EFFECTIVE
School Practices

FOCUS: RESEARCH ON GENERAL EDUCATION TEACHER PLANNING AND ADAPTATION FOR STUDENTS WITH HANDICAPS

In this special issue, the Joint Committee on Teacher Planning for Students with Disabilities summarizes four years of research across four research projects sponsored by the Office of Special Education and Rehabilitative Services under the research initiative of "Research on General Education Teacher Planning and Adaptation for Students with Handicaps." The four projects were located at the University of Miami (UM), University of Kansas (UK), Education Development Center, Inc. (EDC), and Vanderbilt University (VU).

ADI

Philosophy of *Effective School Practices*

1. Teachers are responsible for student learning.
2. The curriculum is a critical variable for instructional effectiveness.
3. Effective teaching practices are identified by instructional research that compares the results of a new practice with the results of a viable alternative.
4. Experiments should not be conducted using an entire generation of Americans. The initial experimentation with a new practice should be small in scale and carefully controlled so that negative outcomes are minimized.
5. A powerful technology for teaching exists that is not being utilized in most American schools.

Planning for Academic Diversity in America's Classrooms:
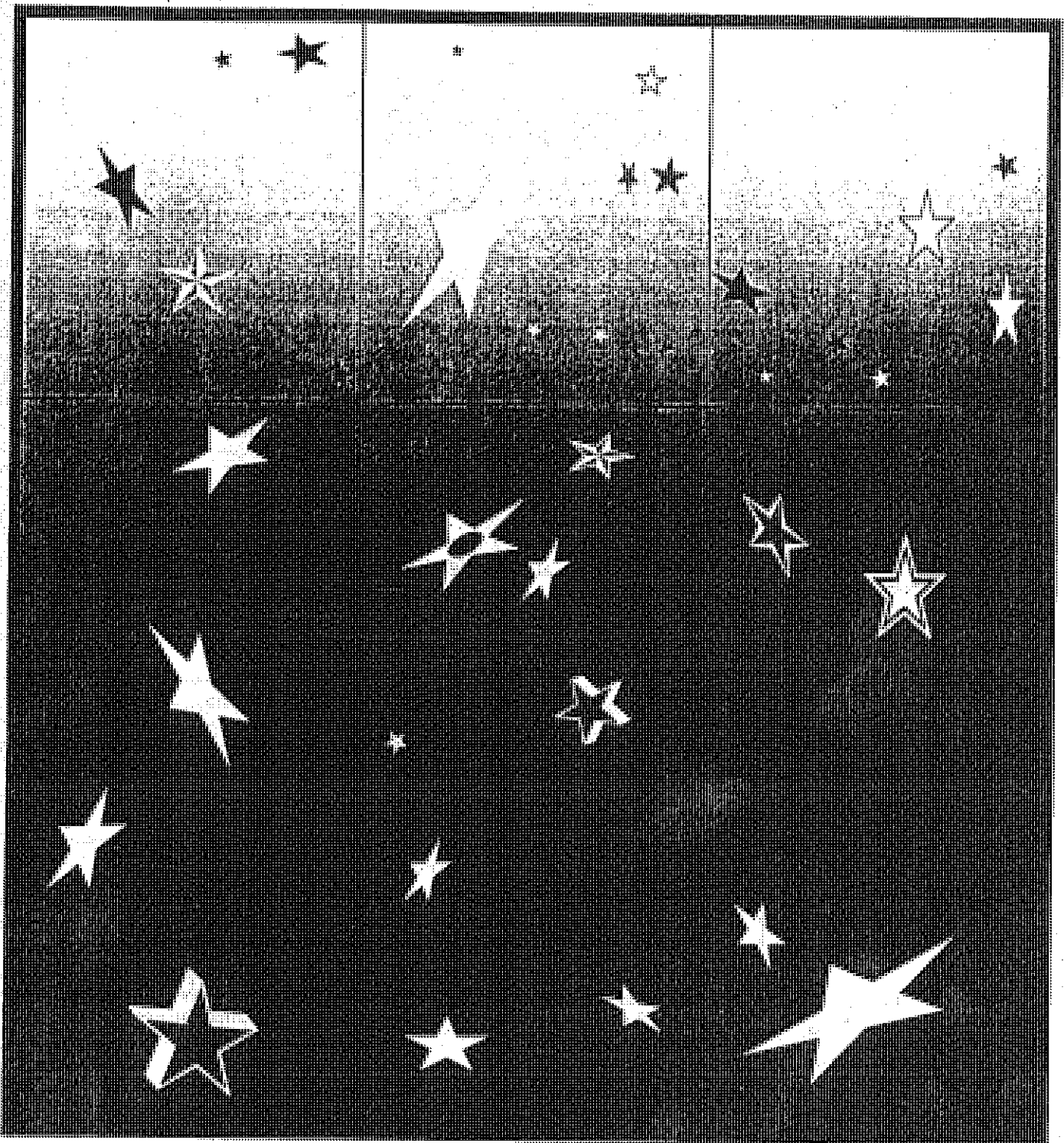
Windows on Reality, Research, Change, and Practice

The Joint Committee on Teacher Planning for Students with Disabilities

The Research Projects

The research findings presented in this document were generated through four years of joint effort by many individuals across four research projects. The four projects were led by the following researchers:

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★——————★

Successful teams build on the strengths of individual members.

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INTRODUCTION

The Challenge of Academic Diversity

ncreasingly, educators are expected to teach classes of academically diverse students. This challenge has been exacerbated in recent years by calls for the full inclusion of students with disabilities in the general education classroom. While these calls are generally supported on philosophical, social, and/or administrative grounds, they are seldom considered in light of the *instructional challenges* that markedly diverse classes present to teachers.

Unfortunately, most of the discussions and actions that have placed the issue of inclusion on center stage have ignored the barriers and conditions that are present within today's schools. As a result, the magnitude of the challenges confronting teachers who try to meet the needs of students with disabilities in their classes is often minimized or overlooked altogether.

Recently, educators have been searching for ways to address these challenges. One important effort was originated by the Office of Special Education and Rehabilitative Services (OSERS) within the U. S. Department of Education. From 1989 through 1993, OSERS supported four major research projects to gather information that would lead to an increased understanding of the complex dynamics surrounding the inclusion of students with mild disabilities within the general classroom. The projects were also charged with the tasks of developing and field-testing innovative practices that would improve the ways that teachers plan, individualize, and adapt curricula and instruction for students with disabilities in the general education classroom. Out of this work emerged a fascinating story that sheds considerable light on one of the most pressing issues in education today — inclusion of students with disabilities in the mainstream of education.

Collecting the Story's Ingredients

The ingredients for this story came from many places (urban and rural school districts in Florida, Kansas, Massachusetts, and Tennessee) and from many players (hundreds of elementary and secondary students and general education teachers representing several curriculum areas). In addition, the teams of investigators at the four project sites were also quite diverse. For example, the teams each represented varying philosophical positions and employed different research methodologies. Amazingly, out of these diverse ingredients and varying perspectives emerged a core of common findings that reveal vitally important information about the challenges that most teachers face as they try to grapple with academically diverse classrooms containing students with disabilities. The essence of these common findings and the story they tell have important implications for educators in today's schools.

The Main Story

The story that emerged from this research had four major themes.

THEME #1: Teachers are sensitive to and concerned about at-risk students in their classes. By and large, the researchers found teachers to be greatly bothered by the fact that there are students in their classes who struggle with the academic demands they are expected to meet. A prevailing maxim in education has been that elementary teachers are concerned while secondary teachers are not. To the contrary, the project findings underscore that regardless of level, teachers *are* concerned. Unfor-

The magnitude of the challenges confronting teachers who try to meet the needs of students with disabilities in their classes is often minimized or overlooked altogether.

Teachers are concerned about the at-risk students in their classes.

tunately, however, teachers are often stymied about what to do when some of the students in the class are not keeping up with the rest.

THEME #2: Specific instructional procedures and tools are workable and effective (for most students!) in general education classrooms. Several new planning strategies and instructional approaches were developed by the four projects for use in the general education classroom. When they were field-tested, researchers found that successful instruction can take place and that students with disabilities *can* successfully respond to the demands of the regular classroom while, at the same time, the performance of other students in the class improves commensurately.

The form of these instructional procedures varied greatly, but some of their features included:

- Teachers collaborating for the purpose of studying and viewing children from a holistic perspective, thinking about, planning for ways to meet the unique needs of students, and sharing results of their instruction with each other;

- Teachers using self-questions to guide their thinking and planning about how a lesson's content can be structured to ensure that all students learn;

- Teachers using curriculum-based measurement and classwide peer tutoring procedures to decentralize the classroom organization thereby affording more opportunities for intensive and individually focused instruction; and

- Teachers systematically thinking about and selecting the "critical content" to teach and then using various graphic devices to organize and depict the content in a more "learner-friendly" way.

When teachers received sufficient instruction in the new procedures and had opportunities to receive feedback on their use, they successfully incorporated them within their ongoing classroom activities. Not only did the teachers consistently report satisfaction with the new procedures, but *the majority* of their students — high, average, and low achievers — benefited!

THEME #3: Steps must be taken *in light of* the complex realities of the general classroom setting to meet the needs of students with disabilities. Overwhelmingly, teachers voiced a strong desire to improve their skills so that they could more effectively teach academically diverse classes. However, the instructional procedures that were most eagerly embraced were those that could be readily incorporated into the ongoing "flow" of existing classroom routines *and* that were perceived as beneficial to all students in the classroom — not just a handful of students. Additionally, these procedures allowed teachers to respond to the prevailing pressures they were feeling such as:

- Pressure to cover large amounts of content required to meet the demands of the "Excellence in Education" movement;

- Pressure to raise the performance of students;

- Pressure to teach larger-sized classes;

- Pressure to prepare for multiple classes with little or no meaningful planning time during the school day; and

- Pressure to work with other teachers and staff with little time for collaboration.

With regard to these pressures, teachers seemed to be saying in a variety of ways: "My plate is already full; if I add anything else, the plate will overflow!" They also acknowledged the various "voices" that had a strong influence on their actions, including high-achieving students who often voice displeasure at instructional accommodations for the low achievers, *or* parents of nondisabled students who question the appropriateness of classroom modifications for students with disabilities for fear that such efforts would compromise the quality of their child's education, *or* fellow teachers who expressed displeasure about students who came to them not knowing "critical" elements of the curriculum because the previous year's teacher had tried to meet the needs of everybody in the class and, consequently, had not been able to cover as much content as necessary. In short, the magnitude of these pressures creates a significant backdrop of barriers against which the demands of inclusion must considered. The complex realities of the classroom affect the shape that strategies for inclusion can take.

THEME #4: Some of the students with mild disabilities did not benefit from the adjustments made in the general education classroom. While a majority of the students with disabilities benefited from the new instructional methods, a few students, across all projects, did not. The reasons why some of the students failed to benefit is unclear. However, some of the hunches posited by the researchers include: (a) the new instructional technique lacked sufficient power to impact the performance of certain students; (b) the classroom teacher had not been trained to individualize instruction sufficiently to match a given student's unique disability; (c) the classroom teacher simply ran out of time and had to move on to the next lesson before the last few students reached mastery; (d) the demands of the classroom were so overwhelming that the teacher overlooked the difficulties that the student(s) with disabilities was having and *assumed* that learning had occurred; or (e) the student was absent from class so much that learning was not possible.

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Some students do not benefit from the new procedures and need additional help.
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Regardless of the circumstance, the demanding dynamic of the general classroom often extracted a significant toll in energy and time from the teachers, leaving them stretched so thin that they could not make sufficient adjustments to ensure that *all* of the students met mastery. Thus, the story that emerged from the projects was one that finds classroom teachers exceedingly concerned about and desirous to use methods that can meet the needs of students who are struggling to meet the expectations placed upon them in the general education classroom.

Unfortunately, the presence of a significant set of barriers in the form of pressures from other students, parents, teachers, administrators, educational trends, and the curriculum all combine to create a very difficult environment within which to successfully meet the unique, and often severe, deficits presented by students with disabilities. Although new methods have been developed that help some of these students succeed in general education classes, there are still some students who continue to fail or experience no growth in their skills. The overwhelming consensus across all of the researchers engaged in the four projects was the following: In order for students with disabilities to be successfully included in the general education classroom, educators need to think in terms of "*supported* inclusion," not simply "inclusion."

