

**Timothy A. Poynton** is an assistant professor with Suffolk University, Boston. E-mail: [tpoynton@suffolk.edu](mailto:tpoynton@suffolk.edu)

**John C. Carey** is the director of the National Center for School Counseling Outcome Research, University of Massachusetts, Amherst.

# An Integrative Model of Data-Based Decision Making for School Counseling

*This article presents a model of data-based decision making based on five commonly used models from both within and outside the discipline of school counseling. This integrative model is tied explicitly to the ASCA National Model® concepts, terminology, and resources. It provides school counselors with a sequence to follow for engaging in data-based decision making. The article elaborates on and discusses facilitators and barriers to implementing data-based decision making in school counseling programs, as well as implications and future directions.*

Data-based decision making (DBDM) has been defined as the “process of collecting, analyzing, reporting, and using data for school improvement” (Dahlkemper, 2002, p. 1). While the importance of using data to plan and evaluate school activities has been recognized for some time, formal models of DBDM have only recently emerged concomitant with the development of standards-based school reform approaches. Standards-based educational reform seeks to improve education through (a) the clear specification of desired student outcomes, (b) the measurement of student performance, and (c) the evaluation of the impact of educational practices on actual student performance. Individual schools, school districts, state governments, and the federal government all use these three principles, albeit in different ways, to improve education. The rationale for implementing DBDM in schools is that “using information to help clarify issues, identify alternative solutions to problems, and target resources more effectively will lead to better decisions” (Protheroe, 2001, p. 4).

The concept of using data in school counseling practice is not new. Traditionally, school counselors have used needs assessment instruments to gather data from students, parents, and school personnel to identify needed interventions (Cook, 1989) and have used evaluation data to document the effectiveness of specific interventions and programs (Fairchild & Seeley, 1995). More recently, school counselors have been urged to use school data to focus student advo-

cacy initiatives (Hayes, Nelson, Tabin, Pearson, & Worthy, 2002) and to use measurable results in the design and improvement of school counseling programs (Johnson & Johnson, 2003).

Interest in the formal incorporation of DBDM in school counseling has recently arisen concomitant with the development of the ASCA National Model® (American School Counselor Association, 2005). The ASCA National Model was developed to connect school counseling with current educational reform movements that emphasize student achievement and success (ASCA). Using data to plan and evaluate school counseling programs and interventions is a critical feature of the ASCA National Model’s Management System, making DBDM an important management tool. Several process models for DBDM in school counseling recently have been developed (Dahir & Stone, 2003; Isaacs, 2003; Reynolds & Hines, 2000). These models are similar in that they present a step-by-step process for DBDM implementation. The models differ from each other in the ways they address some common problems, in the extent to which they are compatible with more general “whole school” DBDM models of school reform, and in the extent to which they are explicitly connected to ASCA National Model concepts and terminology.

In this article, we compare and contrast two popular DBDM models from outside the field of school counseling (Johnson, 2002; Love, 2002), one whole school model that emphasizes the centrality of the school counseling program in school improvement (Reynolds & Hines, 2000), and two models focused on the school counseling program (Dahir & Stone, 2003; Isaacs, 2003). We elucidate common model elements and illustrate how each model addresses common issues in DBDM. We then present an integrative model that includes the best features of existing DBDM models explicitly connected to ASCA National Model concepts and terminology. Finally, we identify some important unresolved issues in implementing DBDM in school counseling programs.

## DATA USE AND COMPREHENSIVE DEVELOPMENTAL GUIDANCE: A BRIEF HISTORY

The use of data by school counselors today is critical to engage in effective school counseling practice (ASCA, 2005). Generally speaking, data can be used in two ways; school counselors can use data to guide program development, and data can be used to evaluate program effectiveness. Practically speaking, using data to guide decision making and using data to provide accountability information go hand in hand, as the process for using data is similar for both. The context of education today promotes the use of data for accountability purposes and, therefore, has received the most attention in the literature. School counselors, who in the past “have resisted efforts to systematically plan, implement, and evaluate their guidance programs” (Lombana, 1985, p. 340), are today in a position to participate in school reform efforts (House & Hayes, 2002) and demonstrate accountability for their part in student achievement (Paisley & Hayes, 2003).

