

ADVOCACY DESIGN STUDY GUIDE

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School Self-Assessment and Design Questions

Preface. Students' performance in mathematics, even more than their performance in reading and writing, depends primarily upon the quality of instruction in the school. While young children do indeed have some sophisticated math concepts and the home needs to support instruction in an active way, it is still largely the teacher who must help the child formalize one's understanding of mathematics. Teaching mathematics is different from teaching computation or "minimum basic skills." Mathematics is a way of thinking, a way of defining situations, a way of solving problems embedded in situations. The challenge facing schools today is to redefine their notion of what it means to "know mathematics" and, therefore, what it means to "teach" mathematics. Definitions that limited the knowing and teaching of mathematics to following procedures in order to get answers that reflected "minimum basic skills" are no longer acceptable definitions. Mathematicians, interest groups, and educators, working both collaboratively and separately, have set new "standards" or new definitions for what it means to "know" mathematics. Policy makers have adopted these definitions and incorporated them in new measures of student performance at grade level check points and for graduation. As a result of this activity, school people must re-learn what it means to teach and to supervise mathematics in the schools.

The focus of this assessment is the program in mathematics. While the definition of mathematics has changed over the last few years, this change is only one piece of significant changes in the larger system of public education. Given the awareness of the need for greater social justice and a more inclusive sense of rights, our society has sifted its perspective on schooling from one that endorsed success for a few to an expectation that all students could and should achieve at a high level of performance. No long was the school to sort out a few innately bright students and point them towards college; the school is now expected to generate intelligence, regardless of the students' initial level of achievement, and to educate all students so that they can live and succeed in a global world. This fundamental shift in social expectations about the function of schooling has brought about concurrent shifts in our thinking about what schools are and how they should work. In short, the issue before us is one of school design: designing schools for a new social mission.

The Advocacy Design framework, which is presented below, is used as a tool for presenting a picture of the school -- the context within which mathematics instruction takes place. Assuming there is a priority on mathematics instruction and therefore a need for each school to study its mathematics program, each school will need to generate a school-wide conversation about the nature of the mathematics program.

Improvement of student performance requires a self-assessment of the school and a significant improvement in knowledge of mathematics requires a revision of the school as an institution. In order to develop a mathematics program that incorporates the current understanding of what it means “to know mathematics,” it will be necessary to change “the system for teaching and learning mathematics.” Making minor adjustments in parts of the current system is not sufficient. The mathematics program as a core program is embedded in the larger context of the school, is interdependent upon what else happens in the school, and cannot be separated from other elements of the school. In order to be successful in revising the mathematics program, therefore, the leadership team of the school must engage stakeholders in a constructive conversation about the school, a conversation that provides the context for a comprehensive, data-driven, central-office-supported effort to strengthen the mathematics program.

The advocacy design framework serves as a tool for the self-assessment of the school and its mathematics program. The self-assessment provides a process for developing plans to change expectations about mathematics content, instructional strategies, and to improve students' mathematics performance. While answering self-assessment questions, the school is both reporting on its current status, considering what it might do better, and constructing plans as responses to perceived concerns. Given the timeline, responses to the self-assessment must be quick, insightful, comprehensive, and coherent. While focused on mathematics, responses should be aimed at improving the overall accomplishment of the school and not thought of as a set of short-term quick-fixes in one part of the school. Similarly, since the focus is on the school as a social institution, it is necessary that the self-assessment and planning process include the primary stakeholders, or a core group of the school's constituencies, in the conversation about the school.

Introduction. This document is designed to present the rationale for the self-assessment and planning process referred to as the advocacy design process. The primary purpose of the advocacy design process is community building; that is, strengthening the school's sense of efficacy and its capacity to be a powerful institution in its social context. The school's sense of efficacy rests upon a general understanding, engagement, and commitment among those stakeholders, both professional and non-professional, who have an interest in the success of the school as an institution. Social power or civic capacity for education is generated through public discourse about the school's intentions, its current accomplishments, and its design. The advocacy design process is a tool the school stakeholders can use in their discourse and effort to construct a stronger sense of community, a new school design, and a higher performing school.

Advocacy and Public Discourse. Research indicates that good schools have a community with a shared vision or sense of identity and character. With respect to mathematics, for example, in a high performing school, teachers, parents, students and others all share a sense of what it means to know and to teach mathematics. In a more general sense, in good schools there is a known School Culture or design of the school

that serves as a set of beliefs and practices about what the school is and ought to be. Good schools engage in a constant process of conversation, inquiry or self assessment as a way of creating this shared sense of who and what they are. Less effective schools, on the other hand, have very few public discussions and seldom ask critical questions about the life they share in the school. Good schools engage in such conversations and generally ask two questions.

First the more effective schools ask, "Who are we?" They talk about their philosophy or vision and ask of themselves, "What is the nature of the predominant belief system that underlies life in our school community? How are competing views expressed, enacted, responded to?" In somewhat more specific terms, they might ask, "What does it mean to know mathematics?" What do good teachers and students do when they work at mathematics?"

Second, good schools ask, "How well are we doing as a school community?" Good schools develop a range of indicators they read to measure the consequences of their joint activity. They look both more closely and more often at what students and teachers are doing. The advocacy design process is intended to provide key questions that can be used to help schools engage in this process of public discourse.

Visions of a "good" school are often contested. People can have very different ideas about what a good school looks like on a daily basis; thus, people interested in the school may differ in their interpretations of the school's daily experience, its current status, and also differ about what needs to be done next. Even professionals often differ in their notions of how learning takes place and what is a good class. In teaching, as well as in viewing classes, it is not simply a matter of seeing competence or incompetency; there are also very different notions of what it means to be "competent" or what it means to be a "good" teacher. The differences in interpretations are a matter of values, not simply a matter of facts. In the more effective schools, through public discourse these differences get aired, acknowledged, and some working resolution about how to judge the present and how to plan for the future is possible. Basic differences in underlying values will never be completely resolved; thus, the need for continuous discourse in order to build understanding that permits action for the future. In less effective schools, people avoid public discussion of their differences and fail to engage in collaborative processes that make it possible for them to work out a shared understanding. In the less-than-effective schools, the various individuals involved in effect agree to work as a collection of somewhat isolated people who share a space, but do not share a powerful idea about what it is that they are to do. In simple terms, each teacher closes the door and follows one's own sense of what is good and proper. In the more effective schools, there is a greater coherence, a shared sense of what is proper, and a conversation about how to give life to their shared sense of purpose.

A "center," in the sense of the advocacy design center, is not a place. A center in this sense is simply a series of events, activities, and exchanges that serve as a public arena in which engaged people, who are stakeholders in the success of the school, talk about their competing notions of what a "good" school is all about. The professional leaders of

the school have a particular responsibility to inform the participants' discussion about the school's present circumstance and its possible future. As leaders in the school, educators must help the school community discuss and come to some understanding of their value differences, so that there is a shared sense of meaning about the "good" school they are attempting to create and sustain. In this process, the professional has an obligation to be clear about his/her personal values or vision and to exert an influence on shaping -- but not controlling -- the public discourse. From this perspective leadership in the community is a moral act, not a neutral act devoid of moral consequences. While leadership requires strong technical competencies, such as filing accurate reports punctually and building meaningful budgets, leadership also requires a clear set of values. The purpose of ADC is to combine technical expertise and professional values in a process that promotes public discourse and constructs a viable consensus among all stakeholders as they work together for a stronger school.

Assessing the School as a Whole. With the intent of providing a means by which the school can develop a greater sense of efficacy, the advocacy design process has a dual focus:

- a focus on a holistic view of the school's culture or on the school's design as an institution in its social context; and
- a focus on inquiry or self-assessment by a core group of the school's stakeholders. Self-assessment serves as the basis for asking the essential question of leadership and planning: "What next?"

First of all, the advocacy design process refers to schools as social institutions. By this we mean that every school is a complicated organization that reflects its own aspirations, its own neighborhoods, its own set of solutions to problems encountered over time, and its own character. Even in bureaucratic school systems that promote "standard operating procedures" that are intended to regularize schooling, individual schools create their own pattern of meaning. Even though a set of school buildings might have been built all according to one architectural plan and appear to be alike -- as is the case with the "presidential" high schools in New York City -- in their daily lives, Washington, Adams, Jefferson, Madison and Monroe high schools are as much different from one another as they are alike -- a critical difference being their willingness to follow directives or to engage in inquiry or self-assessment that lead to improvement.