Supported Inclusion — An Obvious Need

"Supported inclusion" refers to a set of instructional conditions in which classroom teachers:

- ▪ Are philosophically committed to meeting the needs of all students in the general education classroom, including those with mild disabilities;

- Have sufficient time to think about and plan for the diverse needs of students in their class(es);

- Incorporate teaching practices that enable them to better meet the needs of all students in their class(es);

- Collaboratively work with special education teachers to assess, teach, and monitor student progress;

- Have the option for their students to receive *short-term*, intensive instructional support from a special education teacher; and

- Have the option for their students to receive *sustained* instruction in basic skills or learning strategies that cannot be provided in the general education classroom.

In short, when educators adopt a position of "supported inclusion," they are philosophically committing to educating students as much as possible in the general education classroom. However, this posture requires that they carefully monitor the progress of students and, when continuing difficulties are noted, collaborate with each other to create a more effective instructional situation. Such collaboration includes the possibility of short-term or sustained instruction being offered as a support to general classroom activities. In essence, supported inclusion represents a plan through which instructional conditions can be altered to become more intense as the needs of students and classes require. Inclusion of students with disabilities in the general classroom is a responsible action when the existing instructional conditions result in all students in the class achieving mastery on targeted teaching objectives. When this does not occur, avenues for support must be made available so students and their teachers do not find themselves at a dead end.

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Supported Inclusion requires planning, use of validated practices, collaboration, and a willingness to provide intensive and sometimes sustained instruction to meet students' needs.

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An Overview

The two sections that follow present some of the key findings that emerged across the four projects. The intent here is not to discuss detailed procedures and findings (those are available in materials available from each of the projects) but rather to paint a "broad-stroke" picture of some of the exciting interventions that were validated through the projects as well as some of the realities challenging educators who must teach in the face of great academic diversity.

The first section briefly describes some of the planning interventions that were designed and studied through the four projects. The second section highlights a host of factors that were found to characterize the realities of the school culture within which teachers must labor. These contextual factors, in combination, profile the complexity of the task teachers and administrators face as they attempt to meet the needs of students with disabilities within the general education classroom while at the same time respond to the needs of all of their other students, as well as the broad array of external pressures that they constantly confront. Only by understanding and working consciously within this complex context can educators make any planning intervention successful.

To make best use of this booklet, read both sections and consider the information in light of your needs as a policymaker or educator. Request additional information from the research projects as required (see pp. 47-50 for addresses and phone numbers). If appropriate, obtain training for school personnel in the new methods from trainers associated with the research projects.

THE PLANNING INTERVENTIONS

A Context for Professional Growth and Change

The planning interventions developed through the four projects are varied and, in most cases, complex. Although they are based on important and familiar principles of learning and assessment, they include new practices and new ways of thinking for teachers. Thus, their implementation requires that teachers engage in professional growth and change. Researchers who took part in the four projects found that the following conditions needed to be present for teachers to successfully engage in this growth process and effectively use the interventions described in this section.

- **Ongoing administrative support at the district and school levels.** For the change process to work, administrators need to make available both the leadership and the resources (e.g., training time, materials, planning time) for the change process and spend time learning about the intervention and supporting its use.

- **Volunteer participation.** The change process clearly works best with individuals who volunteer to try out new methods rather than those who are required to do so. Initial participants can provide demonstrations for other teachers and administrators, who can then become the next group of volunteers, and so forth.

- **Participation of all teachers serving students targeted for inclusion.** Interventions related to including students in mainstream classroom environments work best when all the teachers involved with those students work together to create learning environments that support and encourage the learning of all students. Thus, as much as possible, teachers who provide special education services and general education teachers need to engage in the growth process together.

- **Commitment to a long-term learning process.** Teachers need time to learn new practices, plan for their use, apply them in their classes, and observe their effects in terms of student outcomes. Consequently, the professional growth process must be designed to allow for this time. Thus, regular inservice meetings must be scheduled across the year (and across several years, in some cases) in order to provide the necessary time for examining and possibly modifying personal beliefs, learning and reflecting about the new practices, and incorporating them into ongoing routines and practices.

- **Structured participation that enables teachers to collaborate.** The formation of cooperative/collaborative groups of teachers who can learn together over time is very helpful to the professional growth process. Teachers can help each other practice using a new intervention and provide feedback to each other, share stories of their successes and failures, provide ideas for new applications, and share problems and create solutions. In essence, they can provide a safe haven for each other that reduces the isolation of teaching and increases the probability of professional growth and success.

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The new planning interventions require that teachers engage in a process of professional growth and change.
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Several conditions must be present to facilitate this process.
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■ **License for refinement and modification.** Teachers need license to modify interventions to fit the needs of their students and the setting in which they teach within the framework of the absolute requirements of the intervention. In other words, they need to feel they have permission to work with the intervention and make it their own.

■ **Partnership between staff development personnel and educators.** Educators need to be acknowledged as experts, and the staff development process needs to be framed as a dialogue between staff development personnel who are familiar with the intervention and its associated requirements and the educators who are learning about and adapting it to meet their students' needs. Within such a framework, staff development becomes an interactive rather than a didactic process.

For the most part, these conditions were present when the planning interventions described in this section were adopted and successfully implemented across all four projects. The researchers consider their findings regarding these conditions to be as important as the interventions they have developed, for, without the presence of these conditions, few of the interventions would have been successful.

Some of the interventions described in this section were designed for and implemented with elementary students, others for secondary students. Some were developed to be used in conjunction with the instruction of reading, writing, and math; others were designed to be used in conjunction with instruction of the content subjects (e.g., science, history, geography). The interventions have been organized here in two groups. The first section, Redirecting Planning to Change Practice, focuses on helping teachers direct their planning processes toward meeting student learning needs. The second section, Redirecting Practice to Change Planning, focuses on engaging teachers in the use of new instructional methods, and, as a result, changing the ways they think about and plan for student learning. Regardless of their focus, all the planning interventions described here help teachers support the learning of *all* of their students while reducing the need to create separate plans and make separate accommodations for each student.

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These conditions are as critical to successful inclusion as the interventions themselves.

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Redirecting Planning to Change Practice

In order to ensure that *all* students within a diverse class of learners, and especially students with disabilities, benefit from instruction and master critical skills and content, planning has to be directed at meeting the needs of different kinds of learners. Since teachers in inclusive classrooms tend to center their planning on the content to be delivered and the classroom activities to take place, opposed to the needs of students, methods of redirecting their general planning processes seem necessary. Nine planning methods have been designed for that purpose. They are founded on the premise that teachers in inclusive classrooms need methods for focusing their planning processes on student needs as well as on the skills and content to be mastered and on the activities in which students will engage to learn the skills and content.

The first two methods described in this section, The Unit Planning Pyramid and the Lesson Planning Pyramid, involve the use of a mental template, a concrete planning sheet, and self-questioning procedures. Together, they form a package that teachers can use to help them plan units and lessons. These planning methods were originally developed at the middle-school level, but case studies have also been conducted at the elementary- and high-school levels.

Similarly, the next three methods, the Course Planning Routine, the Unit Planning Routine, and the Lesson Planning Routine, can also be used by teachers to plan their courses of instruction in subject-area classes. These planning routines involve proceeding through a sequence of steps whereby both student needs and the content to be delivered are considered. Again, the routines form a package that teachers can use in planning for inclusive instruction. Although the three routines were formally field-tested at the middle- and high-school levels, teachers of elementary-aged students also report success after using them.

Another method described in this section, the "Teacher as Composer" method, is a collaborative approach to planning instruction for elementary children involving members of a facilitation team and teachers. By progressing through a series of collaborative activities, teachers learn new ways to reflect on their planning and teaching.

The seventh planning method involves the use of thematic units and thinking frames to guide the planning of instruction. Here, teachers select a theme for their unit (such as "Making hard choices"). They also construct a visual device that depicts the thinking process associated with the theme or type of activity to be done and choose activities accordingly. This method has been used in elementary mainstream settings in association with literacy instruction.

The eighth method makes use of analogue experiences to guide teachers' thinking and planning processes. Here, teachers experience the same kind of task as they are being asked to plan for their students. Through this experience, they gain insights into the kinds of thinking required of their students and how they might best help their students. The method has been used with teachers of elementary children in relation to literacy instruction.

The final method described in this section is an approach for focusing teacher attention on particular students, called "Focal Students," while planning and teaching a lesson to the whole group. Although, as reported here, this method was used with teachers of elementary children, it was also used successfully in other projects with teachers of middle- and high-school students.

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Planning for inclusive classes has to be directed at meeting the needs of different kinds of learners.

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The Unit Planning Pyramid

What is it?

The Unit Planning Pyramid is a process teachers use to plan a unit of conter for their students in subject-area classes. It entails considering the content be taught by using a mental template or graphic device, called the Plannin Pyramid (see Figure 1), self-questioning techniques, and the completion of the Unit Planning Pyramid Form. This process is used to focus attention on what content will be learned by all students, what content will be learned by most students, what content will be learned by some students, and how that learning will directed.

What results can be expected?

Use of the Unit Planning Pyramid enables teachers to become more explicit about what they want students to learn and more proficient in planning units to promot learning for *all* students.

How is it used?

The Unit Planning Pyramid planning method involves the use of a graphic devic This device is designed to guide teachers' thinking and help them meet the challenge of content coverage in general education classes that include children with broad range of academic needs. The Pyramid is a way of considering what needs be taught so *all* students have the opportunity to learn. The Planning Pyramid is divided into three levels of learning. (See Figure 1.)
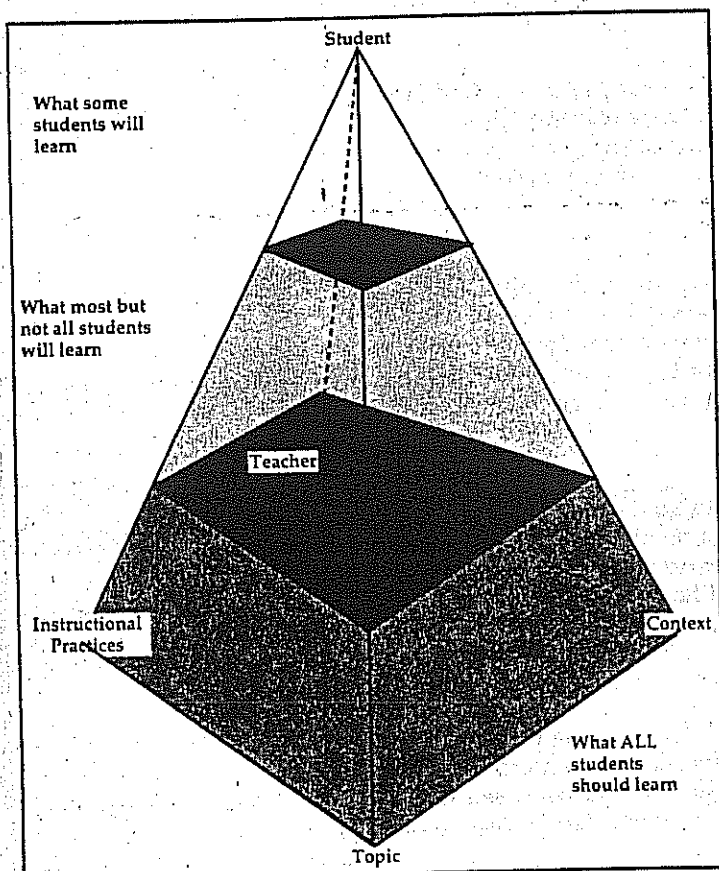
Figure 1: The Planning Pyramid

- The base or largest section of the Pyramid rep sents the most important concepts in a unit th teachers want youngsters to master. Informati at this level may be conceptually broader and more general than at succeeding levels. The guiding question that teachers must ask them selves related to the Pyramid's base is, "What I want ALL students to learn?"

- The next highest level of the Pyramid represe the level of information the teacher considers be next in importance for understanding the (tent/concepts of the unit. It can include addi tional facts, extensions of base concepts, relate concepts, and/or more complex concepts. The guiding question associated with this level is, "What do I want MOST students to learn?"

- The top level of the Pyramid represents infor tion considered by the teacher to be supplem tary. This information is more complex or detailed and will be mastered by the fewest number of students in the classroom. The gui ing question here is, "What information may SOME students learn?"