The use of data has become a cornerstone of effective school counseling practice because it allows counselors to identify areas in need of attention and then evaluate the effects of the remedy. While these uses of data are articulated in the ASCA National Model today, evidence of the use of data as an effective school counseling practice is exemplified by the work of Gysbers and Lapan in the area of comprehensive guidance and counseling programs. In a succinct overview of the Missouri Comprehensive Guidance Program (MCGP), Gysbers, Hughey, Starr, and Lapan (1992) described the history behind comprehensive guidance and counseling and presented a framework designed to serve as a model for other states to follow. Gysbers et al. asserted that “evaluation of the MCGP is an ongoing process, providing feedback to counselors and administrators to use in improving and enhancing the program so that it can more effectively meet the needs of students, the school, and the community” (p. 565). This indicates that early descriptions of comprehensive developmental school counseling programs did include an evaluation component to ascertain the effectiveness of school counseling programs.

The ASCA National Model and the comprehensive guidance and counseling programs described by Gysbers and Lapan are closely linked; in fact, the ASCA National Model can safely be characterized as an extension of their work as it supports Gysbers’ “vision for ... fully implemented comprehensive guidance and counseling services in every state” (ASCA, 2005, p. 4). A comparison of the ASCA National Model and the comprehensive guidance and counseling programs described by Gysbers and

Lapan reveals that there are many similarities but a striking exception regarding school counselors’ use of data. In the MCGP model (Gysbers et al., 1992), responsibility for program evaluation and data analysis largely belonged to university researchers. In Lapan’s (2001) description of results-based comprehensive guidance and the ASCA National Model itself, responsibility for program evaluation activities has shifted from university researchers to school personnel, and it is an integral part of the school counseling program. The ASCA National Model is a natural evolution of comprehensive guidance and counseling programs, providing school counselors with more direction to engage in program evaluation activities and the use of data.

While the ASCA National Model identifies the necessity of school counseling program evaluation using quantitative methods for both planning and accountability, the model lacks practical procedures and techniques for actually engaging in those data-use activities. The ASCA National Model is clear in defining what types of data are available and how data should be used, but how to manipulate “raw” data to engage in these activities remains unclear, and a model for using data to guide program development and modification is not elaborated. Similarly, Lapan’s (2001) description of results-based comprehensive guidance and counseling asserts that school counselors should be “both reflective and investigative practitioners” (p. 295). Unfortunately, requisite skills and knowledge for school counselors to be “reflective and investigative practitioners” are not elaborated. Trevisan (2000, 2002) also has noted the absence of clear guidelines and skills for engaging in the types of evaluation activities required to implement and maintain a comprehensive developmental school counseling program.

In an interesting extension of the ASCA National Model, the New York State School Counselor Association (NYSSCA) has explicitly included Dahir and Stone’s (2003) DBDM model in the New York State Model (NYSSCA, 2005). Here, a specific approach to DBDM is linked to ASCA National Model principles. It will be instructive to track the implementation of this model and evaluate the strengths and limitations of prescribing a specific approach versus a more open-ended approach to program management and accountability.

## OVERVIEW OF DATA-DRIVEN DECISION-MAKING MODELS

To develop a model of data-based decision making that is explicitly integrated with the ASCA National Model, five current data-based decision making models were reviewed—two from outside the field

Interest in the formal incorporation of data-based decision making in school counseling has recently arisen concomitant with the development of the ASCA National Model.

