar to Fullan, what is missing from Sergiovanni’s theory is any treatment of how principals make decisions, especially when there is disagreement in the community.

Fullan claims to speak to educators and non-educators, whereas Sergiovanni obviously is focused on principals. In Reframing Organizations: Artistry, Choice, and Leadership, Bolman and Deal (2003) speak primarily to the private sector, but they do generalize somewhat to schools and school districts with their use of a few education sector examples. The main mission of the book, as the title suggests, is to help leaders understand that there are multiple perspectives, or frames, which reveal how organizations work. Consistent with Fullan and Sergiovanni, Bolman and Deal provide a great deal of information about how leaders ought to think about organizations and to treat the people in them, but they are essentially silent about how the decision-making process works or how leaders ought to involve others.

Through their analysis of the organization theory literature and its application to schools and other settings, Fullan, Sergiovanni, and Bolman and Deal provide important insights into the structure of school districts and schools and how leaders might manipulate that structure for better results. By not providing a comprehensive treatment of decision-making processes, however, these authors leave educational leaders with no systematic way to think about how decisions are made and how decisions might be improved. This is not to say, however, that there is no literature on decision making.

The books discussed above are based in part on the past 100 years of a wide range of thinking about how organizations work and decisions are made, ranging from the superrational (Scott, 1998) to the rational within limits (Allison & Zelikow, 1999; March & Simon, 1993; Simon, 1993) to the completely non-rational (Cohen et al., 1972; March, 1994; Weick, 2001). Most of this literature is theoretical, with the empirical being entirely retrospective (Allison & Zelikow, 1999; Rogers, 1995; Weick, 2001). Our model is intended to facilitate the study of decision making prospectively, rather than retrospectively, and to help fill in gaps in the literature typically used in thinking about educational leadership. This model and the field-based research that stems from it deliberately adopt a middle position on the issue of rationality. Consistent with Rogers (1995), we see many major decisions as deliberate and forward-looking. At the same time, we recognize significant nonrational aspects of decision making that must be understood by leaders if they are to work with multiple constituencies with any degree of success.

Discovering How Decisions are Made

It is not obvious immediately why the hard-won decision worked out that night in the band room did not hold. Why were parents of students in the middle in such a small minority? Why did the principal cave in to pressure in a meeting-after-the-meeting? To understand this commonplace kind of educational decision making requires methods that are interactive between the research participants and the researchers. A conceptual
A Design Research Approach to Investigating Educational Decision Making

foundation for examining the influence of many people with many objectives in a decision scenario such as the high-school science curriculum described above is established clearly (Brazer & Keller, 2006; Keeney & Raiffa, 1976; Keeney et al., 1987; von Winterfeldt & Edwards, 1986; Winn & Keller, 1999, 2001). We build on this foundation and bring in concepts that create a more dynamic model intended to capture features of decision making in educational contexts.

A Conceptual Framework for Educational Decision Making

Many decisions involve multiple constituents who bring multiple objectives into decision making (Allison & Zelikow, 1999; Cohen et al., 1972; March, 1994). Winn and Keller (1999, 2001) present a model of multistakeholder multi-objective decision making based on the retroactive examination of decisions made in business contexts that reveal how influence from different sources is brought to bear on decision making. Those with interests in a specific decision will display varying degrees of power, legitimacy, and urgency as they seek to influence the ultimate outcome. Power derives from position, relationships, and access to resources, or a combination of all three (Pfeffer, 1982), and manifests as an individual’s or a group’s ability to compel others to do as they wish (Bolman & Deal, 2003). Legitimacy refers to constituents’ rights to involve themselves in a particular decision. Urgency conveys the time pressure that they will perceive with regard to making a decision. Those with moderate to high levels of power, legitimacy, and/or urgency are considered most salient to a problem and the ultimate decisions stemming from it (Winn & Keller, 2001).

The multistakeholder multi-objective approach applied by Winn and Keller (1999, 2001) has evolved from studies in both educational and business contexts. Our conceptual framework is more multidimensional and dynamic than the Winn and Keller (1999, 2001) model. To illustrate, we describe one way in which the flow of decision making might occur. A word of caution, however; simplifying decision making for the sake of explanation makes it appear far more linear and ordered than we believe it to be. The model helps researchers know where to look for decision-making dynamics, but the specifics of how they play out will vary from site to site and from decision to decision.