The following orienting questions can be used in a self-questioning process to guide teacher decision-making about what concepts to teach.

Questions pertaining to the topic:
- Is the material new or review?
- What prior knowledge do students have of this topic?
- How interesting is the topic to individual students?
- How many new concepts are introduced?
- How complex are the new concepts?
- How clearly are concepts presented in the textbook?
- How can I relate this material to previous instruction?
- When considering all topics I am responsible for covering this school year, how important is this topic in the overall curriculum?

Questions pertaining to the teacher:
- Have I taught this material before?
- What prior knowledge do I have of this topic?
- How interesting is the topic to me?
- How much time do I have to plan for the unit and individual lessons?
- What resources do I have available to me for this unit?

Questions pertaining to students:
- Will students' communication skills make comprehension of a particular concept difficult?
- Will students with reading difficulties be able to function independently while learning about the concept from text?
- Will a student with behavior or attention problems be able to concentrate on this material?
- Will there be students with high interest in or prior knowledge of this concept who would be anxious to explore the topic in greater breadth or depth or share their knowledge with classmates?
- Will my students have the vocabulary they need to understand this concept?
- What experiences have my students had that will relate to this concept?
- Is there some way to relate this concept to the cultural and linguistic backgrounds of my students?

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The teacher uses a self-questioning process to determine what concepts to teach.
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The Unit Planning Form (Figure 2) can be used by the teacher to record the target concepts to be learned within the unit. Space is also provided for recording plans for (a) instructional strategies and adaptations, (b) materials and resources, and (c) evaluation procedures and other products.

Figure 2: The Unit Planning Form

UNIT PLANNING FORM   Date: _____   Class Period: _____
Unit Title: _____
Materials/Resources:

What some students will learn.

What most students will learn.

What ALL students should learn.

Instructional Strategies/Adaptations:

Evaluation/Products:

The Lesson Planning Pyramid

What is it?

The Lesson Planning Pyramid is a planning process that entails reflecting on the content of the lesson to be taught. As with the Unit Planning Pyramid, teachers plan by using a mental template or graphic device, called the Planning Pyramid, self-questioning techniques, and a form, called the Lesson Planning Form. The main intent is to focus their attention on what content will be learned by all students (and what will be learned by most and some students) and how that learning will be directed.

What results can be expected?

Using the Lesson Planning Form (see Figure 3) enables teachers to become more explicit about what they want students to learn and more adept at planning lessons that promote learning for *all* students. Using this lesson-planning guide does not necessitate extensive paperwork and is compatible with many classroom teachers' existing planning routines.

How is it used?

The lesson planning process associated with the Lesson Planning Pyramid adds further details to what will be taught and how it will be taught by focusing on each lesson within a unit. To develop a lesson plan on the Lesson Planning Form, the following sequence is followed, and the following questions are asked:

The Lesson Planning Pyramid entails focusing on what lesson content will be learned by all, most, and some students.

- Identify concepts to be taught based on the Planning Pyramid device by asking, "What do I want all, most, and some of the students to learn as a result of this lesson?"

- Using the following questions, consider the "context" of instruction: the social aspects of the classroom, the way the classroom is organized for instruction, and the school-based factors that affect the classroom environment:

  - Are there any holidays or special events that are likely to distract students or alter instructional time?

  - How will the class size affect my teaching of this concept?

  - How well do my students work in small groups or pairs? Which students need to work together?

  - What resources do I have to teach this topic?

  - What methods will I use to motivate students and set a purpose for learning?

  - What grouping pattern is most appropriate?

  - What instructional strategies can I implement to promote learning for all students?

  - What instructional adaptations can I implement to assist individuals or subgroups of students?

Figure 3: The Lesson Planning Form

The Course Planning Routine

What is it?

The Course Planning Routine is a set of steps or activities that help teachers create a course for a diverse group of learners including students with disabilities, as well as high, average, and low achievers. The routine involves reflecting on the most important content of the course and on creating ways to launch the course, maintain course themes throughout the course, and close the course. It also involves creating a set of approximately 10 course questions to guide instruction and targeting particular students to guide teacher reflection and instructional decisions throughout the course.

What results can be expected?

When teachers used the Course Planning Routine, they spent considerably more time introducing major course ideas, concepts, themes, and routines to students than teachers who did not use the routine. In addition, they integrated an average of eight innovative instructional practices into their classroom routines on an ongoing basis whereas comparison teachers used an average of one innovative instructional practice. Students with disabilities enrolled in classes where teachers used the Course Planning Routine answered an average of three course questions correctly at the beginning of the course and eight course questions correctly at the end of the course. Students with disabilities in comparison classes answered an average of three course questions correctly at the beginning of the course and four questions correctly at the end of the course. While all students with learning disabilities in the experimental classes made gains, a few made minimal gains.

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The Course Planning Routine involves planning how a course for a diverse group of learners will be launched, maintained, and closed.
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How is it used?

Four stages are involved in implementing the Course Planning Routine:

■ **STAGE 1.** In this stage, the teacher begins using a planning process, called the ReflActive Planning Process, to plan the whole course of study. This process consists of six steps that guide teachers' thinking as they reflect on course concepts and outcomes and make decisions about the course throughout a course. The acronym "SMARTER" is used to help teachers remember the steps of the process. In this stage, the teacher completes the first four steps of the process. As the course proceeds, the remaining three steps are continuously recycled. The steps are as follows:

Figure 4: The first page of the Course Organizer

- **STAGE 4.** Teachers translate their course planning decisions into a plan which they use to "launch" the course.

- **STAGE 5.** Teachers maintain course decisions and themes by revisiting the course map, course concepts, and 10 questions at the beginning of each new unit.

- **STAGE 6.** Teachers close their courses by evaluating student answers to the 10 course questions, discussing the quality of the learning community with students, and completing course content synthesis activities.

What's important to know about it?

Working toward the goal of creating a connected community of learners was very important to teachers. They repeatedly used the "learning community" ideal to judge their progress and success. Creating and then revising the 10 course questions, creating course content maps, and selecting target students to guide their reflection were the components of course planning that teachers identified as different and useful in helping them become more learner sensitive.

The "mindset" teachers have about an overall course substantially affects how they respond to individuals with special needs in the context of the group when planning lessons and units. The use of the Course Planning Routine to create a classroom "learning community" and to focus on major course themes substantially affects lesson and unit planning, as well as the way teachers attend to the needs of individuals in the context of the group. Training and materials associated with the routine are available through a national network of trainers.

What research backs it up?

Research on the Course Planning Routine was conducted over a 2-year period with 16 teachers: (a) four teachers were studied in a descriptive manner, and did not participate in the intervention group; (b) four teachers were studied intensively, with each teacher selecting two additional teacher colleagues to participate in developing course plans; (c) these eight additional teachers were studied as well. Qualitative data were collected through observations, planning interviews, journals, group discussions, and interviews with selected students in classes of teachers listed in (a) and (b). In addition, quantitative data were collected through teacher observations, student questionnaires, student tests based on the 10 course questions, and student expectation surveys.

What additional information is available?

Lenz, K., Deshler, D., Schumaker, J., Bulgren, J., Kissam, B., Vance, M., Roth, J., & McKnight, M. (1993). *The Course Planning Routine: A guide for inclusive course planning* (Research Report). Lawrence: University of Kansas Center for Research on Learning.

Who can provide further information?

The University of Kansas Project.

> ★————————★
> *Use of the Course Planning Routine substantially affects how teachers attend to the needs of individuals.*
> ★————————★

The Unit Planning Routine

What is it?

The Unit Planning Routine is a set of steps or activities that a regular class teacher uses to create a unit of instruction for a diverse group of learners that includes students with disabilities. The routine is used within the context of a course that has been developed using the Course Planning Routin[e] It involves reflecting on the content of a unit and the important outcomes of the u[nit] as well as creating a graphic device to be presented to students as a "road map" fo[r] the unit.

What results can be expected?

After teachers have learned to use the routine, the way they present content to stu[-] dents changes such that they become explicit with students about (a) what is to be learned, (b) the relationships among chunks of content, and (c) the activities that will aid learning. Teachers frequently use teaching routines that enhance the learn[-] ing of all students in the class and emphasize strategies to learn the content. Con[-] sistent use of the Unit Planning Routine leads to substantial improvement in the understanding and retention of information by low-achieving students, students with learning disabilities, and average-achieving students as reflected in unit test scores and scores on unit content maps and explanations of those maps.

How is it used?

A unit of instruction was defined as any chunk of content distinguished from a p[re-] vious chunk of content through a closure activity (e.g., a test) or some kind of tra[nsi-] tion. To use the routine in planning a unit of content, teachers go through four pl[an-] ning stages.

■ **STAGE 1.** First, they use an adapted version of initial steps of the ReflActiv[e] Planning Process (called "SMARTER") to plan the unit. This involves Selecting critical content outcomes for the unit, Mapping the structure of th[e] important content of the unit, Analyzing why critical unit content might be difficult to learn, and Reaching decisions about content enhancement routi[nes] and devices to be used throughout the unit to aid students' understanding [and] retention of the information. As they teach the unit, teachers use the remai[ning] steps of the process by Teaching through explicit use of those routines and devices, Evaluating targeted students' mastery of the unit content, and Reevaluating planning and teaching decisions for future instruction.

■ **STAGE 2.** Here, decisions related to the unit are translated into a graphic device such as the Unit Organizer (see Figure 6). The Unit Organizer: (a) co[n-] tains a paraphrase of the unit topic, (b) shows how the unit relates to previ[ous] and future units, (c) depicts the organization of the unit in seven or fewer graphic parts, (d) shows the relationships among the parts, (e) provides la[bels] for the relationships, (f) depicts a timeline of activities and assignments for [the] unit, and (g) provides a space to record critical questions to be addressed d[ur-] ing the unit instruction.

■ **STAGE 3.** In this stage, teachers share the graphic device with the student[s] using an interactive process. Students create their own graphic organizer f[or] their notebooks, and students and teacher work together to generate a list [of] critical questions they want to be able to answer at the end of the unit.

What additional information is available?

Lenz, B.K. with Bulgren, J.A., Schumaker, J.B., Deshler, D.D., & Boudah, D. (1994). *The Unit Organizer Routine* (Instructor's manual). Lawrence, KS: Edge Enterprises, Inc.

Lenz, B.K., Schumaker, J.B., Deshler, D.D., Boudah, D.J., Vance, M., Kissam, B., Bulgren, J.A., & Roth, J. (1993). *The Unit Planning Routine: A guide for inclusive unit planning* (Research Report). Lawrence: University of Kansas Center for Research on Learning.

Who can provide further information?

The University of Kansas Project (See p. 48)

The Lesson Planning Routine

What is it?

The Lesson Planning Routine is a set of steps or activities that a regular class teacher uses to develop a lesson for a diverse group of learners, including students with disabilities. It is used within the context of a unit that has been developed using the Unit Planning Routine. The routine involves reflecting on the content and important outcomes of the lesson as well as creating a graphic device to be presented to students as a "road map" for the lesson.

What results can be expected?

When teachers have learned to use the Lesson Planning Routine, they become explicit with students with regard to (a) what the lesson is about, (b) what students are expected to do and accomplish during the lesson, (c) the relationship of the current lesson to the rest of the unit, (d) the content parts of the lesson and the relationships among those parts, and (e) any background knowledge or vocabulary that might be useful during the lesson. In addition, teachers' use of the routine increases the rate of attention they direct to individuals, particularly students with learning disabilities, as well as the integration of learning strategy instruction within the lesson. Finally, when teachers use the Lesson Planning Routine, the amount of content that the majority of students with learning disabilities retain from the lesson increases substantially.

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The Lesson Planning Routine involves reflecting on the content and outcomes of the lesson and creating a "road map" for the lesson.

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How is it used?

A lesson was defined as any chunk of content that is presented in one day; however, a lesson may be planned for several days. Usually, there are many lessons in a unit. In using the routine for a lesson, teachers follow these stages:

- **STAGE 1.** They Use the ReflActive Planning Process (called "SMARTER"). This involves applying the same ReflActive Planning Steps described for the Course and Unit Planning Routines with regard to a single lesson.