**Table 1. Stages of Reviewed DBDM Models**

<b>Johnson</b>	<b>Love</b>	<b>Dahir &amp; Stone</b>	<b>Isaacs</b>	<b>Reynolds &amp; Hines</b>
1. Getting started: building the leadership leadership and data teams	1. Commit to student learning vision and standards	<b>Mission</b> —connect to mission of school	1. Identify problem and goal for improvement	1. Vision data
2. Killing the myth, building dissatisfaction	2. Collect and analyze student learning and other data	<b>Elements</b> —identify critical data elements	2. Develop vision and goal	2. Current data
3. Creating a culture of inquiry: assessing where you are, why you are there, and what needs to change	3. Formulate learner-centered problem	<b>Analyze</b> critical data elements	3. Identify measurable changes	3. Data target
4. Creating a vision plan for your school	4. Set measurable student learning goals	Identify <b>Stakeholders</b> to help	4. Develop research plan and blueprint	4. Force field analysis
5. Monitoring progress	5. Develop learner-centered systemic action plan	<b>Unite</b> to strategize	5. Implement plan with periodic measurement of change of effect	5. Strategy development
	6. Take action	<b>Reanalyze</b>	6. Collect and analyze data	6. Planning
	7. Monitor results	<b>Educate</b>	7. Report results	7. Action

of school counseling and three from within. Models reviewed from outside the field of school counseling were Johnson’s (2002) model, a systemic approach to school reform focused on closing the achievement gap, and Love’s (2002) model from the field of mathematics and science education. Models reviewed from within the field of school counseling were Isaacs’ (2003) and Dahir and Stone’s (2003) models of data-based decision making focused on answering accountability questions, and a “guidance-centered whole school reform process” developed by Reynolds and Hines (2000, p. 3).

Each of the models reviewed presents a step-by-step process that can be employed to engage in data-based decision making (see Table 1). It is interesting to note that, in terms of steps in the data-driven decision making process, the models reviewed are more similar than different. To highlight similarities and differences among the models, a matrix using common model elements as the organizing structure was developed by reviewing the steps of DBDM elaborated by each model. The criteria for being a common model element required that the element

be present in more than one model, and that the element was an explicit component of the DBDM process (as opposed to an outcome of the DBDM process or reason for engaging in DBDM). As can be seen in Table 2, none of the five models has all of the “common model elements.” Furthermore, within each of the models, different levels of emphasis are placed on each model element. For example, Love (2002) and Isaacs (2003) have placed strong emphasis on developing benchmarks and vision data, evidenced by having an explicit step for engaging in this activity, while Dahir and Stone (2003) have subsumed this activity under the “Unite to Strategize” step.

### THE IDEAS MODEL

To develop a model of DBDM for integration with the ASCA National Model, the models we reviewed were synthesized into a new five-stage model, the IDEAS model, depicted in Figure 1. The decision-making process we propose pays explicit attention to important enabling conditions, and has five sequen-

**Table 2. Common Model Elements Among Reviewed DBDM Models**

Common Model Elements	Johnson	Love	Dahir & Stone	Isaacs	Reynolds & Hines
Describe the problem in measurable terms	X	X	X	X	X
Obtain stakeholder input	X	X	X		X
Generate benchmarks/vision data	X	X	X	X	X
Use of action plans for intervention		X		X	X
Identify effective, specific interventions		X			X
Development of plan for evaluating intervention success	X	X		X	X
Monitoring of intervention implementation	X	X		X	
Evaluating intervention success (data analysis strategies)	X	X	X	X	
Share results with stakeholders			X	X	

tial stages with sequential tasks within each stage. An overview of the model is provided below.