For the sake of simplicity, we assume a traditional hierarchy of decision making that begins with the school board identifying a policy-level issue. Formally and/or informally, the board informs the superintendent that change needs to occur to resolve the issue. Newly motivated to make change, the superintendent has just been influenced by one major interested group—the school board members.

As the superintendent considers what to do to meet the interests of the school board, he or she weighs input from central office employees. Each set of central office constituents, such as those in the professional development or curriculum and instruction departments, tries to persuade the superintendent to pursue his or her favored solution. Similar to the board and the superintendent, each of these interested parties has his or her own power, legitimacy, and urgency with regard to the issue, as well as a set of objectives with varying degrees of importance (an objectives hierarchy) that drives individual decisions about what to present to the superintendent.

This unfolding process of deciding to change is both rational and nonrational (Rogers, 1995). The decision is rational in the sense that the board, the superintendent, and other school district officials will engage in a process of articulating a teaching or learning problem as clearly as possible, based on evidence that specific goals are not being met. For example, if elementary reading scores do not meet state standards, experts in the
school district may determine that insufficient time during the school day is spent in reading instruction. But knowing how much time should be spent and what the time should be used for is not clear. In the face of ambiguity, constituents may promote pet solutions based on their objectives hierarchies and promoted with varying degrees of power, legitimacy, and urgency. The give-and-take that follows influences how the decision to change takes shape. Some objectives will promote better reading instruction, but others will not.

Implementing Change

After arriving at a decision to change, the superintendent must decide how to present it to those who will lead implementation of the change, namely, principals. Presumably, the superintendent is strategic about obtaining commitment from principals in what she or he assumes to be the most effective manner. Choices for the superintendent include mandating implementation of the change decision, working with principals to obtain their commitment (or “buy-in”) to the change decision, or inviting principals to help refine the change decision before implementing it.

Principals are the agents of the superintendent and the school board in the sense that they work with their teachers to carry out decisions made at the upper echelon of school district leadership. Yet, simultaneously, principals have direct and indirect influence over the decisions that they are expected to carry out. Therefore, superintendents will communicate about a particular decision based on how principals have influenced them and their assumptions about how principals function as agents. There is substantial uncertainty about how decisions will be implemented because principals have their own objectives hierarchies that may drive them in different directions from those that the superintendent intends. Allison and Zelikow (1999) refer to this as the principal-agent problem (in this case, meaning that the superintendent initiates something as the “principal” figure and the school principals carry it out as agents of the superintendent). How consistently principals put into place the wishes of their superintendents is based in part on how tightly coupled school sites are to the central office (Weick, 1976); that is, the degree to which a superintendent’s directive will be carried out as intended.

In their own schools, principals face choices similar to those of the superintendent as they work toward implementation. They must decide how they will respond to the decision to change that the superintendent communicated and how they will get teachers and students to implement it. Their power, legitimacy, and urgency with regard to the issue combine with their objectives hierarchies to influence the choices they make. In turn, teachers decide how they will implement the decision to change based on how the principal approaches them; their perceptions of the principal’s power, legitimacy, and urgency; and their own objectives hierarchies. With so many different choices made by a multitude of people, it is easy to see how implementation might deviate from the original conceptions of what the change should look like.

Board members, superintendents, principals, and teachers do not make decisions in isolation. Starting from their objectives hierarchies and self-perceptions of power, legitimacy, and urgency, they take into account the influences of the interested parties around them and outside the organization. Any individual choice made by the constituents involved in a decision could influence reactions that, in turn, will affect decisions at a later time. Therefore, the entire process is not so much linear as it is reciprocal and/or cyclical, and it is always iterative. For example, school board members may observe how teachers react to the change that the superintendent decided upon based on the
original directive from the board and conclude that the benefits they anticipated are not worth the resulting negative consequences. In such a case, board members may indicate to the superintendent one way or another that they are not as strongly interested in the change as they once were. Alternatively, other members of the organization—principals, teachers, or parents—could initiate just as easily the process of articulating the problem that leads to a decision to change.