- **STAGE 2.** The decisions made are translated into a graphic device such as a Lesson Organizer (see Figure 7). The Lesson Organizer: (a) contains the lesson topic and a paraphrase of the lesson topic, (b) shows how the lesson fits within the unit content, (c) depicts the organization of the lesson in seven or fewer graphic parts, (d) shows the relationships among the parts, (e) provides labels for the relationships, (f) displays expectations and assignments for the students, (g) names the strategies students should apply during the lesson, and (h) provides a space for self-test questions to be addressed during the lesson.

Figure 7: The Lesson Organizer

■ STAGE 3. Teachers use an interactive process with students to present the graphic device. Students create their own graphic devices for their notebook (Along with the device created for the unit, these devices form a record of th whole unit.) Students and teachers also work together to make a list of critic questions they want to be able to answer at the end of the lesson.

■ STAGE 4. Teachers review the graphic device with students at the end of th lesson to show how far they have progressed, remind them of an assignmen or refer to a critical question that can now be answered. It might also be dis played to review for a test.

What's important to know about it?

Research data and teacher reports indicate that secondary teachers have very little time for lesson planning. As a result, lesson planning often takes place in "snatche of time" (e.g., while driving the car, taking a shower, or taking a walk). Thus, usin the ReflActive Planning Process for lesson planning does not make much sense to teachers if it is not presented within the context of using it for unit planning. Once teachers make the "big" decisions at the unit level, the "smaller decisions" at the lesson level fall into place easily. The Lesson Planning Routine tends to be used by teachers for a particularly difficult lesson or series of lessons. As with the Unit Planning Routine, teachers reported that they like having the freedom to use as much of the process as needed for a given lesson and a given group of students. Students with disabilities benefit from teacher use of the routine if they receive sp cial instruction on how to utilize the information. Training and materials associate with the routine are available through a national network of trainers.

What research backs it up?

Data on teacher use of the Lesson Planning Routine have been collected in three studies: a one-year study conducted in a middle school with six teachers; a one-ye study conducted in a high school with nine teachers; and the study conducted for the Unit Planning Routine. Qualitative data were collected through planning inte views, planning "think-aloud" sessions, and group discussions. Quantitative data were collected through teacher observations in class and student interviews. Multiple-probe designs (a variation of the multiple-baseline design) were used to evaluate teacher implementation of the routine as well as student retention of less content.

What additional information is available?

Lenz, B.K., Alley, G.R., & Schumaker, J.B. (1987). Activating the inactive learner: Advance organizers in the secondary classroom. *Learning Disability Quarterly,* 10(1), 53-67.

Lenz, B.K., Marrs, R., Schumaker, J.B., & Deshler, D.D. (1993). *The Lesson Organizer Routine* (Instructor's manual). Lawrence, KS: Edge Enterprises, Inc.

Lenz, B.K., Boudah, D.J., Schumaker, J.B., & Deshler, D.D. (1993). *The Lesson Plann Routine: A guide for inclusive lesson planning* (Research Report). Lawrence: University of Kansas Center for Research on Learning.

Who can provide further information?

The University of Kansas Project (See p. 48)

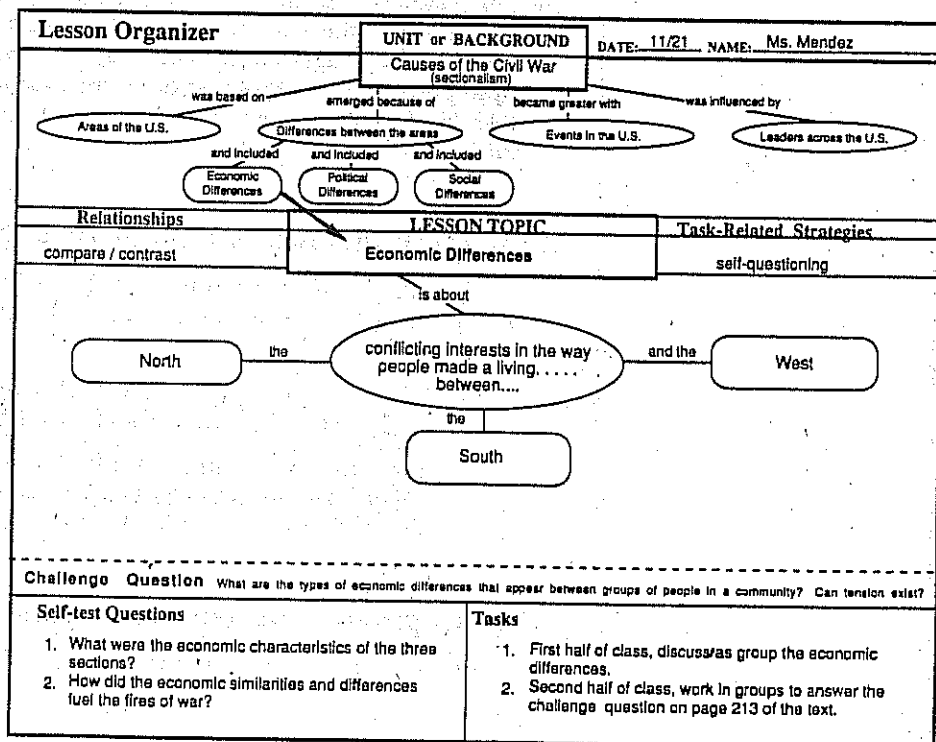★————————★
Once teachers make the "big" decisions at the unit level, the "smaller decisions" at the lesson level fall into place easily.
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Teacher as Composer Planning Process

What is it?

The Teacher as Composer Planning Process is a planning sequence that helps teachers understand the principles of active learning and apply them in planning for the instruction of diverse groups of students, including students with learning/language disabilities.

What results can be expected?

When teachers used the Teacher as Composer Planning Process over a two-year period, they:

- Exhibited increased understanding of active learning principles;

- Applied the principles appropriately in designing integrated reading/writing instruction that included students with learning disabilities along with other students in their classes;

- Interacted with students in ways that were more consistent with principles of active learning; and

- Expressed a commitment to integrate and refine their application of the principles in their future planning and instruction after observing the improvement in their students' writing and thinking.

How is it used?

This planning process is based on a "holistic" approach to developing children's reading and writing abilities; the approach is founded on the assumption that children are active meaning-makers. That is, they *produce* rather than reproduce knowledge. Such an approach is particularly important for students with language/learning disabilities, since their school experiences have, in some cases, overly emphasized the practice of discrete skills outside of the context of reading intellectually challenging literature and engaging in writing for a purpose. Like their more academically successful peers, students with language/learning difficulties require a meaningful context for learning essential and higher-level literacy skills.

Several principles are associated with the idea that children are active meaning-makers, including:

- Children can best engage in problem solving when carrying it out with others;

- Reading and writing activities need to be appropriately matched to students' levels of skill and understanding; and

- Ongoing assessment of writing, in particular, should focus on understanding and assisting students rather than on correcting and directing their writing.

To engage in the Teacher as Composer Planning Process and apply the above principles as well as others, teachers meet with planning facilitators during a series of

> ★───────★
> *The Teacher as Composer Planning Process is founded on the assumption that children are active meaning-makers.*
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three- to four-month planning cycles. During each cycle, teachers plan, teach, upon, and evaluate an integrated reading/writing unit. (A *unit* is a sequence lessons that are organized around compelling themes, varied literary genre, a some assignments that teachers from across several classrooms or schools ha designed together.) Each planning cycle includes the five phases below. Some es are carried out in cross-school workshops; others are completed in the teac own classrooms. The phases may occur more than once in a single planning (

■ (Workshop). Experience the thinking challenges of problem-centered ing/writing activities. Through challenging adult-learning activities pl: by the facilitators, teachers engage in some of the reading and writing (lenges that they will be carrying out with their students. For example, t might select a topic and write about themselves, draft a narrative and c it with another teacher, or build an interpretation of a piece of historica tion. By noticing and talking about their own reading and writing proc teachers are able to jointly construct a "thinking framework" that desc structural features of the kind of text they are reading or writing and th of thinking it stimulates.

■ (Workshop). Design variations of a common reading/writing sequent Collaboratively in the workshop, the teachers sketch out a sequence of ties that they will all carry out in their classrooms. They design several mon assignments that they will adapt for their own students, particula those with language/learning difficulties. These shared assignments at designed to stimulate the higher level thinking and writing processes t identified while reflecting on the adult-learning activity. Teachers also classroom assessment tools and techniques, including interview questi guidelines for analysis of students' written products.

■ (Classroom). Teach one or more lessons in the presence of an interes observer. Facilitators (or other teachers) observe the teachers working their students during "common" lessons and tape record conversation between teachers and students. The observers' job is to support the tea working with new approaches and gather observations of students wit language/learning difficulties that teachers can review in subsequent shops.

■ (Classroom). Assess students' learning and the success of teachers' f: tion. Teachers gather samples of students' ongoing work, from both no achieving students and students with language/learning difficulties. 1 informally interview students to further reveal students' reading and 1 difficulties and plan additional classroom-based support. Teachers alsc nize their own approaches to facilitating students' thinking, reading, a writing.

■ (Workshop). Share and analyze planning and teaching and revise in: tion. In one or more workshops during a planning cycle, teachers mee lyze the results created with their students, with a particular focus on with language/learning difficulties. They analyze students' papers for dence of the higher-order thinking processes identified in the first pha discuss teaching episodes selected for further analysis by teachers and observers together. Teachers compare the results of similar lessons in (classrooms, with different students. Through this joint reflection, teach expand their skills in facilitating challenging literacy instruction in aca ically diverse classrooms.

What's important to know about it?

The positive growth of all teachers who used this planning approach within the context of a research study suggests that it has strong potential. During workshops, the same active learning processes in which teachers need to engage their students were modeled and used with the teachers. Thus, the teachers not only attended to these principles as they were planning and teaching in their schools, they also experienced them in the workshops. Over time, teachers acquired a vocabulary for planning and discussing literacy experiences that engage students in high-level comprehension and composing processes. Further, they became more intentional and effective in applying those principles in adapting problem-centered reading/ writing activities for low-performing students.

What research backs it up?

A longitudinal case-study approach was used to evaluate changes in teacher mind-set. The case studies of 15 third- and fourth-grade teachers and specialists from three school districts conducted over a period of two years and four planning cycles included the collection of several kinds of qualitative and quantitative data: class-room observations; interviews with teachers during planning and following instruction; interviews with students; student work; and questionnaires related to teachers' planning.

What additional information is available?

Gordon, S., Howard, C., Riley, M.K., & Morocco, C.C. (1993). *Collaborative planning and assessment in the regular classroom: From slam dance to smooth waltz* (Technical Report). Newton, MA: Education Development Center, Inc.

Morocco, C.C., Riley, M.K., Gordon, S.M., & Howard, C. (in press). The elusive individual in teachers' planning. In G. Brannigan (Ed.), *The Enlightened Educator*. NY: McGraw-Hill.

Morocco, C.C., Riley, M.K., Gordon, S.M., & Howard, C., & Longo, A.M. (in press). Teachers as Composers: Professional development through collaborative planning. In M. Solomon, *Teaching for the new classroom: Constructivist approaches to staff development*. NY: Teachers College Press.

Who can provide further information?

The Education Development Center Project (See p. 47)
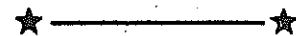
By using this planning process, teachers become more intentional and effective in applying principles to adapt activities for students.

Planning with Thematic Units and Thinking Frames

What is it?

With this planning method, a holistic context is built in classrooms for integrated reading and writing instruction through the use of thematic units. For each unit, a theme is selected, and a "thinking frame" is designed that depicts the types of thinking essential to the theme. The thinking frame, in turn, serves as a schema on which planning, teaching, and asses ment are based.

What results can be expected?

When teachers plan reading/writing units around provocative thinking challenge and integrate considerations about individual support in their planning and teach ing, student writing productivity increases, and instances of advanced thinking ar displayed.

How is it done?

To implement instruction within thematic units, teachers do the following:

- Select a theme for each unit (e.g., "Making hard choices") that is provocati and personally meaningful for students. The most powerful themes promol complex thinking, engage students in linking what they know with new info mation, and prompt them to use information and their imaginations to genei ate possible solutions to a challenging problem.