**Overview of the Model**

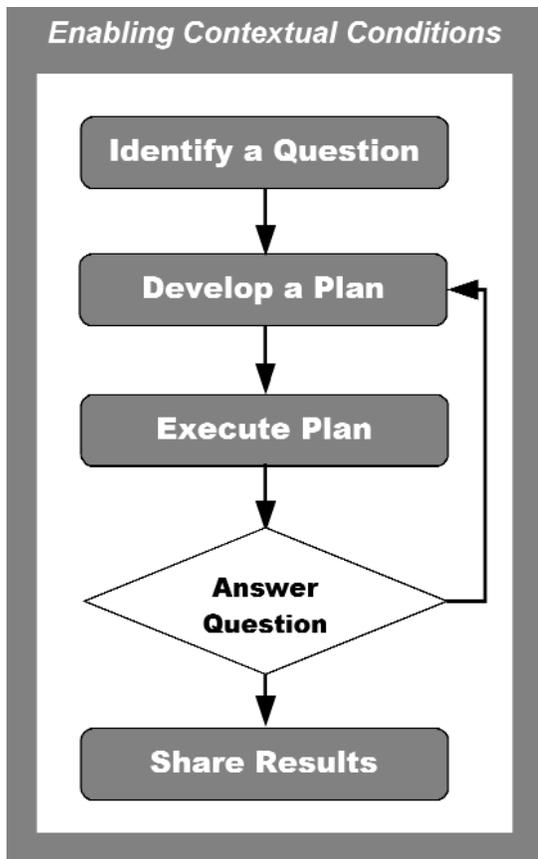
Effective DBDM occurs within a context that can best be described as the “Enabling Conditions.” Establishing and maintaining these conditions are essential to achieving the desired results while engaging the DBDM process. The first stage asks participants in the DBDM team to “Identify a Question,” using the goals of the school counseling program to highlight areas in need of attention and to provide focus. Given these results, the second stage entails “Developing a Plan” to address the issue(s) hindering progress toward the school counseling program’s goals. “Execute the Plan,” the third stage, is the stage in which the intervention developed during the planning stage is put to action. The fourth stage, “Answer the Question,” is a key juncture in the progress of the DBDM team’s work, and involves assessing the extent to which the intervention achieved the desired results. If the intervention did not lead to positive changes, the team revisits the planning stage to modify the intervention or plan a new one; if the intervention had positive outcomes, the final stage, “Share Results,” is enacted to ensure all school counseling program stakeholders are aware of the benefits of the school counseling program.

**Enabling Contextual Conditions**

The models of DBDM that we reviewed all implicitly or explicitly recognize that certain conditions must exist in order for the process to work effective-

ly. Love (2004) identified four conditions that she asserted are necessary for effective data-based decision making in schools: collaborative culture, collaborative structures, widespread data-literacy, and access to useful data. A collaborative school culture is necessary to facilitate productive data-based conversations among school personnel that are focused on improving student learning and development. Collaborative structures (e.g., teams and scheduled meetings) are necessary to create regular, officially sanctioned opportunities for school personnel to work together on DBDM activities. Love further contended that widespread data literacy is necessary so that school personnel have the requisite skills to collect and make sense of data, use research to assist in understanding and creating effective action plans, and evaluate outcomes. Finally, Love suggested that school personnel need to have access to accurate data on both student learning and characteristics of the school system that impact student learning.

While all of the reviewed DBDM models assume the existence of a collaborative climate, the models differ with respect to the composition of the DBDM team. The more general models of DBDM (e.g., Love, Johnson) are by definition oriented toward more general “whole school” reform approaches. In these approaches, school counselors engage in DBDM as members of an interdisciplinary team (along with administrators, teachers, and other school personnel), and school counseling interventions that result from this process are integrated components of a comprehensive school improvement plan. Similarly, Reynolds and Hines’ (2000) DBDM model emphasizes guidance-centered whole



**Figure 1. The IDEAS model of DBDM.**

school reform through a DBDM approach. In this model, which is a whole school improvement model, a school counselor leads an interdisciplinary team through the DBDM process.

In contrast, Isaacs' (2003) and Dahir and Stone's (2003) models emphasize the use of DBDM within the school counseling program. In addition to school counselors, other stakeholders participate in the process by providing input and reviewing results. While all reviewed DBDM models recognize that the process must involve various members of the school community (e.g., administrators, teachers, counselors, parents, and teachers), how these members are involved depends on whether the DBDM process is a whole school change strategy, a guidance-centered whole school change strategy, or an aspect of the school counseling program's management and accountability functions. The nature of the requisite collaborative climate to support DBDM will depend on its intended goal and who needs to participate in the process to achieve that goal.