To test the usefulness of our conceptual framework requires fieldwork tools that will reveal the influences that shape all of the relevant players’ thinking and actions about a particular set of decisions. Such a need suggests the kind of interactive approach between researchers and participants that is embedded in design research.

Constructing a Methodology

The prescriptive focus of decision analysis, the field on which our multistakeholder multi-objective approach is based, is consistent with design research that is aimed at improving practice (of educational decision making, teaching, etc.). Design research is concerned primarily with linking research and practice by examining how theory is applied in instructional settings, how it should be adapted given practical results, and how learning takes place in the school as an organization (Cobb et al., 2003; Design-Based Research Collective, 2003). Although design research is a helpful point of view that encourages hypothesis testing, interaction, and adaptation as research evolves, it is not a methodology in and of itself (Kelly, 2004).

The methodology we employ in conjunction with design research begins with description to verify that the educational, decision-making landscape is understood. After describing how decisions are made, prescription can follow as a result of the trial-analysis-retrial process embedded in design research. Ultimately, normative research findings may follow description and prescription. See Table 14.1 for an explanation of descriptive, prescriptive, and normative foci for both research and practice.

<table>
<thead>
<tr>
<th>Educational decision-making research and practice</th>
<th>Focus</th>
<th>Descriptive</th>
<th>Prescriptive</th>
<th>Normative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research aim</td>
<td>Describe how decisions are made by empirical observations, surveys, and interviews; experiments and statistical analysis may follow later</td>
<td>Prescribe how people should make decisions, given limitations and complexities (as in design research)</td>
<td>Identify ideal decision making based on data analysis from multiple sites or from logical analysis of (often very simplified) stylized examples</td>
<td></td>
</tr>
<tr>
<td>Link with practice (training, consulting, etc.)</td>
<td>Study the evolution of specific decisions as they are happening in field locations, not attempting to change the process or the outcomes</td>
<td>Guide/aid decision making, for one decision at a time; make generalizable tools and observations to improve future practice (as in design research)</td>
<td></td>
<td></td>
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</table>
Our multistakeholder multi-objective model of educational decision making represents a hypothesis to be tested in two ways: as a description of what happens and as a prescription for what should happen. The model has not been developed yet to fulfill the second function because it is only beginning to be field-tested. We believe that it is sufficiently well developed to facilitate field-based data collection and analysis describing how decisions happen, but until it is used as an intervention in decision making, we will not know how well it functions prescriptively. Through the modification required by field testing in multiple sites with varied decisions and contexts, the model will evolve into a normative framework that explains the ideal means of engaging in educational decision making involving many constituents who have many objectives.

**Descriptive Focus**

Most of the descriptive studies of multiple influences on decision making have been conducted retrospectively. Although greatly helpful for fleshing out decision-making processes, retrospectives are limited by the memories of participants that may have eroded substantially or be false by the time researchers interview them. Furthermore, decision making nearly always involves an element of serendipity that is filtered out over time as those involved in the decision making rationalize their decisions (Røgers, 1995) or explain decisions in order to make sense of the actions that preceded them (Weick, 2001).

A decision is more of a process than an event because constituents and leaders continue to influence one another from the initial change decision through implementation. As decisions evolve, the interested parties come and go, attention waxes and wanes, and problems and solutions get redefined (Cohen et al., 1972). Who participates in the decision making is often a vital piece of information for understanding how a decision gets made in a particular way (March, 1994). Decision-makers and their organizations allow certain individuals or groups to have access to them during the process while denying such access to others (Allison & Zelikow, 1999). Yet, among those who have access, there will be variations in influence.

Our model and the methodology that accompanies it are intended to capture the unpredictable comings and goings of decision participants, problems, solutions, and circumstances. The methodology presented here investigates decision making as it happens, in order to yield more accurate and detailed results. One of our research sites helps to illustrate the advantages of studying decision making from a contemporary perspective.