In addition to a belief that each school has its own character, the ADC focus on the school's culture or on a holistic view of the school is also based on modern learning theory. Individuals, so the research suggests, tend to reach a greater understanding of a complex situation, when they start with an overall image, perspective, or model that provides a meaningful context for learning the "pieces" of information or facts. The more traditional and more frequently observed teaching/ learning strategy begins with the pieces of information, or "basics." These differences in approaches to teaching and learning are often referred to, on the one hand as traditional, transmission-oriented, behaviorist, or technical, when the approach is to start with the "pieces" and the hope that the student will "add them up" to make some larger meaning, establishing a concept or stating a principle. On the other hand, there is the alternative strategy that moves

from the whole to the parts and is referred to as the cognitive, transactional, or constructivist approach. The advocacy design process is constructivist in orientation and attempts to engage people by considering the school as a whole and to see how the parts are interrelated, as opposed to thinking of a series of projects, programs, grade levels, separate classrooms, or initiatives that seldom "add up" to a coherent, high performing school.

As the old saying goes, people need to "see" the forest, before they start examining each tree in the forest. Learning is more effective when individuals can relate the new and unknown information to the schema that they already have in their heads. One big problem with talking about schools is that people usually have a very personal referent for the word "school." We carry around very different pictures of schools. Our images of a school are based largely on our own experiences as a student, or perhaps more recently our experiences as a parent. Even as professionals in the school, we tend to think of the school as "my class" or "my students," while failing to see the school in its context as a social institution with many stakeholders. As a result, when we engage in a discussion about "our school," we do not in fact have the same "school" in mind. Nevertheless, most discussions of school are conducted as if everyone at the table brought the same meanings for the word "school." The ADC process provides a means for us to compare our images of the good school and to come to some workable shared picture.

Given the earlier assumption that schools are social institutions, each having its own special character, the advocacy design process does not attempt to specify an official or standardized answer to the question, "what is a good school?" What the advocacy design process does attempt to do is to focus on inquiry or self-assessment. What every good school has in common, according to this research-based perspective, is a self-awareness based upon a continuing examination of the processes in the school and of their consequences in the school community. Students of Japanese management refer to this attention to continuous improvement as "kaizen." While good schools may have different characters, they share a concern for inquiry, for self-assessment, for continuous improvement. Ogden, in reviewing research on blue ribbon and effective schools and borrowing on the work of Glickman, observed that most schools can be called either a "collection" school or a "congenial school" By "collection school" she meant the school operates simply as a collection of classrooms and teachers, without coherence or any operational sense of interdependency or active commitment to common goals and strategies. Similarly, in the "congenial" school people agree to meet and to "be nice," but they are not driven by a commitment to quality learning for all children and to the inquiry that makes continuous improvement possible. The less frequent school type -- the blue ribbon school -- is the inquiry-oriented school, characterized by its vitality: it constantly assess its performance and seeks instructional strategies that work for their children. The ADC process is an inquiry-oriented process.

Individual schools are clearly units within the larger public system of education. As such no individual school can ever be completely autonomous: that is, no school can ever be entirely self-governing. There are externally imposed constraints. Unlike regular public

schools, charter schools, on the other hand, are public schools that are permitted to be largely self-governing, generally bound by state statutes, but operating outside standard state and local regulations. While charter schools have a great deal of autonomy, there is no guarantee that charter schools will design and organize themselves as inquiry-oriented schools; indeed, many of the charter schools simply function as "collection" models.

Even those that have only limited autonomy, efficacious public schools have a sense of agency, a sense of being in control of their own history and destiny. They often act "as if" they were autonomous, as if they were a charter school accountable for themselves. Less effective schools, rather than acting as if they were autonomous, tend to see themselves as victims, as helpless objects of others' directives. As schools move towards autonomy, they consciously develop their special character, their vision, their *raison d'etre* that makes them unique and unlike any other school. Self-governing autonomy, at least over time, will almost certainly lead to uniqueness in character. In effect, the basic premise of the larger public system -- that all schools, personnel, and curriculum within a system should be standardized -- is contrary to the basic notion of self-governing autonomy. Nevertheless, ironically, instituting site-based management within schools does not necessarily mean that each school will move away from its tradition of hierarchical authority and its surface desire to standardize all operations, or to move away from its practice of acting like a *collection* school -- a confederacy of loosely connected teachers who only share a common building. Self-governing schools have several models of governance they can follow: they can decide to continue as site-based bureaucracies. The overall design of the school can call either for a bureaucratic/standardized model of hierarchical authority or a more organic community model of shared authority and creative differences linked to a common value perspective. People who live in communities and/or participate in church congregations generally choose to govern themselves in these non-hierarchical ways.

Design Elements and Definitions. In order to gain a perspective on the school as a whole and to establish some common understanding or referent for the discussion of "our school," people need a way to create meanings that refer more specifically to this school in its context. What we need is a set of lens, a framework or an analytic perspective that we agree to use to frame the conversation or to structure the discussion. The advocacy design process provides such a framework. Use of the advocacy design process asks participants to modify their personalized way of looking at the school and to develop a shared way of looking at the school. According to this framework, the school as a whole is an institution that incorporates four design elements:

- a system of instruction;
- a pattern of organization;
- a system of governance; and
- a system of judging or accounting for the school's accomplishments.

These four components are referred to as the elements of a school's design. Every school, to exist as a social institution, must somehow work out, either explicitly or implicitly, a set of responses to these design elements. Over time the school will make

some decisions about how to conduct instruction, how to organize classes, how to make decisions, and how to measure its performance.

To establish the meaning of these elements of design and establish a useful common understanding, one might ask a series of questions. The questions themselves give an operational definition to these 4 areas or elements of school design. The specific questions in area one, for example, address "What do you mean by instruction?" The process of answering the questions provides a way for people to construct their meaning for the word "instruction," to describe its practice in the school, and to judge its efficacy. The ADC's 29 questions are designed to help people clarify and construct shared ideas about and values regarding important beliefs and practices regarding:

1. how *instruction* is conducted in the school,
2. how people work together or how the school is *organized*,
3. its pattern of *governance* and decision making,
or how authority is used and distributed, and
4. how the school examines and *accounts* for its performance.

These elements can be defined as noted below.

Even though for discussion purposes the four elements of design are presented separately, the actual emphasis is upon their interdependence. The elements of a successful, autonomous school are so integrated and coherent that distinctions among the four elements are difficult to find. In terms of the perspective on knowing and working, for example, when instruction is highly constructivist in orientation, in the successful school the governance system is also constructivist in orientation, emphasizing the creation of meaning through open discussions, as opposed to reliance upon regulations and written memo, which are evident in bureaucratically oriented schools. Given this concern for coherence in design, the overlap in the definitions of the elements is to be expected; unlike parts of a machine, the elements are not discrete. At the same time, however, while the participants, their relations, and their focus are linked throughout the school, these features do vary somewhat from element to element so that for analytic and design purposes, differences among the elements can be discussed.

With this discussion of coherence and interdependence in mind, definitions of the four design elements are offered below.

Instruction: Instruction has two related aspects: work or what students "do" and knowing.

With respect to work, there are two general orientations. Based upon a more behavioral perspective, activity is often designed to focus on small, discrete units of work, involve individuals acting largely in isolation, independent of others, with carefully defined tasks such as workbook pages or questions at the end of the chapter, and in structured, specialized settings, most often seatwork. An opposing perspective, reflecting a constructivist orientation involves efforts to build concepts through reflection and discussion about direct experiences, to comprehend and define problems in context, to

foster deeper understanding, engage students in focused social interaction so that they learn through active talk, work at interdependent tasks, to nurture curiosity and imagination, and to provide enriched settings where open-ended exploration and learnings are possible.

With respect to knowing, there are the two parallel but very different orientations. These differences in orientations or perspectives are based primarily either on traditional / behavioral or on constructivist theories of learning. Based upon behavioral thinking, one is said "to know" when exact answers can be produced or applications repeated precisely as shown, even if there is a new and/or different context. Emphasis is upon getting "the one correct answer." Knowledge is assumed to be external, universal, and objectively verified by others, especially by adults. An opposing perspective, reflecting the constructivist theoretical frame, focuses more on the cognitive processes of students, on the creation of knowledge, on what students must do mentally to make sense of their experience and on personal and intuitive understandings. In the constructivist perspective, the social and interactive aspects of knowing are acknowledged. The processes of creating meaning, engaging in inquiry, and exercising curiosity are valued, as compared with the repetition of only one procedure or correct answer. The 4MAT strategy of building concepts through direct experience and discussions that lead to deeper understanding reflects a constructivist orientation. The New Standards and the NCTM's emphases upon problem solving, the explanation of strategies, and the presentation of word problems are also consistent with such a constructivist orientation.