The ASCA National Model recognizes this fact when it asserts that "through data analysis, school counselors, administrators, faculty and advisory council members are able to create a current picture of students and the school environment" (ASCA,

2005, p. 49). The DBDM models we reviewed differ in terms of when and how these members are involved. The collaborative structures necessary to support DBDM also will differ depending upon whether the process is implemented as a whole school reform initiative, or as a component of the school counseling program. Under whole school reform models, school counselors need to participate in collaborative structures (e.g., data teams) that promote interdisciplinary work with other educators. Under school counseling program-centered models, schools counselors will need to create collaborative structures (advisory councils) to promote DBDM and dissemination of results among stakeholders.

The ASCA National Model does not specify the data literacy skills needed for effective DBDM and seems to underplay the level of sophistication needed in the following quote: "School counselors do not have to be skilled statisticians to meaningfully analyze data" (ASCA, 2005, p. 51). In terms of skills related to the description of specific problems, all the reviewed DBDM models and the ASCA National Model suggest that participants need to know how to disaggregate data to determine how subpopulations of students differ on outcomes or participation in school programs. Love's (2002) model suggests that DBDM teams also need to learn how to triangulate—combine data from multiple sources to identify a problem. Love's model is also the only model that identifies the importance of having skills to evaluate the existing research literature to plan effective interventions.

All DBDM models require some skill in evaluation so that participants can determine whether interventions are having the desired effects. In DBDM, evaluation typically is accomplished by comparing targeted data before and after an intervention. The single group, pre-post test processes advocated by these models are considered relatively weak evaluation designs. Moreover, judgment of improvement is largely done by inspection of the data. The use of statistical tests to determine whether observed changes may be due to chance are not advocated by the reviewed DBDM models.

DBDM requires that participants have access to meaningful and useful data. The ASCA National Model identifies readily available student achievement and achievement-related data, and "perception data" (e.g., survey data on student, teacher, or parent self-reported attitudes and beliefs). However, the ASCA National Model does not provide an exhaustive list of data sources to engage in DBDM. Schools vary widely in both ease of access to student data and the extent to which they routinely engage in the collection of important planning data not typically found in student information systems (e.g.,

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school climate survey data, needs assessment data). DBDM teams need to be able to identify the existing data in the school's student information system, access and organize those data (or consult with a technician who has the technological skills to do so), and identify and collect additional data when needed. Because additional data may need to be collected by the school, data collection skills that DBDM teams need include survey selection, design, and evaluation.

Effective DBDM can only occur within a school context that facilitates the process. Therefore, school counselors need to be able to orchestrate and/or collaborate with other people in their school to establish the conditions necessary for engaging in DBDM. Any analysis of specific school counselor competencies in DBDM must include the identification of skills needed to establish these conditions. Once these "Enabling Conditions" are understood and addressed to the greatest extent possible, the actual process of DBDM can be engaged.

### **Stage 1: Identify a Question**

Through data analysis, school counselors, administrators, faculty and advisory council members are able to create a current picture of students and the school environment. This picture focuses discussion and planning around students' needs and the school counselor's role in addressing those needs. (ASCA, 2005, p. 49)

**Task 1: Form the DBDM team.** The primary factors determining the composition of the DBDM team, and the school counselor's role on the team will be the extent to which the process is a whole school reform initiative versus a component of the school counseling program's management and accountability systems. In whole school reform teams, the school counselor may be the designated leader of the team if he or she is perceived as having the appropriate expertise and centrality to school reform initiatives; overall DBDM team membership will include school personnel from a wide range of departments.

If the DBDM process is confined to the school counseling program, a school counselor will typically lead the team, and team composition will consist of advisory group members and other school counseling program stakeholders such as administrators, teachers, parents, and students.

In assembling a DBDM team, the leader ought to consider the following questions: (a) Does the team include all the needed perspectives to correctly identify problems and potential solutions? (b) Does the team include all the needed perspectives to correctly

identify strategies and barriers to intervention implementation? (c) Do team members have the necessary data literacy skills? (d) Do team members show the capacity for effective collaboration?