- Select high-quality literature. The most appropriate literature meets these c teria: (a) it reflects the chosen theme; (b) it provides the appropriate level of challenge for students; (c) it offers a richly detailed context for exploring the theme; and (d) it meets standards of "high quality" according to library and professional guidelines.

- Construct a thinking frame. A "thinking frame" is a schema of the kinds of thinking that are essential to the unit theme. To construct a thinking frame, teachers "disentangle" the major thinking process provoked by the organizir theme and the characteristics and structures of the "genre" or type of writin they hope their students will produce. They depict those processes with a w or other visual device. (See Figure 8 for an example thinking frame.)

- Base planning on the thinking frame. Here, teachers consider how they wil stimulate student thinking as depicted in the thinking frame. They anticipat the kinds of individual support particular students might need to be success ful, taking into account thinking challenges and students' background know edge, writing skills, and learning strengths. They also consider how they wil assess students' reading and writing.

- Conduct ongoing writing assessment. Teachers assess students' thinking b asking stimulating questions during read-aloud and composing sessions. These questions are formulated based on the thinking frame. In addition, teachers base their assessment of students' thinking expressed in their writte products on the ideas in the thinking frame.

★————————★

A thinking frame serves as a schema on which planning, teaching, and assessment are based.

★————————★

What's important to know about it?

This approach is consistent with the "constructivist" view that reading and writing require active creation of knowledge by the reader or writer. According to constructivist principles, the teacher's role is to create a classroom environment where students are encouraged to express their ideas, listen to each other, and elaborate their thinking. For teachers, the most challenging aspect of this approach was attending in such detail to the underlying "thinking structure" of activities; however, they found that the thinking frame gave them a concrete way to think about their students' needs. As a result of using the thinking frame, their conversations with students during composing sessions focused more on ideas and less on "feeding" students content. They became more aware of all the different ways in which writing could facilitate students' thinking about the theme — through description, argument, explanations, comparison of choices, etc. Finally, all teachers expressed amazement at the level of thinking that even their lowest achieving students were able to reveal through their writing.

EXPOSITORY WRITING THEME "REASON TO RIGHT – A REASON TO WRITE" MAKING HARD CHOICES – TAKING SIDES	
GENRE FEATURES	THINKING PROCESSES
Point of View	Perspective Taking
Explanation, Argument	Objective, Exocentric
Reasons, Facts, Details Circumstances	Causes Comparing, Weighing, Reflecting, Analyzing
Consequences	Effects Comparing, Weighing Reflecting, Analyzing
Values, Rules	Applying, Rejecting
Prediction	Hypothesizing, Inferencing
Resolution	Deciding, Judging
Clear, Cohesive, Audience Perspective	Interrelated, Logically Ordered

Figure 8: A Thinking Frame

What research backs it up?

Research on this planning approach focused on instruction during three reading/writing units that took place over a two- to three-month period. Teachers and specialists in seven classrooms were interviewed during their initial planning and just prior to instruction, and they were observed during instruction. Teachers predicted their students' level of productivity and evaluated the completed written products. Students were observed in the classroom during prewriting and writing activities, and drafts of their writing were collected. Pre- and post-unit writing samples of students with disabilities were gathered.

What additional information is available?

Riley, M.K., Morocco, C.C., Gordon, S.M., & Howard, C. (1993). Walking the talk: Putting constructivist thinking into practice in classrooms. *Educational Horizons*, 71(4), 187-196.

Riley, M.K., Morocco, C.C., Gordon, S.M., & Howard, C. (1993). *Using thinking frames to plan and assess writing* (Technical Report). Newton, MA: Education Development Center, Inc.

Who can provide further information?

The Education Development Center Project (See p. 47)

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Use of the thinking frame results in conversations between teacher and students based on ideas.
★————————★

Analogue Experiences

What are they?

Like most learners, teachers sometimes acquire new concepts best through direct experience. "Analogue experiences" are adult learning experiences th replicate the specific thinking and social demands students face in the class room. Such experiences are particularly valuable in the area of literacy instruction, since teachers have been found to require a deep and personal knowl edge of reading and writing processes in order to foster them successfully in their students.

What results can be expected?

When teachers themselves engage in literacy experiences and identify the specific thinking challenges implicit in them, they plan more intentionally to activate their students' higher level thinking. When analogue experiences become an ongoing part of teachers' experience, teachers are more aware of why students become ove whelmed or "turned off" to reading and writing. They are better able to anticipate the kinds of support they can provide for individual students. Their students com prehend and write more successfully because their higher level thinking has be come activated.

How are they used?

Analogue experiences can take varied forms: reading and writing in a certain genr assessment of memory and comprehension, different forms of conferencing, dis cussion, and role-playing. Embedded in these experiences are principles and con cepts concerning the genre requirements and thinking demands that can help teachers stimulate their students' higher level cognitive abilities. During and after analogue experiences, teachers can develop insight into challenges of literacy instruction through asking themselves questions like the following:

- **What kinds of thinking do I hope to activate in my students?** Before begin ning a writing unit with their students, teachers themselves read and write in the genre and identify the particular analytical skills and memory de mands this genre requires. For example, in personal narrative writing, these include selecting a brief but complete episode and retrieving vivid images that recreate personal emotional meaning. For expository writing, they can include focusing on decision-making, weighing consequences, and using critical details to build an argument. During these adult-learning experiences, facilitators model ways to build upon teachers' own thinking and ensure ownership in writing.

- **What kinds of activities will engage all students in higher level thinking?** Building on their own experiences with the genre, teachers consider how they can activate these same thinking processes in their students. To begin, they select children's literature that is highly relevant to their particular stu dents and that will enrich students' knowledge and stimulate ideas. Then teachers create ways to help students find a genuine purpose for writing about the story. For example, a teacher might create an activity where, at criti cal problem-solving moments in the story, the students become authors and generate their own predictions and write about alternative outcomes.

Analogue experiences are adult learning experiences that replicate student learning activities.

■ How can my interactions with students during writing encourage, rather than stifle, their thinking? Once teachers have participated in the analogue activity and experienced the facilitators' models, they can consider how to best interact with students as they engage in the planned activity. They can create analogue guidelines for themselves that will help them support students' higher level thinking in an appropriate written product. The analogue experience provides models for how to talk with students and ask questions that follow or search for the child's "lead" and ensure the child's ownership in his/her writing. A comment such as, "I'm interested in hearing more about ... ," builds on the students' own thinking and encourages elaboration. Interactions are guided by the teacher's awareness of the kinds of thinking and the components of the genre that will support the students' writing.

What's important to know about them?

Analogue experiences are most effective if they take place with a group of teachers who are sharing in planning and reflecting on literacy learning in their classrooms. Such a group needs to have time to become immersed in the experience, talk with one another, and carefully map the specific thinking challenges across the adult and child reading/writing lessons. When they truly affect teachers' planning and teaching, analogue experiences are also characterized by the following features:

■ They are carefully designed to focus on the literacy concepts that are most relevant to teachers at a particular time;

■ They use adult material of high quality;

■ They create an atmosphere of safety and collegiality;

■ They are facilitated by an experienced professional, since teachers may not be accustomed to using introspection as a planning tool;

■ They provide teachers with sufficient time for genuine personal reflection; and

■ They provide sufficient time for teachers to plan the specific classroom assignment which this adult experience was designed to replicate.

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Analogue experiences are most effective if they take place with a group of teachers.
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What research backs them up?

Over the course of two years, seven teachers and six specialists participated in seven workshops that included analogue experiences. Qualitative data on the implementation of these activities and the participants' responses to them were gathered by an outside observer. Qualitative data on classroom implementation were obtained through periodic classroom observation and through teacher and specialist interviews regarding their planning and instruction. Students were observed during the prewriting and writing activities. Their written products were obtained, and focal students were interviewed.

What additional information is available?

Riley, M.K., Morocco, C.C., Gordon, S.M., & Howard, C. (1993). Walking the talk:. Putting constructivist thinking into practice in classrooms. *Educational Horizons,* 71(4), 187-196.

Who can provide additional information?

The Education Development Center Project (See p. 47)

Planning Around Focal Students

What is it?

This planning process involves teacher selection of two or three students functioning at high and low achievement levels and focusing on those students while planning and delivering instruction.

What results can be expected?

When teachers consistently focus in depth on two or three students of high and l achievement levels throughout their planning and teaching of a literacy unit and make and test conjectures about how these students will react to the activities planned, they:

- Increase their knowledge of individual needs of particular students;

- Adapt their curriculum and instruction to address those needs; and

- Integrate more specific literacy objectives and individual support in their pl ning.

In other words, closely attending to the needs and progress of selected high- and low-achieving "focal students" at every stage of planning and teaching can help teachers bring an "individual student perspective" into their planning and teachi process.

How is it used?

Teachers engage in this planning process through the following activities:

- They select one low-achieving student, often with learning disabilities speci to reading and writing, and one student with high reading and writing abili ties;

- They identify a theme for a reading-writing unit that broadly appeals to the class, including the two focal students;

- They bear both students' needs and abilities in mind when selecting literatu and developing the assignment and the specific writing activities related to theme; and

- They conjecture about the background information and reading and writing support the focal students will need in order to engage fully in the reading and writing processes and participate in thoughtful class discussions. These conjectures focus on the kinds of facilitation that best engage these students higher-level reading and writing processes. Some of the conjectures need to about the class as a whole (e.g., "If students draw a map of the Dakota terri ry, they'll follow the events better."). Others need to focus on the focal stude with learning difficulties (e.g., "Kevin has a great deal of difficulty focusing during reading. If I have all the students write a brief journal entry about th story each day, he is more likely to absorb the content and contribute his ide to the discussion."). Still others need to be about the high-achieving studen (e.g., "John will be far ahead with his reading; he will extend his knowledge he researches and designs the costumes for the story dramatization.").

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This planning process involves selecting one low-achieving and one high-achieving student on whom to focus while planning and delivering instruction.

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■ Teachers test and revise these conjectures in their "interactive planning," as they observe and interview individual students during the lesson, and as they review students' written products. They also assess whether the kinds of stimulation and support that have been provided for the focal students are helpful to other students as well.

This process leads teachers to make subtle or even dramatic shifts in their support for the students, resulting in more tenacious student interest in their writing, and thus more complex writing. The focus of their interactions with students shifts from "correcting" students' reading and writing, to hearing and stimulating students' ideas and promoting students' ownership of their own writing. The students write more and reveal higher-level thinking abilities that often surprise their teachers.

What's important to know about it?

If classroom teachers are to improve the reading and writing abilities of all their students, they need to be aware of the students' specific cognitive strengths and needs. Unfortunately, teachers find that getting to know individual students well is a daunting task because of class size and the diversity of literacy, learning, and cultural experiences students bring to the classroom. This planning process gives teachers a practical method for focusing on student strengths and needs that benefits all students in the class without having to plan for each individual in the class.

Although teachers can use this planning approach individually, it is most effective when they plan a unit together and each reflects on his or her own focal students while planning and implementing the unit. In this manner, teachers are able to share ideas about what facilitates the learning of students with different learning needs. School administrators can encourage this kind of planning by creating and protecting common planning times for teachers and specialists. Further, they can provide a facilitator, from inside or outside the school, over the first few planning cycles to guide teachers in the new kinds of thinking required.

What research backs it up?

During a two-year intervention period, data were gathered from seven teachers and seven specialists about their planning and instruction for selected students with special needs. Data included verbatim transcripts of group planning, classroom observations, interviews with students, students' written work, interviews with teachers and specialists, and periodic reviews written by participants about their knowledge of their focal students.

What additional information is available?

Morocco, C.C., Riley, M.K., Gordon, S.M., & Howard, C. (1993). *Including students with special needs in constructivist classrooms: What can we learn from teachers?* (Technical Report). Newton, MA: Education Development Center, Inc.

Who can provide further information?

The Education Development Center Project (See p. 47)

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This planning process leads teachers to make subtle or even dramatic shifts in their support for students.
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Redirecting Practice to Change Planning

Other methods of helping teachers redirect the planning process created by the four planning projects involve asking teachers to use new instructional methods to teach skills, content, and strategies. Since teachers in inclusive classrooms tend to center their planning on what content is to be delivered and what activities are to take place, as opposed to the instructional methods to be used and the outcomes to be achieved, such methods seemed essential. Four instructional methods were tested as ways to help teachers redirect their thinking. Use of each of these methods by teachers changed the ways they plan for student learning in their classes.