These fundamental differences in what it means to know can be summarized by reference to two brief examples.

Student #1

Q: What was the date of the Battle of the Spanish Armada?
A: 1588

Q: How do you know this?
A: It was one of the dates I Memorized for the exam.

Q: Why is the event important?
A: I don't know.

Student #2

Q: What was the date of the Battle of the Spanish Armada?
A: It must have been around 1590.

Q: How do you know this?
A: I know the English began to settle in Virginia just after 1600, although I'm not sure of the exact date. They wouldn't have dared start overseas explorations if Spain still had control of the seas. It would have taken a little while to get expeditions organized, so England must have gained naval supremacy somewhere in the late 1500's.

Q: Why is the event important?
It marks a turning point in the

relative importance of England and Spain as European powers and colonizers of the New World.

Organization: Organization refers to the pattern of purposeful relations that exist among individuals within the boundaries of the school's sphere of interest. School behavior varies in the degree to which it is public and interdependent or is private and isolated. In more traditional schools, the school is more private and isolated, the school being considered a collection of independent agents. In traditional schools each person conducts work of a similar nature, but not in a cooperative or collaborative way. In such schools, teachers most often work in "my room" and individually assume responsibility for what happens to "my kids." Almost their entire day is spent with children, with next to no time for adult learning, collaboration or joint planning. Individuals in the more traditional schools often emphasize the differences between "regular" teachers and specialists, who are viewed as competitors for classroom time and student interest, rather than being viewed as contributing colleagues working together for student success. In the more traditional schools, the spheres of decision making are sharply delineated, so that the school's organization for instruction and governance are distinct; teachers decide about their individual classrooms, while administrators decide about the school. There is only a small public space for common interests.

In more successful schools, teachers are organized differently; there are stronger interdependencies and more public collaboration. Often, there are teams of teachers, who refer to "our kids." These teachers may see themselves as working together and jointly responsible for student success. They spend time focusing on their common concerns and coordinating their contributions. A diversity of competencies and contributions is valued.

School designs representing "whole school models," frequently redefine roles and patterns of organization. There is less attention to narrowly defined roles and greater attention to broad roles and integrated work.

Given a renewed attention on mathematics performance, it is highly probable that schools will need to change their pattern of organization so that greater sharing, collaboration, and assessment of the mathematics program and its lessons is possible. Adding additional isolated individuals to the school, for example, is not likely to make more than a marginal difference in student performance. Both students and faculty may need to be organized differently. It may be necessary, for example, to find strategies to increase knowledge of mathematics among teachers responsible for teaching mathematics. This may call for further specialization and the creation of a mathematics team, as opposed to offering staff development to all teachers. Regardless of the strategy, it is likely that in order to change classroom instruction, these individuals will need to work in a more integrated way and be organized differently.

Governance: Governance refers to the system by which members of the school identify problems, express preferences, and generate hypothesis about action, and make decisions about the connection between the ends they desire and the means they intend to use to achieve them: what is to be done and how. Governance systems vary in the degree to which they sustain public discourse and distribute authority among participants. In the *collection* school, for example, governance is by a pattern that resembles a confederacy, a loose alliance of individuals pursuing their own activities, under the assumption they are working for the same goal. Unlike schools that function as collections, inquiry-oriented or self-governing schools incorporate a self-assessment process into their governance processes. In these schools, there is a coherence and continuity between the elements of governance and accountability; that is, the same people who engage in governance also engage in judging the success of the school. This integration of governance and accountability is based upon public discourse and common concerns. Only in the more bureaucratically oriented organizations are the processes of "making decisions" or governance separated from the processes of "measuring the outcomes" as accountability. In these bureaucratically oriented organizations, a site-based management team might "plan" some activities, while some central office unit measures the school performance, with the two activities being highly distinct and disconnected. In most traditional schools, very little on-site planning and accounting for results occur, except within individual classrooms by individual teachers, who post grades for individual students. In inquiry-oriented schools, data about performance (accountability) are used to inform the continuing discussion about school life, the process of governance. In successful schools, the governance system tends to be more data driven and based upon public information about performance, rather than being based almost solely on individual references and impressionistic opinions.

The basic distinction between more traditional bureaucratic governance systems and more community-oriented systems is the relation between the "workers" and the "managers" -- the relation between those who work and those who govern. In bureaucratic governance systems, the workers are assumed to be incapable of being self-governing; they must be managed by outside experts or supervisors. In community-oriented organizations, the "workers" are considered to be "citizens," responsible for governing themselves and responsible to themselves for their governance. In a community, the group is committed to making public plans and observing consequences publicly. In many communities, these processes are exercised in relation to an election process, by which leaders are held accountable for their conduct of the public agenda. In successful schools, this discourse or conversation is conducted within a professional context.

If classroom instruction is to improve, it is clear that teachers for the school as a whole will need to examine the mathematics program and to engage with others in designing the response to their self-assessment. As an instructional leader, the principal will need to consider by what means this engagement and decision making is to take place. It is not likely that the standard series of school meetings -- monthly faculty meetings and/or grade level meetings -- is sufficient to identify real school-based problems and to design responses to those problems. Whatever governance process is followed, the principal

needs to work with the school's stakeholders to make the process of decision making or governance known to the school. Some stakeholders may "have an interest" in the school's well-being, but they do not necessarily "express an interest." Mobilizing participation may take special effort. Governance structures lose their credibility when it is obvious to the stakeholders of the school that decisions actually get made through processes that are not the announced processes, for example, when a site-based council is announced, but decisions are made by the principal and several trusted allies.

The arrival of new personnel at the school level means that the school has access to new expertise that could be incorporated into its decision making. The principal needs to consider how this new expertise will be incorporated into the decision making process. What roles will these individuals play in the governance of the school? Are they to be considered full members of the school and peers of the current teachers, or are they viewed as short-term outsiders, largely excluded from the decision making process -- viewed as simply added units in the *collection* ?

Accountability: Accountability is the process through which public knowledge about school work is created. Its purpose is to test whether the selected means were sufficient to achieve the desired end. In this sense, public knowledge for accountability has both an informational referent and a value dimension. Public knowledge accounts both for what we understand -- what action led to results -- and what we value -- how well we like what we got as results. In more coherent organizations, governance and accountability are seen as a continuous process of inquiry -- a series of questions posed and answered by the citizens of the school, e.g. how are students performing in mathematics and what will happen if we develop a new program of instruction? Once an hypothesis about organized action is accepted and efforts to implement it are taken -- in other words a plan is developed and put into motion -- its utility or truthfulness must be determined by observing the consequences of the intended action: the new response must be assessed. When the sought-after end is not sufficiently achieved, new means or practices must be devised and tried, a process of continuous improvement or planning and accounting. School processes of accounting for consequences vary in the degree to which they are integrated into school life, are public and are formal, as opposed to being disconnected, private, and informal. The more integrated, formal and public systems involve action research, which results from group collaboration and information gathering. The means and methods of collecting and displaying information in the accounting process also vary, ranging from traditional quantitative data in tabular form to visual images presented through multimedia.

If the school improvement effort involves the adoption of a "whole school model," then that design model itself, not just the students studying within the model, needs to be assessed. The individuals or governing group that made the decision to pursue the model design should also be held accountable for that decision. The question is "Was this a good decision? Can this model work in our context?"

One primary means of accounting for the mathematics program might be the use of unsecured versions of performance tests, used for diagnostic purposes. These data need to be organized and presented in such a way that the school community comes to some agreement about the meaning of these data; the school community needs to own these results. Careful accounting requires continuous assessment of instruction and student progress. The sharing of teacher made tests, classroom observations, assessment of lessons and other techniques can be used for constant inquiry and assessment. The school needs to develop an explicit plan for accounting for its efforts to improve student performance.