Salmon Run is a small, kindergarten-through-grade eight school district located in northern California. The superintendent has been there for five years. Just before his arrival, the school board approved a narrowly drawn retention policy: any student not meeting state and local standards at a particular grade level would be retained. The superintendent has explained to our research team that he wants to engage the school board and school community members (predominantly teachers and administrators) in a “data-driven,” decision-making process to determine if the retention policy is meeting its original goals and what, if anything, should be done about it. As of this writing, the school district is engaged in fact-finding about the policy.

The rational aspects of the decision to change the retention policy (or not) are relatively clear at this point. The superintendent has brought together key constituents in the school district, including two school board members, two school site administrators, and ten teachers, with each of the district’s schools represented. Working with a consultant from a university in the region, this group has divided into subcommittees to
study, through the school district’s student data and surveys, how the current retention policy is being implemented and the teachers’ and parents’ perceptions of the effects and effectiveness of the policy.

The superintendent’s process seems likely to yield one of four recommendations to the school board: (a) preserve the current retention policy as it exists, (b) modify the current policy, (c) replace the current policy with a new one, or (d) remove the current policy and do not replace it with a new one. These prospects are listed as possible change decisions and are laid out in Table 14.2, along with related possible implementation decisions.

As obvious as it may seem to choose among the four alternatives listed in Table 14.2, looking at the implementation decisions brings nonrational factors into the picture. How is it possible that the implementation choices remain the same for all four policy alternatives? In an organizational context such as a school district, implementers are often different from decision-makers (Rogers, 1993). They have their own objectives hierarchies that may or may not be consistent with those of the decision-makers. Two examples from Table 14.2 illustrate the point. If the board decides to preserve the current policy, it is possible that some teachers have been so dissatisfied with it that they will find ways to modify the current implementation, such as by identifying more students for special education or Section 504 eligibility, thereby exempting them from the retention policy. At the other extreme, if the board removes the policy and does not replace it, teachers and principals could continue to retain students just as they have for the past five years because “that’s the way we’ve always done it.”

Table 14.2 lists the likely sets of choices for the change decision, but without observing the decision process and talking with those involved, it would be very difficult to determine why a particular choice was made. We know that key Salmon Run constituents are involved somehow in making the ultimate decision because we know that the superintendent has brought them into the consultations deliberately. But we do not know what influence, if any, a given individual or group has and it is difficult to determine this based only on the final outcome. To reconstruct the influence of the various interested parties after the decision has been made, we would have to rely on retrospective accounts from individuals who would be motivated to “make sense” of the decision made and who might have difficulty remembering their thought processes at the time of the decision.

<table>
<thead>
<tr>
<th>Table 14.2 Possible Outcomes from Retention Policy Choices</th>
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<tr>
<td>Change decision</td>
</tr>
<tr>
<td>-----------------------------------------------------------</td>
</tr>
<tr>
<td>Preserves the current policy</td>
</tr>
<tr>
<td>Modify the current policy</td>
</tr>
<tr>
<td>Replace the current policy</td>
</tr>
<tr>
<td>Remove the current policy</td>
</tr>
<tr>
<td>Modify the current implementation</td>
</tr>
<tr>
<td>Replace the current policy</td>
</tr>
<tr>
<td>Remove the current policy</td>
</tr>
</tbody>
</table>
The nonrational, serendipitous, or unpredictable aspects of change and implementation decision making require researchers to be present while decisions are being made in order to document how they happened. Our method begins with surveying the participants in the superintendent’s decision-making group and the teachers throughout the school district to learn their perceptions of the district’s orientation to change and the power, legitimacy, and urgency of the different parties interested in the retention policy decision. Combining survey results with interviews of participants to discover their objectives hierarchies and to discern their power, legitimacy, and urgency with regard to the decision enables researchers to map out potential patterns of influence. Observing the interactions among those involved helps to verify or draw new maps based on the actions of individuals and groups. Perhaps most important, observation allows for the capture of serendipitous events without having them filtered through participants’ retrospection.

The concepts embedded in our model of educational decision making provide the groundwork for coding interview and observation data. In addition to searching for factors that influence how change and implementation decisions evolve, the model requires finding evidence of the exercise of power, legitimacy, and urgency; explaining which objectives are most important and why; and how perceptions of loose or tight coupling influence communication choices and implementation decisions.