**Task 2: Identify the goals of the school counseling program.** ASCA National Model school counseling programs have clearly articulated vision and mission statements, and they utilize the ASCA National Standards to provide goals. School counseling mission statements are integrated with district and school missions, and yearly agreements with school administrators specify the priority outcomes of the school counseling program. These can be used by the DBDM team to provide an initial focus. To keep the DBDM process manageable, it is important to identify a single, measurable goal of the school counseling program to investigate. To keep the focus on student outcomes, the goal selected should be measurable by student achievement data (e.g., standardized test scores, GPA), achievement-related data (e.g., attendance rate, discipline referrals, homework completion rate), or standards- and competency-related data (e.g., percentage of students with 4-year plans) (ASCA, 2005). Sample goals of the school counseling program that are appropriate for use in this task can be derived from the ASCA National Standards, the National Career Development Guidelines, or they can be specific to your school. (Examples of more specific goals of the school counseling program include "the average daily attendance rate will be 95% or higher" or "the percentage of students who are suspended more than once will be lower this year than in previous years.")

**Task 3: Collect and analyze data to describe current status.** Once a goal has been identified, data need to be collected and analyzed to establish a baseline. In addition to collecting the results data (student achievement, achievement-related, or standards- and competency-related data) related to the goal, demographic data also will need to be collected to permit disaggregation analyses. Disaggregation analyses involve reporting results data for different student subgroups to highlight discrepancies, and they include demographic variables such as ethnicity, gender, socioeconomic status (free or reduced lunch), special education status, grade level, and English language learner status. All of these demographic data are routinely collected by schools to meet state and federal guidelines.

Upon completion of this stage, the DBDM team will have a clear description of a specific question defined in terms of measurable student learning outcomes. Disaggregation analyses permit the DBDM team to describe the similarities and differences among different student subgroups, and to facilitate the identification of solutions.

## Stage 2: Develop a Plan

“School counselors must show that each activity implemented as a part of the school counseling program was developed from a careful analysis of student needs, achievement and related data” (ASCA, 2005, p. 49).

**Task 1: Identify barriers to goal attainment.** Once the results data are analyzed to describe the current status of the identified question, the DBDM team can begin to generate ideas regarding barriers to attainment of the goal. This will usually require collecting and analyzing additional perception data through surveys administered to parents, students, administrators, and/or teachers. For example, if the DBDM team believes that students’ lack of connection to adults in school is affecting academic achievement (Dimmitt, 2003), surveys to assess how connected students feel to adults in school should be developed, disseminated, disaggregated, and analyzed to supplement the results data describing the problem.

**Task 2: Determine intervention to effect change in problem data.** With the results and perception data, the DBDM team can now identify an intervention to solve the problem. The intervention can take many forms—changing a policy, implementing classroom-based lessons, or having focused individual counseling are all potential interventions. The team should strive to find an “evidence-based” intervention to solve the problem. Evidence-based interventions are interventions that research has proven to be effective, and they should be used to the greatest extent possible (for a review of evidence-based practices in school counseling, see Carey, Dimmitt, Hatch, Lapan, Lee, & Whiston, 2005). If an evidence-based intervention is not available, efforts should be made to determine what counselors with a similar problem have done to identify and implement a promising solution.

The final steps of the Develop a Plan stage involve developing “blueprints” (Isaacs, 2003) to guide the implementation and evaluation of the intervention.

**Task 3: Develop an action plan.** The ASCA National Model provides sample “school guidance curriculum” and “closing the gap” action plans to assist with the planning of the intervention (ASCA, 2005). School guidance curriculum action plans are useful for planning classroom-based interventions, while closing the gap action plans are useful for planning most other types of interventions. These action plans are useful tools for developing a timeline for intervention implementation, assigning responsibility to individuals, identifying resources needed to effectively implement the intervention, and identifying the data needed to evaluate the intervention.

**Task 4: Develop an evaluation plan.** An explicit plan for conducting the evaluation of the interven-

tion is developed to ensure appropriate data are collected to determine the effectiveness of the intervention. Appendix A contains a sample evaluation planning tool that can be used to ensure these data are collected; it is an extension of the ASCA National Model action plans. The plan facilitates “triangulation” of data to be used in the evaluation by ensuring that process, perception, results, and demographic data are included in the evaluation, and a plan for analyzing the data is developed (see pages 50–52 of the ASCA National Model for definitions and descriptions of the different types of data). Identifying the different types of data, their sources, and the method for analyzing the data is critical to ensure evaluation components are built into the overall plan for implementing the intervention.