Governance and Accountability

Variations in the patterns of participation in defining problems, generating responses or action plans, and accounting for consequences represent different approaches to governance and accountability in the school community. The school should make clear to itself and to its larger community how it has and will conduct governance and accountability processes. While assessing student performance is central, assessing the school design is also fundamental. W. Edwards Demming's observation may be accurate for schooling: 80% of the variation in the consequences of work are due to the design of the work process and are not due to the motivation and/or competencies of the workers. At any rate, the design of the school, not just the work of the students, needs to be assessed.

In assessing the school as a design, the following elements and their components should be considered. On the next page there is an outline of basic concepts included in the Advocacy Design Guide.

I. INSTRUCTION

A. WORK

1. Teaching Practices
2. Teacher Role
3. Materials/ Tools
4. Workplace Organization
5. Classroom Management
6. Work Patterns

B. KNOWING

7. Creation of Knowledge
8. Demonstration of Learning
9. Student Interests
10. Order of Thinking
11. Relation to Community
12. Program Sequence

II. ORGANIZATION

13. Access to Program
14. Access to Services
15. Student School Career
16. Adult Work Patterns
17. Staff Patterns
18. External Agencies

III. GOVERNANCE

19. Planning Change
20. Resources/ Commitment
21. Control of Training
22. Inquiry Into Success
23. Authority Distribution

IV. ACCOUNTABILITY

24. Improving Community Life
25. Adult Growth
26. Monitoring Student Life
27. Student Community Service
28. Systematic Data
29. Information Use

Responding to Self-Assessment. Good schools, in developing their vision, create some model of schooling. In some cases, schools select a formal or research-based model of schooling, such as Comer's School Development Program model, Levin's Accelerated School model, Slavin's Success for All model, Hirsch's, Goodlad's, or Sizer's model. Other good schools consciously attempt to be eclectic and create their own model. Whatever model is pursued, a good school has a coherent, integrated set of values and beliefs that serve to unify the practices of the school. The good school is not an amalgam of "good practices," that in the abstract appear "good" but are in fact borrowed from competing and incompatible models. The good school chooses practices that "fit" or can be modified to fit their basic beliefs and values so that the school program has an enduring coherence. Instead of "adopting" a model with its set of good practices, successful eclectic schools more nearly adhere to an inquiry model, constantly critiquing and creating ways to improve student learning, while constructing their own model of schooling based on a clear set of values or philosophy, e.g., behavioral or constructivist.

It is important that schools know that researchers working in schools have developed models of schooling that lead to greater student achievement. At this point what is important is not whether a school adopts such a formal model or attempts to construct its own model. What is important is that the school attempt to articulate its model, compare it to research supported models, and to engage in self-assessment of their model.

The advocacy design process does assume that the good school carefully studies research-based school models and uses the advocacy design framework for assessing these competing and possible models. The advocacy design process does not assume that the school will "adopt a model" or enact a specific ideology --other than a constant process of inquiry and self-assessment. We must acknowledge, however, that a school that believes in and enacts self-assessment and inquiry is by its very nature a more constructivist school.

If the self-assessment leads the school to conclude that its underlying model, school philosophy, or design has led to the creation of a fundamentally efficacious school, then the model itself does not need to be substantially modified. In terms of mathematics instruction, if the self-assessment shows that students can perform at a high level on the newer problem-oriented, conceptual measures of mathematical thinking, then the school has a problem that is different from the one it would have if the students were unable to demonstrate understanding of mathematics. If there is an acceptable level of student performance, the school might proceed to "fix" the problems it observed in its operation, leaving the overall model intact. If on the other hand, the school determines that the quality of school life and the school's overall performance is far from efficacious, then the school will need to consider discontinuing its model and designing a new model of schooling. In this instance, it is not a matter of just "fixing" a few problems with the current model of schooling.

Whether one "fixes a few problems" or "redesigns the model," it is almost certain that the change in one element of the school will lead to anticipated or unanticipated changes in other areas of the school. Changing the system of classroom instruction will almost certainly entail changes in the way people are organized, in the way decisions are made, and in the way progress is monitored and accounted for. By attending to a set of design elements, the school may be able to see the school as an institution and see that changes are interdependent and to see how one change may be linked to other elements.

Design questions and Comparison Scales. A set of ADC questions found useful for self-assessment of a school's design or culture and/or assessing a whole school model is provided below. Beneath each question there is a 5 point scale that suggests the range of possible answers, reflecting the value orientation evident to the observer. The scale is essentially bi-polar. The scale ranges from (5) more technical, traditional answers on the left end of the scale to (1) the more constructivist, community oriented answers on the right end of the scale. For question number one about student work, for example, the scale is "(5)individual workbook . . . (1)cooperative learning, collaborative work." The data to be recorded represent the observer's sense of the predominant pattern within the school on this particular aspect. In the more successful schools, there is a coherence to the program and most people will in fact adhere to a similar set of values and give them expression throughout the processes of the school. When there is a high level of agreement and enactment, then one should mark either the (1) or the (5) to indicate this high level of agreement. If, on the other hand, there is a strong tendency towards agreement, but at the same time there is obvious disagreement and evident differences among the relevant settings in the school, then one would mark either the (2) or the (4). Such a mark would indicate the predominant value orientation evident in the school, but would also note the lack of true coherence. It follows, then, that a mark of (3) would indicate the lack of a strong tendency towards either orientation and in fact a fractured and incoherent aspect of the program.

References below to the 4MAT perspective, for example, are used for illustrative purposes primarily to suggest the type of answer that might be given. The illustrative answer is not intended as a prescription. While the 4MAT has a "brain research / learning style" framework, its underlying perspective on learning is a constructivist or cognitive one, which might be incorporated in a number of other similar perspectives.

These answers are provided to suggest the range of possible answers. They are not intended to describe your school or any one school. In general, good schools tend to be consistent in their pattern of answers, reflecting the model of schooling that serves as the core of their vision. Good schools, for example, tend to give mostly constructivist answers (1) or behaviorist answers (5), as opposed to an unexamined mix or *collection* of answers(3). In good schools, shifts or differences in perspectives result from explicit decisions to develop new approaches or strategies for the school as a whole.

The 29 design questions given below are distributed over the 4 areas or elements of the school design: instruction, organization, governance, and accountability. While individual questions are posed, the intent is to capture a holistic view of the school. In

this regard, the self-assessment should incorporate an overview, a statement of philosophy, a synopsis of the school's culture, or a picture of its character. This statement might result from a survey of opinions and a process of writing and revising over a period of time, as opposed to being written either first or last or by a single individual.

The advocacy design process focuses on the school as a whole. In order to provide an example of how the self-assessment might work for a specific event, such as a parents' day focusing on the program for mathematics, the illustrative answers are provided in that context.

Process of Generating and Presenting the Self-assessment. In the advocacy design process, the method of gathering school-based information and the method of presenting it to the school stakeholders for self-assessment differs in three important ways from those processes frequently used in the more traditional schools.

First, the self-assessment process should be a collaborative, participatory one. As with constructivist learning in the classroom, it is important that the school as a whole consider the "whole" set of questions, discuss appropriate answers, and construct a meaningful response. All member of the school community should be encouraged to contribute their understanding of the questions and ways of getting answers. After all member of the school community have participated in constructing this "picture of the whole," then sub-groups might be asked to write-up or synthesize the previous discussions. No set of questions, such as those dealing with instruction, should be assigned to a committee prior to this community or school wide discussion. If that is done, then some members of the school community -- those on the committee -- will become specialists in one segment of the school, but none of the community will have a sense of the whole. They will also generate a report that is nothing more than a "collection" of individual statements, thereby reinforcing their standard or traditional approach to problems. After public discussion and when work groups have drafts or outlines of their ideas, there should be other sharing sessions, so the total group is informed of the school's work and can contribute other ideas to the drafts the work groups have presented.

Second, the presentation of the self-assessment -- which is a meaningful event in the self-assessment process -- is intended to be an event that creates a sense of shared meaning within the school community. It is not a traditional committee report, presented to a small group and filed away. It is not expected to be limited to a written document, but is intended to be a celebration, an event of special meaning. The most effective presentations rely upon multi-media, taking advantage of their capacity to show visual samples of student work, of classroom processes, and information in graphic form. The schools that have developed the most powerful presentations have taken an afternoon or evening and have used a combination of large-group multi-media presentations, face-to-face small group presentations that incorporate printed and multi-media work, and students, who present their research projects. In these schools the presenters include such members of the school community as the principal, the school security officer, the

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nurse, the parent president, agency officers who provide related services, a range of students, and most of the school faculty, who collaborate to prepare their own materials as answers to the design questions.