**Prescriptive Focus**

The multistakeholder, multi-objective, decision-making model employed in the field work referred to above is a working hypothesis for how decisions happen. It is also potentially more than that. We envision our model serving as the basis for educational leaders’ professional development, which would be a specific intervention consistent with design research. At this point, we present Salmon Run school district as a hypothetical example of how professional development could aid future decision making because, thus far, the district has declined to engage in professional development centered on decision making. The kind of interaction between researchers and participants that we describe below is similar to the design research model proposed by Bannan-Ritland (2003).

Having demonstrated to Salmon Run officials how our model helps to explain their decision-making processes, we would work collaboratively with school and school district leaders to improve their decision making by using a multistakeholder multi-objective perspective. Professional development could include learning how to identify the key constituents and their objectives; how to assess the power, legitimacy, and urgency of the various involved groups; how to analyze the degree to which organizational entities are coupled loosely or tightly to one another; how to be strategic in the implementation phase; and what to do with feedback that occurs throughout the process.

Using the model in professional development and practice will surface weaknesses. For example, principals know that power in educational settings may be exercised by not doing something, rather than by getting others to engage in an activity. This stems from teachers’ relatively high degree of autonomy. This kind of thinking would lead to a new conception of power that entails both accomplishment and inaction. The consequences for implementation from this reconceptualization seem substantial. By explaining their experience of power, educational leaders help to improve the model by exposing its shortcomings to researchers.

Under ideal circumstances, researchers would work side by side with administrators
to observe how the model functions in practice, to coach administrators on the use of the model, and to make modifications to the model that enhance its prescriptive legitimacy. If school and school district leaders are able to use the model well, researchers would examine the quality of their decisions in terms of measures such as consensus or stability or adopt a decision quality framework such as Matheson and Matheson (1998) provide. If leaders use this model with a high degree of fidelity, but decision processes or outcomes are poor quality based on some objective measure, then practitioners would engage with researchers to determine what is invalid or missing from the model, make modifications, and try again. If the model is used well and helps to develop higher quality decisions, it would make sense to try it in different contexts to see if the validity and quality hold.

By co-designing professional development focused on decision making and testing jointly the hypotheses implicit in professional development activities, both researchers and practitioners will learn more about educational decision making. This partnership uses the model as a design research tool, marrying together the perspectives of research and practice. Collaboration on professional development would allow us to test what we believe about educational decision-making processes and would strengthen the explanatory and predictive value of our model.

**Normative Focus**

In the normative phase of model development, descriptive and prescriptive results from Salmon Run and a wide variety of other school districts would be synthesized to produce a more generalized model that describes productive, decision-making processes for a broad range of issues and educational contexts. The value of such a grounded theoretical model is that it would serve as a set of guidelines to improve decision making in schools and school districts with the hope that students, families, and society would benefit from enhanced educational quality.

To know on a more general level the degree to which our model helps to improve decision making, we would look for the following kinds of evidence in school districts: greater consensus, fewer reversals of decisions, transferring process tools (software, survey forms, and process steps) to new domains, repeated budget allocations for decision analysis interventions, etc. Matheson and Matheson (1998) have developed a specific decision quality spider diagram for decision analysis in practice. The diagram is a six-pointed star that displays graphically scores on six dimensions of the quality of a decision: the appropriate frame of the decision; creative doable alternatives; meaningful reliable information; clear values and trade-offs; logically correct reasoning; and a commitment to action. Whatever measures are used, to identify ideal decision making requires establishing criteria and standards against which decisions deriving from the process described in our model can be measured.

The normative phase methodology likely would involve comparative case studies that employ both qualitative and quantitative measures. It can be achieved only after a sufficient body of experience at the descriptive and prescriptive stages has been amassed and understood.

**Methodology Summary**

To describe educational decision-making processes, prescribe what works, and establish decision-making norms requires collecting and analyzing data about both the rational and the nonrational aspects of decisions, from the initial choice to make a change
through implementation of the change. On the rational side, the specific aspects of a problem and the choices available to address the problem will be known and agreed upon by the key constituents. On the nonrational side, the constituents' objectives hierarchies contain objectives that are self-serving, peripheral to, and/or at odds with, decisions to change. Sorting through the objectives hierarchies and how the interested parties promote their own goals through the use of their power, legitimacy, and urgency is central to understanding the multiple influences in decision-making processes.