## Stage 3: Execute the Plan

The model recommends the use of disaggregated data to drive program and activity development, thus enabling school counselors to intentionally design interventions to meet the needs of all students and to close the gap between specific groups of students and their peers. (ASCA, 2005, p. 10)

**Task 1: Implement action plan.** After ensuring that all of the components of the action plan developed during the Develop a Plan stage are in place, the action plan is put into motion.

**Task 2: Monitor implementation.** Once the intervention has been implemented, steps need to be taken to ensure the action plan is being executed appropriately. This includes conducting checks for “treatment fidelity.” For example, if a classroom-based intervention is being implemented, checking for treatment fidelity entails making sure that what happens in classroom A is the same as what happens in classroom B, and that the intervention was implemented as it was designed to be implemented. For example, if the DBDM team decides to implement the “Second Step” curriculum to improve academic achievement in its elementary school, checking for treatment fidelity entails making sure that all students experience the Second Step program similarly. Because the Second Step program is evidence-based (Carey et al., 2005), checking for treatment fidelity also should include checks to make sure the program was implemented by the classroom facilitators as it was designed to be. At the end of this task, the “process data” identified in the evaluation plan should be assembled. It should be possible to precisely describe who received what interventions, for what period of time, and under which conditions.

**Task 3: Formative assessment.** Formative assessments should be conducted while the intervention is

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being implemented to provide opportunities for adjustment to maximize the intervention’s impact. The formative assessments can be formal, such as tests or quizzes to assess student knowledge, or informal, such as conversations with students, counselors, administrators, and/or teachers to obtain their preliminary perceptions of the intervention’s progress toward meeting its goals. Information obtained from these formative assessments can provide valuable information to increase the likelihood of implementing a successful intervention. Ordinarily, in terms of the ASCA National Model, this formative assessment consists of gathering perception data during the intervention. These data can be used to modify the intervention to address implementation shortcomings.

proved as needed. Sharing these reports with stakeholders serves as an advocacy for the students and the program” (ASCA, 2005, p. 24).

The results of the process the DBDM team embarked on should be disseminated broadly, but the DBDM team should be mindful of the audience as results reports are shared and communicated with the school counseling program’s stakeholders. The school counseling program’s stakeholders involve people within and outside of the school. Within the school, the school board, teachers, administrators, students, and other professionals and paraprofessionals are the stakeholders. Outside of the school, stakeholders include the community at large, such as parents and local businesses and agencies.

The ASCA National Model provides sample results reports that can be used to capture critical elements of a school counseling intervention for reporting (ASCA, 2005, pp. 60, 62). To communicate with school counseling program stakeholders within the school, faculty and school board meetings and a report distributed to faculty mailboxes provide excellent opportunities for sharing concrete successes. Communicating with stakeholders outside of the school can involve using the media (newspapers, television), a newsletter to parents, or a presentation to a parent organization. The Support Personnel Accountability Report Card (SPARC, 2005) provides an excellent template for sharing the outcomes of school counseling programs and includes graphs and figures, tables, and narrative descriptions of data. The use of technology tools such as Microsoft’s PowerPoint, Publisher, Excel, and EZAnalyze can facilitate the summarization and dissemination of the DBDM team’s work.

## SUMMARY, CONCLUSIONS, AND FUTURE DIRECTIONS

The IDEAS model represents a synthesis and integration of common DBDM models. It combines the overlapping functions of needs assessment, program evaluation, accountability, and public relations in an organized approach to data use that is consistent with the ASCA National Model for school counseling programs and standards-based educational reform approaches. Our analysis of the differences among the existing DBDM models and conditions necessary for IDEAS implementation raises several critically important issues.