Third, the data gathering and presentation should be richer than is ordinarily the case. By tradition, schools tend to rely upon standardized test scores in tabular format as the chief tool for reporting on school achievement. In the advocacy design process, the emphasis is upon more authentic assessment; that is, presenting the actual products of student work to show what they have been doing in school and what they are capable of doing. Making student work known requires a far richer data set than a table of test scores alone.

At the same time, however, standardized test scores do need to be presented, but in a more meaningful way. Bar charts of gain scores for several cohorts of students, for example, are usually more meaningful than a table of scores for one grade level. Item analysis or scores on clusters of competencies are also more revealing than total scores for a class. Analysis by quartiles also reveals how students are distributed across the range of scores. The analysis should be useful in focusing on areas of need, as well as on real accomplishments.

To assist members of the school community in developing their presentations, the advocacy design group has prepared what they referred to as two "tool boxes." One tool box deals with data collection and one deals with data presentation methods. These tool boxes were developed collaboratively with the principals and central office personnel interested in the advocacy design process. One tool box was a document that explained various methods for collecting and analyzing data about the school. Several entries, for example, discussed how to construct questionnaires, how to collect unobtrusive information, and how to conduct interviews. The other tool box talked about presentation methods, and explained, for example, how to use such formats as computer graphics and a mutli-media software program, such as Hyperstudio.

As presented below, the answers to the questions would serve the school as information to be used in their celebratory presentation. The means of communicating this information should be determined by the school. Most likely some of the written information presented here would be incorporated into some other presentation format for the school's presentation.

Note on the Format of The Worksheets. The following worksheets are designed with an assessment and planning perspective in mind. The sections indicated for each question are intended to lead to a commitment for improvement by encouraging discourse about comparative models of schooling. Thus, the format of each item is organized into the following sections:

- (1) an analysis of the current school situation,
- (2) a description of the school's "best future."
This discussion focuses on possible options identified through conversations, study of research-based models and site visits to exemplary schools.
- (3) an estimate of the school's progress towards its best future, represented as a percentage ranging from zero (not present) to 100% (clearly evident in the school); and finally
- (4) Suggestions about the presentation format that might be used to present the analysis of the present situation, in order to compare it to the desired best future.

ADVOCACY DESIGN CENTER

Frank Smith
St. John's University, Oakdale Campus

School Self-Assessment and Design Questions

Here is an overview of our school as an institution in its context: what we believe and enact in our daily lives -- a sense of our character as a school.

In thinking about this section, it may be helpful to refer to Ogden's notion of school types: collection school, congenial school, or a vital, inquiry-oriented school.

Here is a description of our Best Future, our school as we intend it to be.

Ms. Diego's algebra class and Mr. Browning's physical science class are jointly investigating radioactive decay. The two teachers, with the support of the school administrators, have worked out a schedule that enables their classes to meet together this month to explore some of the mathematical aspects of the physical sciences. Both teachers regularly incorporate some content from the other's discipline in class activities, but this month was specially planned to be a kind of celebration of the relationship between the two areas. By the end of the month, they expect that the students will appreciate the role that mathematics plays in the sciences, and the problems presented by the sciences that call for innovative mathematical solutions.

The classes are average. Nearly every student in the school takes these two classes at some point during their school career and, over the past few years, because of the exciting real-world problems, like the one they are working on this month, the classes have become two of the most popular in the school.

Monday's class begins with a presentation by of a problem by Mr. Browning. He distributes several fossils to student teams and asks them to estimate the age of the

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fossils they have and to design a method by which they could establish the age. After the teams present their solutions, he talks about the process of carbon dating. He describes the problem that archaeologists faced in the 1940's with respect to determining the age of a fossil. They knew that all living things contained a predictable amount of radioactive carbon that began to diminish as soon as the organism died. If they could measure the amount that remained in some discovered fossil and if they knew the rate at which the carbon "decayed," they could figure out the age of the object. An American chemist named Willard Libby developed a technique that allowed them to do so. Ms. Diego explains that the classes will spend the next few days exploring the concept of radioactive decay and, toward the end of the week, they will be able to solve some of the same kinds of problems solved by those archaeologists.

On Tuesday, working at stations created by the teachers, the students begin to explore both the mathematical and scientific aspects of radioactive decay. Working in groups, the students use sets of 40 dice to simulate collections of radioactive nuclei. Each roll of the collection of dice represents the passage of one day. Any time a die lands with a "1" showing, it "spontaneously decays" and is taken out of the collection. The student plot the number of radioactive nuclei left versus the number of days passed in an effort to determine the half-life of the elements - the amount of time it takes for half of the element to decay. Because the experiment is relatively well controlled, each group working on the task produces a graph that effectively illustrates the decay, but because the process is also a truly random process, each group's results are slightly different from those of the other groups.

On Wednesday, in a very different kind of activity, students use graphing calculators in a guided activity to discover the properties of exponential functions, and the effects of various changes to the parameters in the functions. Working from a worksheet prepared by the teachers, they start with the general form of an exponential function, $y=ab^x$. Using the values $a=1$ and $b=2$, they input the equation into the calculators and study the resulting graph. They systematically change the values of a and b to discover what each change does to the graph. They are directed by the worksheet to pay particular attention to the effect of changing b to some value between zero and one, because graphs of that type will be especially important for their work with radioactive decay. The culminating problem on the worksheet is a challenge to try to find the values of a and b that produce a graph that looks like the ones that resulted from the experiment with the dice. The students enjoy the problem and use their calculators to quickly check and refine their solutions, zeroing in on the critical numbers. Among different teams of students there is a lot of discussion about why those numbers might be the correct ones. Finally the student teams use the computer projection capacity to show their solutions and present their rationales to the class.

On Thursday the students discuss a reading that was assigned for homework the night before, focusing on carbon dating and addressing some of the mathematical processes used to determine the age of fossils. This discussion is led by the two teachers, who have brought in some fossilized samples to better acquaint the students with the kind of materials they read about. Ms. Diego then leads a session to develop the computational

procedures for solving the carbon dating problems using exponential functions. The students will be given some homework problems of this type and will spend tomorrow's class discussing those problems and wrapping up the unit.

On Friday, some of the students suggested that they knew how to use the Internet and they were sure that they could find some archaeologists and other specialists who were working on carbon dating problems and who would be willing to discuss the nature of research in their area. Once the discussion got underway, other students had explorations they thought would be interesting and helpful to the class. One of the students thought he could find a nearby lab technician, who would invite the class in either to date one of the fossils they had observed or to work with her on one of her current projects. While the teachers had not anticipated these interests and curiosities, they encouraged the students to use the classroom computers to explore.

The teachers are very pleased with what the students have accomplished. The active involvement with a hands-on experiment simulating decay, the symbolic manipulations and graph explorations made possible by the graphing calculators, the study of a particular scientific application of the mathematics, and the exploration using the Internet to find researchers and museum workers have been quite productive. By working together as a team and by encouraging the students to follow their interests and curiosities, the class had been able to relate the different aspects of the phenomenon to each other and to find meaning in some current adult work. The students have learned a great deal of mathematics and of science and have seen how strongly they are linked.

(Based upon a best futures description in the New Jersey Core Curriculum Content Standards for Mathematics, May 1996)

Area I. WHAT IS INSTRUCTION / THE LEARNING PROCESS TO LOOK LIKE?

There are competing views regarding instruction and learning. The traditional or transmission view differs from the transactional or constructivist view. The essential difference in these views involves assumptions about the cognitive models students bring to school and how they use their minds.

In the transmission view, students come to school as empty vessels that must be filled with knowledge that is held by the adult teacher. In this traditional view, the teacher tells students what they ought to know by providing bits of information from the society's past learnings. These "learnings" are stored by the students and reproduced when called for.

On the other hand, in the transactional view, students come to school with world views of their own and a set of cognitive schema they use to organize experience and information. In some respects these cognitive maps are accurate in terms of mature knowledge, and in some respects they are more mythical in nature. In this view, the purpose of the teacher is not simply to add information to the schema, but to change the student's world view, to lead the student into a more mature and informed understanding of the world.

These different definitions of learning and teaching lead to different school belief systems or school cultures. These beliefs and values, in turn, lead to different classroom practices. "Knowing mathematics" in a transmission type school is very different from "knowing mathematics" in a constructivist school. In some schools there is a predominant view favoring either the transmission(5) or the transactional view(1). In other schools, there is a struggle or strong contention regarding which belief system should be paramount(3). In the advocacy design self-assessment, the school community should observe and reflect upon its stated and enacted view of the values that define "good" instruction. This issue is key to the school's view of itself as an educational institution.