With the notable exception of Allison and Zelikow (1999), the few studies that examine decisions focus on the decision itself, not the process. Furthermore, the decisions investigated are typically change decisions and not implementation decisions. There is little follow-through in the literature from first conception to ultimate implementation, and virtually nothing about the evolution of decisions in educational contexts. In this type of uncharted water, it is more appropriate to begin with exploration and informing practice (Kelly, 2004). But as case studies are developed, we are optimistic about recasting our model in prescriptive and normative forms.

The Science Curriculum Revisited

Had the principal and the department head been working from the multistakeholder multi-objective model, they might have seen and reacted differently to the evening in the band room and been able to anticipate problems from a missing interest group. They needed to recognize their failure to involve all those who had moderate power, high legitimacy, and high urgency when they conducted their meeting.

The principal’s most serious mistake may have been to assume that a decision could be made soon after the meeting in the band room. Had he anticipated that typically underrepresented constituencies would not attend the meeting, but that they would care about its outcome, he could have set up other avenues for parents to express their views about the curriculum. Doing so would have dispelled the false impression that “all parents” agreed on what the curriculum should look like and he would have been able to understand more parents’ objectives hierarchies.

Thinking from a multistakeholder multi-objective approach, the principal might have seen that the following main objectives were at work for the parents interested in honors and AP courses: (a) getting their children into the best colleges and universities, (b) preparing their children to take SAT subject and AP examinations, (c) getting their children into the best high-school situations possible, and (d) keeping their children away from unmotivated and/or “bad influence” students. Understanding that the first objective is probably the most heavily weighted in the objectives hierarchy for this group and, perhaps in a somewhat modified form, for all the other parent groups, the principal would have seen potential common ground among those parents who appeared to disagree with one another.

Finding common ground would not be sufficient, however, because to offer one class means that another likely would be cut; one group wins while another loses. This is the reason the principal was lobbied so hard to restore a college preparatory course that had been cut as a result of the meeting. Therefore, it is necessary for the principal to assess the power, legitimacy, and urgency of all the constituencies with which he is working. The principal reacted to his perception of the power of the parents concerned about honors and AP courses by making the modifications in his proposal that they requested. But he was subjected later to the power of the parents of college preparatory students and made a change. It might have worked better for the principal to recognize that parental power stemmed from the ability of parents to influence school board
members, the superintendent, and/or central office administrators in this small school district, suggesting that the principal should have known what these other interested parties would support before he modified the curriculum. It is easier to stand firm on a decision arrived at collectively when the principal knows that superiors will not intervene to overturn it.

Principals’ abilities and time are stretched to engage in this kind of analysis in the midst of busy schedules and multiple demands. For this reason, a design research approach is very attractive. Instead of principals being expected to engage in the above kind of thinking alone, it seems more feasible to have a partner, perhaps an academic, who can engage in the analysis with them and serve as a professional coach. By providing description and prescription, the researcher can help principals through difficult passages. By testing recommended strategies against predetermined criteria for the quality of decision outcomes, both researchers and principals will learn how to engage in collaborative decision making more effectively.

By partnering with practitioners, researchers using our model and method are more likely to be able to describe for leaders the entire perspective and the important details of decisions simultaneously. With this kind of knowledge, principals and superintendents may be more capable of making decisions that serve their intentions better and are less prone to be weakened through the implementation process. If so, leadership is enhanced because the fundamental act of leaders in all contexts is decision making.

Notes

1 This section is a much abbreviated description of our conceptual framework that is described in Brazer and Keller (2006).
2 Salmon Run is a pseudonym used to protect the identity of the school district and the research participants.
3 At the middle of the star is the worst performance level on each dimension (0 percent achievement); the outer ends of the six points are the best, 100 percent level. A large symmetric star would signify excellent scores on all six dimensions. In an educational decision context, the quality of the decision could be tracked over time for one school site and compared between school sites.

References