We believe that it is essential to approach DBDM as an ongoing proactive component of the school counseling program rather than as a reactive activity episodically enacted as a response to threat, such as the potential loss of a school counselor position. The primary purpose of DBDM ought to be helping school counselors implement more effective pro-

**A collaborative school culture is necessary to facilitate productive data-based conversations among school personnel that are focused on improving student learning and development.**

### Stage 4: Answer the Question

“Data collection provides the school counseling program with the information needed to evaluate the program as it related to students’ progress” (ASCA, 2005, p. 59).

**Task 1: Analyze the data.** The evaluation plan developed in the Develop a Plan stage provides a roadmap to follow for analyzing the data gathered before, during, and after the intervention. To facilitate data analysis and reporting, technology tools such as EZAnalyze (<http://www.ezanalyze.com>, free) can be used to perform statistical tests and disaggregate data. This step is often the most difficult for school counselors. Ideally, at least one member of the DBDM team is facile in performing data analyses; if not, assistance with data analysis can often be obtained by contacting a local university with a school counselor education program or an organization such as the National Center for School Counseling Outcome Research (<http://www.cscor.org>).

**Task 2: Interpret the results.** With the data analyzed, the DBDM team can make a determination about the success of the intervention. The decision to move to the Share Results stage or the Develop a Plan stage at this point will require the team to scrutinize the results of the data analyses. If the analyses reveal the intervention was successful with short-term perception data indicators and long-term results data indicators, the team can make the decision to move to the Share Results stage. If the analyses reveal that the intervention did not have the expected results, the team may decide to move back to the Develop a Plan stage, using the process, perception, and results data to diagnose problems with the intervention.

### Stage 5: Share Results

“Results reports ... ensure programs are carried out, analyzed for effectiveness and changed and im-

grams, rather than justifying their existence. Only if DBDM is seen as a critical component of the school counselor's job will sufficient time be allocated so that it will happen with sufficient regularity. DBDM cannot be an "add-on" activity. In terms of the ASCA National Model categorization of school counselor activities, DBDM would be considered a system support activity. We doubt whether DBDM can be effectively integrated into a school counseling program without increasing the recommended time allocated to these activities by 5 percent. If a reduction in noncounseling responsibilities is not possible to create time for engaging in DBDM tasks, we recommend slightly decreasing the time spent in each of the other Delivery System activities.

Many school counselors lack the skills to implement the IDEAS model because school counselor education programs have curricula that do not build the requisite values, knowledge, and skills to enact the model. The IDEAS model can be used to determine required skill sets for planning professional development, restructuring school counselor education programs, and strengthening certification and accreditation standards.

We noted a range of approaches and intentions among the existing models for involving stakeholders in the DBDM process. Some models involve stakeholders from the beginning (Reynolds & Hines, 2000) as full partners in the process to ensure that decision-making and planning has the benefit of multiple perspectives and a variety of expertise. Other models (Dahir & Stone, 2003) involve stakeholders later in the process after much of the analytic work has been done to get "buy-in" and support for intervention implementation. In the IDEAS model, we opted for early stakeholder involvement. While the optimal time and level of stakeholder involvement may be an empirical question, we opted for an approach that shares decision-making power and authority from the onset. We recognize that this approach may not be optimal under all circumstances. Closer study of optimal approaches for involving stakeholders in the DBDM process is needed.

Finally, if we are correct that skills in DBDM are a new cornerstone in effective school counseling practice, changes in school counselor education programs and the concomitant development of effective ways to teach these skills to practicing school counselors are needed. CACREP ought to consider including DBDM competencies in its revision of training standards. Model programs and research on effective ways to teach DBDM and develop the requisite DBDM skills such as program evaluation design and data analysis skills are needed. ■

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**The IDEAS model can be used to determine required skill sets for planning professional development, restructuring school counselor education programs, and strengthening certification and accreditation standards.**

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APPENDIX A Sample Evaluation Planning Tool		
X	Hypothesis/Question	
<b>Triangulation</b>	Process Data	<i>Source(s)</i>
	Perception Data	<i>Source(s)</i>
	Results Data	<i>Source(s)</i>
	Demographic Data	<i>Source(s)</i>
	Analysis Plan	<i>Source(s)</i>