A. WHAT DOES IT MEAN "TO WORK?"

1. What are to be the desirable work strategies and practices?

individual workbook . . . cooperative learning, collaborative groups
whole group authentic problem solving

Given the struggle between the transmission and the transactional views of instruction, the school needs to clarify which view it holds as the predominant view of the school.

The New Standards mathematics program calls for problem solving and application of competencies. Such a stance suggests a transactional point of view.

Among the systems that emphasize the transactional strategy, the 4MAT perspective posits that a good work strategy or set of lesson has eight steps or components:

Integrating Experience with Self: making meaning, seeing the whole

1. Creating an experience, answering the question "Why?"
2. Reflecting on Experience: discussion to examine experience

Concept Formation: Reflective Observation to Abstract Conceptualization

3. Integrating Observations into Concepts: patterning, organizing, relating
4. Developing Theories and Concepts

Practice and Personalization: exploring, manipulating, try it

5. Working on Defined Concepts:
 experimenting, tinkering, predicting
6. Messing Around: personal synthesis, choice expression, modeling

Integrating Application and Experience: imposing form, verifying, explaining

7. Analyzing for Usefulness of Application: teach it, proof of learning
8. Doing it Themselves and Sharing What They Do With Others

Other transactional models of learning and instruction, define a good lesson as one that engages students in immersion, provides modeling or demonstration, provides a definition of expectations, permits assumption of responsibility, incorporates use and practice, provides for approximations or applications, and offers feedback responses from knowledgeable adults.

The primary point is that the basic difference in beliefs about instruction is between transmission and transactional models of instruction. There are various models of the two belief systems. What is in question is the school's awareness of the predominant model evident in the school.

Nature of Possible Response:

1. Situation Analysis

In our school, the predominant pattern of work for students can be described as About ___% of class time could be observed to follow this pattern and about ___% of the teachers have mastered this approach or instructional strategy. On a typical day, one might see the following

activities in the classrooms, as recorded on computer video clips. In our mathematics instruction, one would find that _____ lessons predominate.

_____ of our teachers, who endorse the transactional perspective, approximately _____% have relied upon the 4MAT strategy for developing lessons. An exemplary lesson developed by several 4MAT teachers for a unit in mathematics on the concept of _____ involved the following activities over a period of _____ classroom sessions: _____. During the next few months the teachers of mathematics will be using the 4MAT framework to develop lessons on the concepts of _____.

2. Description of Best Future

3. Estimate of Progress towards Best Future

0 25 50 75 100%

Presentation Format:

model lesson plans for mathematics in 4MAT outline
video clips of different teachers teaching the same concept
computer generated pie charts showing how teachers differ in beliefs

School Design Team: Advocacy Framework

As a frame of reference for school design, the professional recommendations made for middle schools and for high schools in two significant publications are summarized below. Following these summaries, the design elements and questions of the Advocacy Design Center are listed, with cross reference to the New York City PASS document for evaluating schools (October, 1998 #21).

Design Features of a Middle School to Consider

The Carnegie Foundation's report on middle schools, Turning Points, suggests that there are eight key areas that should be incorporated into exemplary middle schools' practice. These key areas can be aligned with our 4 design elements as noted below. A later Carnegie reports Turning Points 2000 by Anthony W. Jackson and Gayle A. Davis focuses on the need for a system perspective, not a list of good practices, and attention to the performance gap among students from different ethnic/racial groups in the middle schools. In short, the later report calls for a stronger emphasis on academic content and the new standards for academic content.

I. INSTRUCTION

- TEACHING A COMMON CORE OF KNOWLEDGE
- Teach our students to think critically
- Teach high level of mathematical understanding to all students
- Promote curriculum "connectedness" through interdisciplinary teaching
- Teach our students to develop healthy lifestyles
- Teach our students to be active citizens, engage in service learning
- Integrating technology into core content areas
- Promote a variety of teaching strategies to promote understanding

- Reengaging Families
- Offer families opportunities to support learning at home and at school.

II. ORGANIZATION

- Creating a Community for Learning
- Create smaller learning units, such as "houses" or schools within a school
- Form teams of teachers and students
- Create teaching teams with common planning time
- Assign an adult advisor for every student
- Create advisory groups
- Ensuring Success for All Students
- Group students for learning (emphasize cooperative learning groups, not homogeneous tracking)
- Provide flexible block scheduling
- Expand opportunities for learning (e.g., extending the school day, offering summer school or Saturday sessions).

III. GOVERNANCE

- Empowering Teachers and Administrators

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- Give teachers greater influence in the classroom
- Establish building governance committees
- Designate leaders for the teaching process
- Reengaging Families
- Offer parents meaningful roles in school governance
- Connecting Schools with Communities
- Provide opportunities for youth service
- Seek to augment resources for teachers and students

IV. ACCOUNTABILITY

- Preparing Teachers for the Middle Grades
- Develop expert teachers of young adolescents through staff development programs
- Develop in-school and district-wide support networks and study groups
- Improving Academic Performance through Better Health and Fitness
- Ensure access to health services
- Establish schools as health-promoting environments

- Reengaging Families
- Keep parents informed
- Connecting Schools with Communities
- Ensure student access to health and social services

Design Features of a High School to Consider While Completing Your “Situation Analysis” and “Best Future”

In 1996 the Carnegie Foundation in partnership with the National Association of Secondary School Principals published Breaking Ranks: Changing an American Institution. They noted there were six main themes to the study: Personalization, Coherence, Time, Technology, Professional Development, and Leadership. They presented the report in the following sections:

Curriculum: Offering Essential Knowledge
Integrating Knowledge, and Making Connections to Real Life.
Instructional Strategies: Engaging Students in Their Own Learning
School Environment: Creating a Climate Conducive to Teaching and Learning
Technology: Making Way for Electronic Learning
Organization and Time: Restructuring Space and Time for a More Flexible Education
Assessment and Accountability: Individual, Collective, and Institutional Outcomes
Professional Development: Helping School Staff Members Fulfill Their Potential
Diversity: Finding Strength in Differences
Governance: Streamlining the Operations of Schools and School Districts
Resources: Providing for Sufficiency
Ties to Higher Education: Seeking Unity in Purpose
Relationships: Reaching Out to Form Alliances in Behalf of Students
Leadership: Attributes that Need Nourishing

In order to align these recommendations with the Advocacy Framework and make them parallel with the recommendations for the Middle School, in the next section we organize the major recommendations in the four ADC areas: Instruction, Organization, Governance, and Accountability.

INSTRUCTION

- establish essential learnings that link what is taught with what is tested
- integrate assessment into instruction as part of the learning process
- learning must make sense in terms of real world application
- integrate the curriculum; give it coherence
- emphasize depth over breadth of coverage
- promote curriculum articulation with lower schools, as well as with higher education and the world of work
- design engaging, active student work to promote student learning
- use alternative instructional strategies that accommodate individual learning styles
- replace or redefine the Carnegie unit as a measure of student work
- utilize family members in their children's learning lives
- foster business partnerships to support and supplement student learning
- form partnerships with agencies for youth that support and supplement classroom learning

ORGANIZATION

- establish learning communities with no more than 600 students
- all students should have a personal, adult advocate and a personal plan for progress
- greater attention should be given to individual students by teachers' having no more than 90 students a term
- restructure space and time for a more flexible education
- develop flexible/ block scheduling
- reorganize the departmental structure to integrate the curriculum
- support staff collaboration to develop goals for the program
- provide for collaborative staff planning and development
- orient staff to serve as coaches/ facilitators to promote more active learning
- provide alternative to tracking and strict groupings
- convey a sense of caring to students by demonstrating a stake in students' learning

GOVERNANCE

- establish a site council to work with the principal in reaching decisions to make the school an effective organization for student learning
- diffuse leadership throughout the school community and engage participation
- encourage risk-taking, manage change, nurture and support leadership by staff, students and parents
- accord meaningful roles in decision making to members of the school community
- negotiate work agreements that include Student Impact Statements
- make budget and staffing decisions at the school site
- nourish teacher leadership to promote successful reform
- develop political alliances and financial commitment among individuals and organizations within the community
- require student service learning and community service
- collaborate with other agencies for youth services



ACCOUNTABILITY

each high school educator will create a Personal Learning Plan that addresses his or her need to grow, stressing both skills and knowledge related to improved student learning, e.g., broad base of academic knowledge, ability to use technology in instruction, ability to integrate assessment into instruction, convey a sense of caring.