The first two methods described in this section combine Curriculum-Based Measurement and Classwide Peer Tutoring to achieve specific outcomes in the areas of math and reading skills. In both methods, students work in pairs to learn basic skills. Weekly assessments are used to pair students, assign activities, and chart progress. These methods were tested in elementary mainstream settings.

The third method involves the use of Content Enhancement Routines to teach subject-matter content. These routines involve a set of procedures that teachers use to deliver subject-matter information to their students in such a way as to enhance student understanding and memory of the content. The routines have been field-tested primarily in middle- and secondary-school classes.

The last method described in this section is Learning Strategy Instruction. This instructional method focuses on teaching students how to learn. The desired outcome is students who can use strategic processes in relation to assigned academic tasks. Strategy instruction has been field-tested in elementary-, middle-, and secondary-school classes.

Curriculum-Based Measurement Combined with Classwide Peer-Mediated Instruction for Math

What is it?

This instructional method involves restructuring the classroom setting so that pairs of students work together on math activities. Student pairings and math activities are based on weekly computer-managed math assessment. Adaptations are implemented by teachers and student pairs according to student needs.

What results can be expected?

The program: (a) enhanced teacher planning by helping teachers differentiate their instruction and be more responsive to individual needs; (b) produced large, dramatic, and statistically significant gains in math achievement compared to contrast groups for students with learning disabilities, students with chronically low mathematics achievement, students with average mathematics achievement, and students with high achievement; and (c) was popular with regular educators and students.

How is it used?

To combine Curriculum-Based Measurement and Classwide Peer-Mediated Instruction, regular teachers do the following with all students in their math classes:

- Conduct weekly, computer-managed assessments, each of which samples the material to be covered over the year.

- Provide biweekly feedback to students about overall progress and specific skill mastery, and they have students set personal learning goals for the upcoming two-week period.

- Use the results of the weekly assessments to determine the focus for large- and small-group instruction, to set up individually tailored computer-assisted instruction sessions, and to specify the content and pairings for classwide peer-tutoring sessions.

- Conduct classwide peer-mediated instruction twice weekly with each session lasting 25 minutes.

- Build instructional adaptations into the classwide peer-mediated instruction sessions using the weekly assessment information by: (a) having student pairs work on different components of the curriculum; (b) having student pairs use different instructional techniques in their sessions; and (c) circulating among the pairs to provide on-the-spot individual tutorials.

What's important to know about it?

Effective implementation of combined Curriculum-Based Measurement and Classwide Peer-Mediated Instruction requires participation in a full-day workshop in which teachers learn basic concepts and rehearse and role-play the interactive

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This instructional method involves weekly math assessments, biweekly feedback, large- and small-group instruction, and peer-mediated instruction in math skills.

★————————★

methods students employ in peer-tutoring sessions. Training manuals are available which provide scripted lessons that teachers can use to train their students in taking the Curriculum-Based Measurement Assessments, learning to understand the bi-weekly feedback, and working effectively in pairs. Software to support the use of curriculum-based measurement is available through PRO-Ed, Austin, TX. The amounts and types of adaptation that teachers introduce within the Classwide Peer-Mediated Instruction sessions, especially regarding on-the-spot tutorials and alternative instructional strategies, vary considerably and are related to teacher characteristics.

What research backs it up?

Efficacy studies were conducted across two successive years in general education classes where students with learning disabilities were enrolled for daily math instruction. Efficacy studies rely on experimental designs, involving random assignment to experimental and contrast treatments. These studies have incorporated more than 150 teachers and 3500 students. Each study documents impressive, statistically significant outcomes.

What additional information is available?

Fuchs, L.S., Fuchs, D., Hamlett, C.L., Phillips, N.B., & Bentz, J. (1994). Classwide curriculum-based measurement: Helping general educators meet the challenge of student diversity. *Exceptional Children, 60,* 518-537.

Fuchs, L.S., Hamlett, C.L., & Fuchs, D. (1990). *Monitoring basic skills progress: Basic math* (Computer program). Austin, TX: Pro-Ed.

Fuchs, L.S., Fuchs, D., Karns, K., & Phillips, N.B. (1995). *Peer-assisted learning strategies in math: A manual.* (Available from L.S. Fuchs, Box 328 Peabody, Vanderbilt University, Nashville, TN 37203)

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Fuchs, L.S., Fuchs, D., Bentz, J., Phillips, N.B., & Hamlett, C.L., (1994). The nature of student interactions during peer tutoring with and without training and experience. *American Educational Research Journal, 31,* 75-103.

Phillips, N.B., Hamlett, C.L., Fuchs, L.S., & Fuchs, D. (1993). Combining curriculum-based measurement and peer tutoring to help general educators provide adaptive education. *Learning Disabilities Research and Practice, 1,* 148-156.

Fuchs, L.S., Fuchs, D., Phillips, N.B., Hamlett, C.L., & Karns, K. (in press). Acquisition and transfer effects of classwide peer-assisted learning strategies for students with varying learning histories. *School Psychology Review.*

Who can provide further information?

Teachers build adaptations into the peer-mediated instruction based on the weekly assessments.

Curriculum-Based Measurement Combined with Classwide Peer-Mediated Instruction for Reading

What is it?

This instructional method involves restructuring the classroom so that pairs of students work together on reading activities. Student pairings and reading activities are based on weekly computer-managed reading assessment. Adaptations are implemented by teachers and student pairs according to student needs.

What results can be expected?

The program: (a) enhanced teacher planning by helping teachers differentiate their instruction and be more responsive to individual needs; (b) produced large, dramatic, and strategically significant gains in reading achievement compared to contrast groups for students with learning disabilities, students with chronically low reading achievement, and students with average and above-average reading achievement; and (c) was popular with general educators and students.

How is it used?

To combine Curriculum-Based Measurement and Classwide Peer-Mediated Instruction, regular teachers do the following with all students in their reading classes:

- Conduct weekly, computer-managed assessments, each of which requires an integrated reading performance on grade-level material.

- Provide weekly feedback to students about their overall progress in reading, and they have students set personal learning goals for the upcoming week.

- Use the results of the weekly assessments to specify the content and pairings for classwide peer-tutoring sessions.

- Conduct Classwide Peer-Mediated Instruction three times weekly, with students paired to work simultaneously. Each session, which lasts 35 minutes, includes three activities: (a) Partner Reading, in which students take turns reading text aloud, correcting errors, and retelling what they read; (b) Paragraph Shrinking, in which students take turns reading paragraphs aloud, correcting errors, and stating the main idea of each paragraph in 10 or fewer words; and (c) Prediction Relay, in which students take turns predicting what will happen on the next page of a story, reading the page aloud, correcting errors, verifying predictions, summarizing the text, and continuing to make predictions.

- Build instructional adaptations into the classwide peer-mediated instruction lessons using the weekly assessment information by: (a) having student pairs read different materials, representing different genres and levels of difficulty; (b) having student pairs use different instructional techniques in their sessions; and (c) circulating among the pairs to provide on-the-spot individual tutorials.

★——————★
During peer-mediated instruction, students engage in three activities: Partner Reading, Paragraph Shrinking, and Prediction Relay.
★——————★

What's important to know about it?

Effective implementation of combined Curriculum-Based Measurement and Class-wide Peer-Mediated Instruction requires a full-day workshop in which teachers learn basic concepts and rehearse and role-play the interactive methods students employ in peer-tutoring sessions. Training manuals are available which provide scripted lessons that teachers can use to train their students to take the Curriculum-Based Measurement Assessments, to understand the biweekly feedback, and work effectively in pairs. Software to support use of curriculum-based measurement is available through PRO-Ed, Austin, TX. The amounts and types of adaptation that teachers introduce within the Classwide Peer-Mediated Instruction sessions, especially regarding on-the-spot tutorials and alternative instructional strategies, vary considerably and are related to teacher characteristics.

What research backs it up?

Efficacy studies were conducted across two successive years in general education classes in which students with learning disabilities were enrolled for daily reading instruction. Efficacy studies rely on experimental designs, involving random assignment to experimental and contrast treatments. These studies have incorporated more that 150 teachers and 3500 students. Each study documents impressive, statistically significant outcomes.

The amounts and types of adaptation created by teachers vary considerably and are related to teacher characteristics.

What additional information is available?

Fuchs, D., Mathes, P., & Fuchs, L.S. (1995). *Peer-assisted learning strategies in reading: A manual.* (Available from D. Fuchs, Box 328 Peabody, Vanderbilt University, Nashville, TN 37203)

Fuchs, L.S., Fuchs, D., Bentz, J., Phillips, N.B., & Hamlett, C.L. (1994). The nature of student interactions during peer tutoring with and without training and experience. *American Educational Research Journal, 31,* 75-103.

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Mathes, P.G., Fuchs, D., Fuchs, L.S., Henley, A.M., & Sanders, A. (1994). Increasing strategic reading practice with Peabody Classwide Peer Tutoring. *Learning Disabilities Research and Practice, 9*(1), 44-48.

Simmons, D., Fuchs, D., Fuchs, L.S., Pate, J., & Mathes, P. (1994). Importance of instructional complexity and role reciprocity to classwide peer tutoring. *Learning Disabilities Research and Practice, 9,* 203-212.

Fuchs, D., Fuchs, L.S., & Mathes, P. (1993). *Peer-mediated learning strategies: Effects on learners at different points on the reading achievement continuum.* Paper presented at the annual meeting of the American Educational Research Association, Atlanta.

Fuchs, D., Fuchs, L.S., & Mathes, P. (in press). *Integrating ongoing assessment and peer-mediated instruction to increase general education efficacy in reading.* Manuscript submitted for publication.

Who can provide further information?

The Vanderbilt University Project (See p. 50)

Content Enhancement Routines

What are they?

Content Enhancement Routines are sets of teaching behaviors specially designed to help teachers enhance their delivery of information in subject-area courses to diverse groups of learners in an effort to improve student understanding and recall of that information. Each routine focuses on an important aspect of the teaching process. For example, some routines focus on understanding information related to major concepts; others focus on mastery of information. An example of a routine is the Concept Mastery Routine, used by teachers to help students understand a major concept such as "democracy" or "mammal." Through an interactive process between teacher and students, characteristics of the concept that are always, sometimes, and never present in the concept are identified along with examples and nonexamples of the concept that relate to these characteristics.

What results can be expected?

When content teachers select and use specific Content Enhancement Routines, the result is improved mastery of information by a large majority of students with disabilities as well as other students in the class. Further, the majority of students who were previously failing tests can earn passing grades when a Content Enhancement Routine is used. Additionally, the process of planning and implementing the routines increases teacher attention with regard to desired outcomes and aspects of the content that make learning difficult for students. Involving students in partnership in constructing meaning increases teacher awareness that students have not mastered learning strategies that might help them learn information. Teachers and students endorse the routines as acceptable and helpful.

How are they used?

In order to implement one of the Content Enhancement Routines, teachers do the following:

- Identify a specific outcome for the instruction. Teachers select an important outcome or set of outcomes for a unit of instruction. For example, they specify that students will understand a major concept like "democracy."

- Choose the most appropriate routine. Teachers choose a routine that fits the outcome that has been selected. For example, they choose to use the Concept Mastery Routine.

- Prepare the instructional device. Each routine has an instructional device (e.g., a graphic chart) associated with it. To prepare this device, teachers sort and transform the information to be presented into a "learner-friendly" form. For example, they construct a draft of the Concept Diagram to be co-constructed with students in class.

- Prepare the students. Prior to presenting the instructional device for the first time, teachers explain it to the students, describe how it will be used in the class, and specify what students will be expected to do during and after its presentation.

- Present the instructional device. Each time teachers use the instructional device in class, they follow a three-phase sequence. First, they CUE students

Content Enhancement Routines are used by teachers to enhance their delivery of content and improve the understanding and recall of students.

that the device will be presented and explain what is expected. Second, they DO the presentation in partnership with students by involving students in the construction of the instructional device. Third, they REVIEW how the device was used, what has been learned, and where the information might be applied.

What's important to know about them?

Teachers can learn to prepare for and deliver each of the routines in a two- to three-hour workshop where they have opportunities to prepare instructional devices associated with their own content and practice using the routine. Teachers' facility with each routine is enhanced if they can work collaboratively on a regular basis with other teachers who teach the same subject matter. Training and materials associated with the routines are available through a national network of trainers.