Type of Predominant School Belief System

Culture is a pattern of basic assumptions -- invented, discovered, or developed by a given group as it learns to deal with its problems of external adaptation and internal integration. These assumptions have worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems. (Edgar Schein, *Organizational Culture and Leadership*, Allyn and Bacon, 1985)

Culture is both product and process. As product, it embodies the accumulated wisdom of those who were members before we came. As process, it is continually renewed and re-created and new members are taught the old ways and eventually become teachers themselves. (Lee G. Bolman and Terrence Deal, *Cultural Leadership: The Culture of Excellence in Education*, Allyn and Bacon, 1993)

Belief systems are often contested. As a result of this contested nature of culture, most schools do not simply have “a” culture, but each has a set of competing belief systems. When talking about “the culture” of a school, therefore, it is often more accurate to talk about the “predominant” belief system and the competing belief systems. Often the principal is the spokesperson for the predominant belief system; but, that is not always the case. It is important, therefore, to note the subordinate culture and the relation between the two: who represents each set of beliefs, what are the critical issues of debate, and how are their beliefs expressed. Surely, one needs to attend to the public statements by the various “official” leaders of the school: the principal, the parent association head, the union leader, the leadership team chair, the Teacher Center director, etc. In listening to these leader, one needs to check the cultural beliefs being espoused and the compatibility among these statements: do these leaders explicitly endorse each other’s opinions?

Approaches to problems and/or school improvement plans are embedded in the school’s culture. As a result, the characteristics of the planning process and of the plan itself differ from one type of school culture to another. In addressing the need to improve student performance, schools with different types of cultures generate different types of “social action theories” or explanations about what “causes” low student performance and what should be done about the low performance. In addition to identifying the predominant school culture, therefore, it is important to capture the school’s social action theory. This theory is expressed in people’s

explanation of “what causes the problem,” “what we are trying to do to overcome these causes of the problem,” and “the reason why we are doing it.”

School Belief Systems may be described as being predominantly one of three types described below. The nature of the most probable social action theory generated within each culture is also noted. In constructing a school’s social action theory, one needs to study the alignment between the “official” action theory, often expressed in some written document such as the School Leadership Team’s Plan, and the “walking theory” one hears and sees as one walks around the school. The writers of “the plan” may have reflected only their own belief or value system.

1. Vital or Constructivist -- collaborative, reflective, inquiry-action research oriented with a focus on the construction of knowledge by students and adults; public agenda is performance driven; school functions as a community of complex interests. Teacher evaluation taken seriously as a source of professional growth.
Most Probable Social Action Theory: low performance viewed as a complex matter resulting from the design of the system and/or a set of inter-related factors and not due to an isolated problem or the incompetence of a few individuals. Group may be explicit about the need for action research and may carefully attend to the analysis of various forms of data.

2. Congenial or Illusory -- polite, interested in manners; words are exchanged, but critical commentary and collaboration avoided; minor non-instructional problems constitute the public agenda. Examination of student performance data and careful construction of a social action theory are unlikely. Meetings have a rehearsed quality. Teacher observation and evaluation are ritualistic, lacking substance.
Most Probable Social Action Theory: Blaming the victim. Projecting the causes of the low performance onto the students and/or their families, while holding the school blameless. Analysis of performance seldom involves an actual study of data and is usually based on “teacher-room tales.”

3. Collection or Technical -- focus on enforcement of official rules and correct ways of doing things; restricted public agenda; little if any collaboration, with emphasis upon isolated individual responsibility; school functions as a collection of unrelated actors. Great variation in teacher quality informally noted, but not officially acknowledged, and considered the result of uncontrollable individual differences.
Most Probable Social Action Theory: Identification of a specific problem in a limited area of the organization with little sense of connections or interdependencies. Stated as something to be “fixed” by a few individuals. Data analysis is personal and cursory and not a central component of the action theory.

How to Use this Guide

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This guide is not intended to be used as a checklist. Nor is it intended to be used for an inventory of good practices. Rather, the guide is to be used as a tool in “seeing” the school as a whole. The guide as a tool is useful in conversations about the school. Under each item there is a scale that was discussed above. Types of artifacts, practices, or procedures that one might observe in the different value orientations are noted. These items are illustrative. The illustrative items are not intended to serve as a comprehensive listing. The items are for discussion purposes. They provide some specifics to be discussed as indicators.

With this in mind, the guide might be used in a manner similar to the one described below.

1. Study the 29 questions that relate to the 4 elements of the school culture: Instruction, Organization, Governance, and Accountability. The areas covered in the 29 questions have been aligned with the NYC PASS document. The 29 questions are more comprehensive and are more focused – especially on the mathematics program.
2. Observe life in the school. Look and listen carefully. What problems, causes, and action theories do people talk about or avoid? Make notes to record what you see and hear.
3. At the end of each observation, interpret your notes. What do they mean? What do they tell you about the school? What themes emerge?
4. Make a first effort to articulate the school’s belief system or culture. What type of belief system seems predominant? How prevalent is the predominant belief system? What critical incident convince you that your sense of the culture is valid?
5. Using your filed notes of what you saw and heard, write in answers to the 29 questions as seems appropriate. Note whether your observations are more like the illustrative items of a constructivist nature or of a behavioral nature. Note also the level of coherence or divergence from the central tendency.
6. Review the notes you have entered in the guide. Revise your initial statement about the school culture, if necessary. If there are items where you have little or no information, determine what you need to observe.
7. Write your understanding of the school’s action theory, as it related to the school’s efforts to improve student performance – especially in Mathematics.

In order to save space in this document, only the first question has the suggested work format. It is assumed that individuals will either open their own file or use a paper and pencil notebook for the other items in the guide.

The following three PASS dimension are broad areas and do not align with specific questions or illustrative examples in the guide.

PASS References: PASS1: Mission/ philosophy
 PASS2: Climate; Welcoming
 PASS3: Climate: Environment

- I. **What does instruction / the learning process look like?**
 Section A. **What does it mean for student "to work?"**

With Other Adults as

(5)Sources of info (1)Interactive learners
mentors, family

(See format for question 1 for recording discussion)

Q3. What kinds of **materials and tools** do students use in their work?

(PASS 13: Computers -- PASS14: Equipment-Supplies)

(5) No materials (1) multi-source, multimedia, internet

(5)Workbooks, sheets . . . (1) multi-source, multimedia, internet

(5) School materials (1) Tools of Adult work settings

Q4. What are the **work spaces** and how are they **organized**?

(5)Isolated seats . . .

(1) For teams, temporary groups

(5) Non-specialized, general

(1) resource centers

(5) Traditional classroom

(1) Adult work settings, Labs

(5) Standardized

(1) Variety of settings

Q5. How is the classroom managed?

(5) Authoritarian adult

(1) Active, collaborative

(5)Teacher enforced . . .

(1)self-directed, curiosity

(5)Prescribed rules . . .

(1)Informal, like adult workers

(5) Public rebukes

(1) Indirect control

Q6. What are the **work patterns** within the class?

(5)Short-term specified tasks . . .

(1)Interdependent work, project tasks

(5)Series of school work problems

(1) *Long term real work with scaffolding*

Section B. What does it mean "to know"?

Q7. How do students **create knowledge**?

(5)Teacher acceptance, corrections

(1)With critical error analysis

(5)Recalling text . . .

(1) Socially construct knowledge

(5)Individual subjects . . .

(1)integrated, problem based, concepts

(5) Directed Instructions

(1) *Lab, applied technique in new setting*

Q8. How are students to **demonstrate their learning**?

(PASS8: Instructional Practice)

- | | |
|------------------------------------|--|
| (5)Artificial exercises . . . | (1)Create authentic, varied, useful products |
| (5)Replication of masters. | (1) Generate, display new forms |
| (5) Produce expected answer | (1) <i>Respond to open questions</i> |
| (5)Traditional tests, drills | (1) <i>Demonstrate / exhibit understanding</i> |

Q9. How are **students' curiosities** and competencies incorporated in school work?