What research backs them up?

Ten research studies have been conducted in mainstream science and social studies classrooms in middle schools, junior-high schools and high schools. Multiple baseline and comparison group designs have been employed. Quantitative data on teacher and student performance and qualitative data on teacher implementation of the routines have been collected.

What additional information is available?

Bulgren, J.A., Deshler, D.D., & Schumaker, J.B. (1993). *The Concept Anchoring Routine* (Instructor's manual). Lawrence, KS: Edge Enterprises, Inc.

Bulgren, J.A., Schumaker, J.B., & Deshler, D.D. (1994). *The Concept Mastery Routine* (Instructor's manual). Lawrence, KS: Edge Enterprises, Inc.

Lenz, B.K., Bulgren, J.A., Deshler, D.D., & Schumaker, J.B. (1993). *The effects of Content Enhancement Routines on secondary teacher planning* (Research Report). Lawrence, KS: University of Kansas Center for Research on Learning.

Schumaker, J.B., Deshler, D.D., & McKnight, P.C. (1991). Teaching routines for content areas at the secondary level. In G. Stover, M.R. Shinn, & H.M. Walker (Eds.), *Interventions for achievement and behavior problems* (pp. 473-494). Washington, DC: National Association of School Psychologists.

Who can provide further information?

Teachers' facility with the routines is enhanced if they can work collaboratively with other teachers on the same subject matter.

Learning Strategy Instruction

What is it?

Learning strategy instruction is instruction in how to learn and perform in learning settings. A learning strategy is a person's approach to a learning task, including how the person prepares for, executes, and evaluates performance on a learning task and its outcomes. Some of the learning strategies that were taught were paraphrasing, reviewing unit information for a test, and test-taking. The paraphrasing strategy was a strategy which teachers taught students so that they could participate in class discussions by rephrasing information, summarizing information through the use of main ideas and details, and elaborating on information through the use of background knowledge.

What results can be expected?

When regular teachers plan for and teach learning strategies in conjunction with their subject matter, they become more sensitive to the learning needs of students. As a result, they spend more time planning how to promote "learning how to learn," teaching students specific learning strategies relevant to their content area, and providing activities where students can directly use the strategies to learn the content. While instruction in the learning strategies in the general education classroom alone is not intensive and extensive enough for students with learning disabilities to master the strategies, when support teachers are available to provide additional explanation, modeling, practice, and feedback, significant gains are rapidly seen in student performance. Therefore, students benefit when both the general educator and a support teacher jointly plan for strategy instruction for the whole class and for individual support.

How is it used?

Regular teachers integrate learning strategy instruction into their subject-matter instruction using the following methods:

- **Select a strategy.** Teachers select a strategy that matches the goals associated with the course of study and the nature of the subject matter. For example, they choose to teach the paraphrasing strategy if they have frequent class discussions.

- **Describe and model the strategy.** Teachers describe and model the learning strategy for their students. Specifically, they explain how the strategy will help students learn the subject matter associated with the course and how students are to think and act when using the strategy in class. For example, they explain and model how students are to listen actively to the discussion, ask themselves questions about the information, rephrase the information in their own words, summarize the information using main ideas and details, and elaborate on the information by tying it to their prior knowledge.

- **Provide opportunities for application of the strategy.** Teachers structure their class activities so that students have numerous opportunities to practice using the strategy with course content. They cue students to use the strategy and provide opportunities to discuss how the strategy is connected to performance outcomes. For example, during each classroom discussion, the teacher prompts students to rephrase information, summarize it, and elaborate on it.

A learning strategy is a person's approach to a learning task, including how the person prepares for, executes, and evaluates performance on a learning task and its outcomes.

- Provide feedback on strategy performance. Teachers give students information on how they are performing the strategy and make suggestions on how students can improve their performance. Students who are not mastering the strategy receive individual instruction by the general education teacher or a special education teacher.

- Provide opportunities for students to generalize their use of the strategy. Teachers structure assignments so that students can use the strategy in a variety of ways. For example, they create a reading assignment where students need to read a passage and then paraphrase to a partner what the passage is about, or they develop an assignment to create a research report where students need to access resources and paraphrase the information onto note cards before writing it into a report.

What's important to know about it?

Integrating learning strategy instruction with subject-matter instruction requires the sacrifice of some content-based instruction. Most general education teachers favor teaching only one learning strategy in a course, and they like to use the instruction as a coursewide theme. Usually, teachers introduce the strategy in one or two class periods at the beginning of the course, followed by practice throughout the remainder of the course at appropriate times related to how the strategy corresponds to the task at hand. Teachers need about two to three hours of instruction to implement instruction in one strategy. Opportunities for teachers to discuss strategy implementation over the course of the year dramatically increase the quality of instruction and their commitment to teaching the strategy to students. Teachers who discuss strategies regularly with students, prompt students to use specific strategies in content-area assignments, accomodate students who have not met mastery through individualized instruction, and represent student progress in learning the strategies as part of grades are more effective in teaching learning strategies in their courses than teachers who do not. Training and materials associated with strategy instruction are available through a national network of trainers.

> *Some students require individualized instruction to reach mastery with regard to using a strategy generatively.*

What research backs it up?

A series of studies were conducted related to a variety of social studies and science courses. Each study targeted one strategy. Comparison-group designs were employed. Student use of the strategy was measured in all studies. In some studies, learning outcomes were measured as well.

What additional information is available?

Deshler, D.D., & Schumaker, J.B. (1993). Strategy mastery by at-risk students: Not a simple matter. *The Elementary School Journal, 94*(2), 153–167.

Schumaker, J.B., & Deshler, D.D. (1992). Validation of learning strategy interventions for students with LD: Results of a programmatic research effort. In Bernice Y.L. Wong (Ed.), *Contemporary intervention research in learning disabilities: An international perspective* (pp. 22–46). New York: Springer-Verlag.

Who can provide further information?

The University of Kansas Project (See p. 48).

PLANNING REALITIES

Ways the School Culture Affects Teachers' Planning

The ways teachers plan for the diversity of their classes and utilize the planning interventions just described are affected by many factors. Their work is influenced by the ways schools are organized and managed. It is affected by the intentional and unintentional philosophy and tone that emerge as the school learning community evolves in its cycling of learners, teachers, and administrators. It is also affected by the expectations and mandates not only of students, parents, colleagues, administrators, support systems, and the greater civic community, but also by the publishers of curricula and professional organizations. Finally, teacher's work, maybe more than we would like to admit, is affected by the needs of the cooks, bus drivers, and custodians of the school campus. These and other factors add up to create a school culture that affects what a teacher can do in the classroom.

A description of some of these critical conditions can help us explain and appreciate why teachers approach planning in the ways many of them do. This section identifies some areas, organized by questions teachers seem to be asking themselves and each other, that appear to affect general planning, planning for academic diversity within a group, planning for students with disabilities, and teachers' abilities to carry out their plans in the classroom.

Is Anyone Out There?

- **Teachers are expected to work alone.** General education teachers are often on their own in planning for and instructing students with disabilities. Textbooks and curriculum guides provide few suggestions for instructional adaptations for children with disabilities. Although teachers state that they value input from special education teachers and other general educators, they rarely have an opportunity to grapple with instructional issues with their colleagues.

- **Support rarely focuses on what can be done in the classroom.** When administrators schedule professional development opportunities or, in rare cases, provide for planning time beyond the school day to support the incorporation of different techniques into the classroom, most of them think that they are providing teachers with the support they need. Many teachers, however, do not interpret these activities as "support." Instead, teachers appear to view these activities as taking up their time and adding to their responsibilities, especially when previously accepted responsibilities, tasks, and expectations are not simultaneously altered or dropped.

- **Teachers fear that inclusive education may not be valued.** Those teachers who make changes in how they teach to ensure more effective inclusive teaching are often not reinforced for the risk-taking involved in abandoning traditional practices, and they do not feel that their efforts are valued by administrators. Further, teachers are concerned that some school and community leaders will claim that they are not meeting the needs of students judged to be average and high-achieving. In short, teachers often feel abandoned by key leaders and traditional sources of support when they take risks to help students with disabilities.

Many factors work in combination to create a school culture that affects the work of teachers in their classrooms.

What should I teach? How fast can I teach it?

■ **Teachers struggle with the expectation to "cover the curriculum."** Teachers are driven by the expectation that the material related to curriculum objectives (as specified at the school, district, or state level) needs to be "covered" during a specified period of time. Underlying this principle is the notion that particular objectives and material are slotted for each grade level and that if the specified content is not covered, the result is serious negative consequences for both the student and the teacher.

■ **Teachers know that "covering" and "teaching" the curriculum are not the same.** While teachers express little enthusiasm for the "coverage" approach to education, they do not feel they have much choice, given the demands placed on them by the school culture. Teachers feel that they must move from lesson to lesson and from unit to unit at a steady pace even though some students do not learn the material at all. Thus, teachers report that students with learning difficulties often do not learn the content that is critical because they have to move the entire class along.

When will I plan?

■ **Most of the planning time made available to teachers is not quality planning time.** The time formally scheduled for teachers to plan instruction during the school day is, out of necessity, primarily used for administrative tasks that are not directly related to instructional planning. For example, one teacher stated: "The school schedule *labels* it a planning period, but it is really a period to administrate your day. I answer and send messages, phone parents, stand in line at the copy machine, go to the restroom, and try to think about what I need to do to compensate for all the planning that I didn't get done. So, how do you think I feel when I am accused of not doing enough planning for some kids? It tears me up."

■ **Planning for academic diversity requires quality planning time.** While there is insufficient time in the daily school schedule for most planning, many teachers recognize that deeper more substantial planning is necessary. The thoughtful planning that is required to teach effectively seems to be an ongoing process. Thus , it continues in teachers' minds at those times that allow for "mental drift" such as driving to work, viewing an exhibit in a museum, attending a church service, taking a shower, taking a walk, or taking a summer vacation.

■ **Planning for academic diversity is rarely recorded in "planning books."** Teachers report that the impromptu mental planning for daily instruction is rarely recorded in their "planning books," and it rarely takes place during the scheduled planning period in the school day. Unfortunately, because of pressures to "teach more and teach it faster," this type of thoughtful planning is often accidental, not coordinated with other efforts, and remains group-oriented. In addition, the formal follow-up time needed to develop specific activities or materials that might enhance the learning of individuals or groups of students is rarely scheduled.

A primary factor that affects teaching is the pressure to cover the curriculum.

Planning for academic diversity requires quality planning time.

What will be on the test?

■ **Objective tests are the standard for evaluation in secondary schools.** The most frequent measures of a student's success in the secondary-school curriculum are based on memorizing lists of facts and details and demonstrating control of this knowledge on objective tests. While teachers acknowledge the limitations of this approach, most of them believe that barriers associated with time, class size, and accountability will not be sufficiently addressed in the near future to enable them to significantly alter their current approaches to testing.

■ **Objective tests can be barriers to learning.** A teacher's approach to testing appears to send a strong message to students regarding not only *what* is important to learn, but also *how* to go about learning. For example, even when classroom instruction focuses on analyzing issues and ideas, the tests frequently do not allow students opportunities to show that they understand the issues or to demonstrate their knowledge of the relationships between the ideas and concepts. Instead, students quickly learn that success is defined by memorizing details and facts and by providing the answers the teacher expects, even when they do not understand the information, do not believe that the information is important to know, or disagree with the teacher's view of the information.

■ **Test results are not used to help teachers plan future instruction.** The formal and informal methods used by secondary teachers to evaluate student progress on an ongoing basis rarely provide information about why students are not learning. Evidence of student failure is not used by teachers to redirect planning and instruction. Thus, the pressure to "teach more and teach it faster" does not encourage teachers to attend to how students are learning. As a result, when teachers do get evaluation information that indicates that students are not learning, they do not feel they have the necessary time to redirect their teaching or to reteach.

How Teachers Plan

This section describes how teachers plan for student learning when they are faced with groups of academically diverse students, despite the limitations that exist within the traditional school culture. The picture that emerges shows the ongoing tension between what teachers believe should be done and what can be done for some students. These realities of teacher planning in America's schools provide a window through which educators might be able to view the problems associated with meeting the needs of students with disabilities.

How can I teach this group of kids?