- | | |
|-------------------------------|---|
| (5) Not explicitly considered | (1) Student team initiated projects |
| (5)Prescribed content | (1) Talents nurtured, exhibited |
| (5)Standardized work | (1) Student initiated research projects |
| (5)Attempted homogeneity | (1) Diverse backgrounds expressed, valued |

Q10. What **order thinking skills** are evident in student work?

(PASS7: Instructional Program Characteristics)

- | | |
|---------------------------|---|
| (5)Simple recall. | (1)problem identification, divergent opinions |
| (5)Facts | (1) understanding, concept driven |
| (5) non-critical | (1) Creative, evaluative, critical |
| (5) Disjointed, illogical | (1) Persuasive, logical, thematic |

Q11. How do students **relate** their learning to their lives in the **community**?

(PASS8: Instructional Practices)

- | | |
|---------------------------|--|
| 5)Private thoughts. . . . | (1)Personal experience as focus of study |
| (5)Unlinked. | (1) Contextualized, occupational link |
| (5)Impersonal text | (1) <i>Service Learning, community development</i> |

Q12. In what ways is student learning organized into a meaningful, sequential and coherent instructional program?

(PASS6:Instructional Program)

- | | |
|-----------------------------------|--------------------------------------|
| (5)Random courses, track. | (1)coherent themes |
| (5)Separate courses | (1)interdisciplinary units |
| (5) Annual organization | (1) MultiYear Assignments, looping |
| (5)Work Assigned without support | (1) Scaffolding for projects |
| (5)Unrelated field experiences | (1) Shadow-mentor-intern |
| (5)Individual classroom rules | (1) Consistent, coherent class rules |

II. How is the school organized?

(PASS4: Align Plans, Structure, Practices)

Q13. How does the school group or place students, thereby controlling **access** to instruction and services? Who makes these decisions?

(PASS17: Pupil Personnel)

- | | |
|--|---|
| (5)Categorical, pullouts, age graded | (1)inclusive, multi-age |
| (5)Specialist teams assign. | (1)Teacher-based, parents engaged |
| (5) <i>SpecialEntry Tests ,criteria</i> | (1)Self-advocate, declared interest |
| (5) <i>Probable Destiny tracks.....</i> | (1) <i>Common Core with Special courses</i> |
| (5)Traditional, high stakes test | (1)On-going evaluation and grouping |

Q14. How are **facilities and school time** used? What is the flow and cycle of activities?

(PASS12: Library, MultiMedia Center
PASS 19: Non-instructional Resources)

- | | |
|-------------------------------------|-----------------------------------|
| (5)Rigid schedule. | (1)flexible schedules |
| (5) Segmented Blocks | (1)Large, enriched blocks |
| (5)Assigned standard spaces | (1)activity spaces, open schedule |
| (5) <i>Standard classrooms</i> | (1) <i>Adult work settings</i> |
| (5) <i>Formal, Official spaces</i> | (1) <i>Informal gatherings</i> |
| (5)Study center, limited access | (1) <i>Open multimedia center</i> |
| (5)Regular school day, week | (1)Extended day, week, weekends |

Q15. How are students organized for their **school career** and what continuity is provided?

(PASS6: Instructional Program Implementation)

- | | |
|--|--|
| (5)random groups annually constituted. | (1) continuing cohort |
| (5)Individually selected courses | (1) core studies for all |
| (5)Teacher determined grade level content | (1) <i>Reference to Core Standards</i> |
| (5) No identity groupings | (1) <i>Family / Advisory Groups</i> |

Q16. How do **adults relate** to each other within the context of the school?

- | | |
|--|--|
| (5)"My job" orientation.
Work to contract | (1)Broadened roles, sense of community |
| (5) Separated by Specializations | (1)Integration of instructional/ support teams |
| (5)Socially detached, seniority | (1) Partners/ Mentors Integrated |

Q17. What do **staffing patterns** look like for the educational program (within the school?)

(PASS5: Staff Qualifications)

- | | |
|---|---|
| (5) Professionally Inexperienced | (1) Professionally Experienced |
| (5) Non-certificated | (1) Certificated |
| (5) Grade level teams | (1) Disciplinary, interdisciplinary teams |
| (5) Collection of Individuals | (1) collaborating teams, task groups |
| (5) Disproportionate Teacher Support | (1) Adult Engagement with Students |

Q18. How do **external agencies and families** relate to the school?

(PASS15: Parent Participation
 PASS 18: Securing Resources)

- | | |
|---|-------------------------------------|
| (5) Loosely linked by referrals | (1) collaborative planning |
| (5) <i>Detached External services</i> | (1) <i>Co-located, school based</i> |
| (5) Low, formal parental involvement | (1) <i>Family Engagement</i> |
| (5) Passive Recipient of Allocation | (1) <i>Seeks Resources, Grants</i> |
| (5) Reluctant partners | (1) Active, sustained, advocacy |

III. How is the school governed?

Q19. How is the school governance system representative of the stakeholders? Who plans and/or implements the school model or design?

- | | |
|--|--|
| (5) School Employees Only | (1) Inclusive of community-based agents |
| (5) Central office, administrators | (1) Core group, team, working committees |
| (5) <i>Expert planners</i> | (1) <i>Stakeholders, Advocates</i> |

Q20. What **commitment** do stakeholder partners make to program? What do they bring to the table?

- | | |
|-------------------------------------|--|
| (5) sporadic participation. | (1) generate civic capacity |
| (5) Goodwill, advice | (1) field experiences, mentors, access,
jobs, teacher support |
| (5) Decision Protection | (1) Active Engagement |

Q21. Who controls **development or training** of participants, e.g. student leadership, parent training, staff development?

(PASS10: Development of Staff
 PASS16: Parent Education)

- | | |
|------------------------------------|----------------------------------|
| (5) centralized authority. | (1) core teams, groups |
| (5) Officials, employees | (1) school council, parents |
| (5) <i>School Determined</i> | (1) <i>Collaborative Efforts</i> |

Q22. Who participates in **inquiring** into the school design or model's success?

- | | |
|-------------------------------|---------------------------------------|
| (5) External experts. | (1) core group, teacher researchers |
| (5) <i>Official assessors</i> | (1) <i>Continuous action research</i> |

(5) Designated Persons

(1) Open thru digital media

Q23. How is **authority distributed** among the participants?

How are decisions made? Who has veto power?

(5) Elected elites by vote.

(1) stakeholder consensus

(5) One governing unit.

(1) Linked, consultative units

(5) According to contract

(1) Informal and informative

(5) Seniority, cliques

(1) Constructive participation

IV. How does the school account for education?

Q24. How will this school design or model make the school **community better** for all adults as well as for all children? What will it do to build civic capacity and a sense of community?

(5) Narrow scope of claimed impact. . . . (1) broad focus on civic capacity, social capital

(5) Official standard data sources (1) process visualization/ interpretation

(5) Isolated services and agencies (1) Integrated, collaborative efforts

Q25. How does the school account for **adult growth**?

(PASS11:Formal Activities)

(5) Limited official expertise. (1) Developing learning organization

(5) Process accounting (1) Engage in action research

(5) Legal Supervision (1) Collaborative work, Interdependency

(5) Inactivity to Protest (1) indicators of family satisfaction/welfare

Q26. How will the unit **monitor the quality of daily life**?

(5) Informal random talk (1) Organized family-style advisories

(5) Individual responses (1) focus groups, forums

(5) 5) Student protests (1) Organized student assessments

Q27. How does the school account for **student needs and competencies**? Does accounting include community service?

(PASS 17:Pupil Personnel

PASS21: Student Performance)

- (5) standard measures, records.
- (1) authentic assessment, product exhibitions, multi-media portfolios

Q28. How does this model make **use of data** to determine what the children know? How are data analyzed and presented?

(PASS22:School Effectiveness)

- (5)cross sectional tests, slices.
- (1) cohort, trend analysis
- (5) periodic report cards
- (1) public career portfolios
- (5)Avoidance of teacher assessment
- (1) Incorporates data about teachers
- (5) Print reports
- (1)Uses digital media with open access
- (5) User of commercial tables
- (1) Visual interpretations of data
- (5) Annual Reviews
- (1) Continuous assessment

Q29. What types of **information** are collected; how is it distributed; and who receives it?

(PASS20:School Assessment Program)

- (5) Personal report card, tests results.
- (1)competency profile
- (5) Student records
- (1) Community development indicators
- (5) Generalized teacher evaluations
- (1) Program specific assessments
- (5) Official Profiles of School
- (1) School-based Assessment Sessions