■ **Planning is focused on group learning.** By far, the primary instructional approaches planned for and used across elementary- and secondary-school settings are centered around whole-class activities. Thus, although individual assignments or activities, small-group work, and student pairings do occur, they occur significantly less frequently than whole-class instruction. During planning sessions, therefore, teachers are concerned about moving the entire group of students along, and infrequently mention how individuals or subgroups in the class might respond to the content or an activity.

★————————★
Most teachers believe that barriers present in today's schools will not be sufficiently addressed to enable them to alter their testing methods.
★————————★

★————————★
Teachers plan whole-class activities and focus their planning on group learning.
★————————★

■ Individual accommodation frequently conflicts with the goals of group instruction. Once group planning decisions are made, teachers rarely are able to find the time to plan or implement accommodations for individuals or sub-groups within the class. However, even when teachers are able to plan activities that allow for more individual contact, the "habits" of group instruction persist. For example, when small-group activities are included as part of class-room instruction, teachers often do not assist the small groups or discuss work with individuals.

■ Teachers often plan for the group by planning for the "one." As teachers plan for the group, a collective "they" appears to act as a "template"— a composite of salient features — of the class as a whole or of a small group of students. Out of this collective "they," teachers construct a "meta-student," or a collective image of students, often based on the characteristics of many of the students they have taught across their teaching experience. This "meta-student" is often characterized as a "B" student (as opposed to the commonly held belief that many teachers teach to the average or "C" student). Creation of a "meta-student" image seems to help the teacher reduce the complicated task of thinking about all of the characteristics of students in a single class.

Teacher planning is characterized by efficiency and economy.

■ Teacher planning is characterized by efficiency and economy. In general, teachers quickly make general plans for how lessons will play out and then refine them if time permits. To accomplish this, teachers plan in many ways and at many different times. The urgency to "be prepared" across the school day results in plans that focus on what *must* be accomplished in the group. Teachers do not have opportunities to plan what *might* be accomplished. Rarely does the "self-talk" of planning center on the difficult task of reaching those who may be struggling to learn. Thus, key questions related to predicting and addressing learning failure seem to be missing from planning conversations (e.g., "What could make this difficult for my students to learn?", or "Did all the students really understand the critical content in yesterday's lesson so that we are ready to go on to the next lesson?").

Teachers plan activities to be attractive and motivational for students.

■ Teachers are not sure how to plan for students with disabilities. When teachers do talk about individual students in their planning, they often focus on the student's problem and what the student should do. In addition, references to student's academic abilities tend to be general; for example, the teacher might say, "He has absolutely no comprehension," or, "If he could stay on task, he would make more progress." In general, teachers do not propose activities that might be used to address or compensate for the identified student characteristics. While teachers report having a great deal of confidence in their planning for general education students, they note that they do not have the necessary competencies to plan for and teach students with disabilities.

■ Activities must be attractive to students. Overwhelmingly, teachers identify student motivation as one of the greatest considerations in making instructional decisions. As a result, teacher planning frequently focuses on selecting attractive activities that students will like and that will maintain a peaceful classroom rather than on activities than will enable students to meet specific learning objectives or that will challenge students to engage in higher-order thinking. In addition, methods initially adopted to promote more inclusive teaching will frequently be abandoned in order to sustain the motivation of higher-achieving students, even when such methods have been effective in enhancing the learning of other students, including those with disabilities.

What will we do today?

◼ **Planning centers on how students will spend their time.** The time spent in planning tends to focus on the activities that will be incorporated into the flow of instruction and when they will be inserted. Because teachers are concerned about classroom management and student behavior, they want to make sure that students are kept busy. As a result, planning sessions focus on activities, and lesson-plan books list activities to be conducted, textbook pages to be covered, and assignments to be given. By contrast, references to accommodations or individual students rarely appear in written lesson plans.

◼ **Most teachers plan units rather than lessons.** When teachers are asked to talk in depth about their lessons, they frequently talk about the *unit* that a lesson falls within and the activities used to reach *unit* goals. For example, in elementary writing instruction, the integrating experience for the writing unit might stress the format of the unit writing project; less attention may be given to planning how to achieve through individual lessons the concepts of written expression that are being taught. At the secondary level, while lesson plans may list page numbers, activities, and assignments, teaching is largely defined by the plans made as the unit was launched. Once a unit is planned, very little day-to-day lesson planning is conducted, and any requests to alter individual lesson activities on behalf of students with disabilities are not likely to be acted upon in a serious manner.

◼ **Course planning defines the "mindset" for teaching.** While most formal teacher planning occurs at the unit level, it is greatly affected by the grand scheme of course planning. Thus, course planning lays a framework for how units and lessons will be experienced by students. If the course framework does not take into consideration instructional concepts related to academic diversity, inclusive teaching, or accommodation, the teacher is unlikely to make or maintain changes after the course is launched. Summer seems to be an important time for teachers to regroup and chart different directions for their courses. Once course and unit decisions are made, lesson planning is frequently improvised at the last minute, and it is frequently guided by decisions already made in course and unit planning.

How should I help them learn?

◼ **Teachers value students learning how to learn.** Teachers value and expect students to develop and use good learning strategies. Most teachers believe that teaching students how to approach learning and solve problems efficiently and effectively is a major learning goal for schools. In addition, teachers want students to learn good learning strategies as a result of being in their classes. Teachers also acknowledge that accommodations can help students learn.

◼ **Teaching learning strategies and making accommodations are viewed as not feasible.** Although teachers state that they value student knowledge and use of learning strategies and the instructional accommodations that can help students learn, they also recognize that the time required to implement specific accommodations and provide instruction in learning strategies is not available. Thus, teachers report that making effective instructional adaptations for individuals is not feasible while promoting effective instruction for the rest of the class in the context of the current realities of classrooms (e.g., class size, range of student diversity, amounts of planning time).

★————————★
Teachers focus their planning on units.
★————————★

★————————★
Teachers value teaching students how to learn, but they report that pressures and time constraints limit this type of instruction in mainstream classrooms.
★————————★

- Teachers don't plan for instruction in or teach learning strategies. Most teachers assume students will learn and use learning strategies on their own without emphasis or instruction as part of their courses. At neither the elementary- nor the secondary-school level do teachers routinely teach learning strategies. At the elementary-school level, basic skills are generally taught in isolation, and instruction in how to integrate a variety of skills to complete tasks is generally not provided. Most secondary content-area teachers state that someone else should teach students how to learn. In general, across the elementary- and secondary-school levels, despite the high value placed on learning strategies by teachers, teaching students how to learn is not given serious attention.

- Students want to learn learning strategies. While teachers are reluctant to integrate explicit strategy instruction into their teaching, students have a different perspective. Across all grade groupings and achievement levels, students report that they prefer teachers who make adaptations to promote student learning and who provide instruction in learning strategies. Students also report that they are not being taught the learning strategies they need to succeed in school.

- Accommodations are less likely at the secondary-school level. Teachers at the middle- and high-school level rarely make instructional modifications or modifications in assignments for students with disabilities. By comparison, teachers at the elementary level are more likely to make instructional and social adaptations to meet the specific learning needs of students with disabilities.

- School organization can be a barrier to individualization. Teachers who have students in the same classroom all day in the elementary- or middle-school grades may be able to "get back" to the student later in the day if a problem is detected. At the secondary level, time to "get back" to a student is not available; teachers may tell students to see them after school or during lunch if they need help. At this level, the student needs to recognize that help is needed and initiate contact with the teacher.

- The school culture inhibits infusion of a learning-to-learn perspective. Several current realities perpetuate the idea that learning strategies do not have to be directly taught. First, teachers are doing what their employers are asking of them. At the elementary level, for example, "covering" a highly detailed scope and sequence of basic skills is mandated by school districts. In secondary schools, teachers report that they are held accountable for student performance on subject-area tests, not how students are "learning" the subject area. This was clearly stated by one teacher when she said, "So what do I do? Emphasize how to learn history? Or do I emphasize the concepts and events of history? Look at the achievement tests; that will tell you what is valued."

- The teacher's view of the student's role in learning influences planning. Willingness to move to more inclusive methods in planning and teaching appears to be associated with how teachers view student contributions. Teachers who view student knowledge and various life experiences as important building blocks for making plans are more likely to consider and make changes on behalf of inclusion; on the other hand, teachers who give less consideration to the different perspectives of students in their planning and teaching activities are not as likely to consider or make adaptations.

★——————★
Accommodations and individualization are less likely at the secondary level than at the elementary level.
★——————★

★——————★
Secondary teachers report that they are accountable for teaching content, not for teaching students how to learn.
★——————★

- **Teachers prefer to teach above-average and high achievers.** Some teachers report that they do not enjoy teaching students who have difficulty learning. Most teachers report that they prefer to teach students who learn quickly. When secondary teachers are asked who they prefer to teach, without hesitation, many indicate they prefer to teach the "A" and "B" students. Few teachers report a preference for teaching the "D" and "F" students. In fact, teachers report that if they "have to" teach low-achieving students, they prefer to teach them in a heterogeneous group along with higher-achieving students.

- **Teachers are willing to implement innovations that target the whole class.** Although general educators report that they do not have the skills or knowledge to plan for students with severe academic problems, many appear willing to implement innovative methods to address these problems — if those methods are also appropriate for most of the class. Some teachers, especially at the secondary-school level, express the sentiment that the methods they are currently using to teach groups of students are, indeed, not appropriate for students who do not have sufficient background or skills.

Implications

Kurt Lewin once asserted that if you really want to understand something, try to change it. This section has focused on some of the conditions that researchers involved with the four projects collectively came to understand about planning as they tried to bring about change in the planning process. The fact that four very different groups of researchers came to agree on these summary points would indicate that the information provided in this section is significant and can be used with some degree of confidence.

For those individuals who seek to bring about change in schools to benefit students with disabilities, the planning realities described in this section can provide a backdrop for making and evaluating instructional decisions. These realities point to a number of implications for practice if change is to occur:

★————————★
The planning realities described in this section can provide a backdrop for making and evaluating instructional decisions.
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- **The goals of teacher planning should shift from focusing on covering the curriculum to focusing on students learning the curriculum.** This shift in planning will require that policy makers acknowledge the value of accepting different outcomes for different learners in their demands for accountability.

- **Adaptation for students with disabilities should be considered as part of the broader challenge of responding to the academic diversity within a class.** Planning for individual needs should be done in conjunction with planning for improved learning for the entire group.

- **Operationalizing a philosophy of inclusive teaching and adaptation for students with disabilities must become a goal of the school community if it is to become a classroom reality.** At present, however, most school cultures inhibit the basic philosophy of adaptation and inclusive instruction even though attention is sometimes directed to individual or small-group adaptations.

■ **Planning, teaching, adapting, and assessing should be considered as connected parts of a whole educational process.** Avoiding fragmentation in any area (e.g., instruction unrelated to testing, instruction targeting only the "B" student, etc.) results in a clearer understanding of how to plan for and achieve goals of successful instruction for a diverse group of students.

Acknowledgment of these realities and their implications as school change is considered will increase the likelihood that efforts by reformers to increase student learning and performance will pay off. In addition, consideration of these realities and investing in the process of involving teachers in the conversation of change will dramatically increase the chances of inclusive practice becoming a part of what schooling is all about.

PROJECT INFORMATION

The Education Development Center Project

Institution: Education Development Center, Inc. (EDC)

Project Name: Teacher as Composer

Project Emphasis: Long-range change in teacher "mindset" through integrating principles of active learning in literacy planning

Project Leaders: Sue Gordon
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                             Catherine Morocco

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PROJECT INFORMATION

The University of Kansas Project

Institution:	University of Kansas Center for Research on Learning
Project Name:	Planning Routines for Enhancing Content Delivery
Project Emphasis:	Middle school and high school; social studies and science
Project Leaders:	B. Keith Lenz Jean B. Schumaker Donald D. Deshler
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PROJECT INFORMATION

The University of Miami Project

Institution:
: University of Miami
School-Based Research Project

Project Name:
: Research on General Education Teacher Planning for Students with Disabilities

Project Emphasis:
: Elementary through high school; social studies and science

Project Leaders:
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Jeanne Shay Schumm

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PROJECT INFORMATION

The Vanderbilt University Project

Institution:	Vanderbilt University School-Based Research Project
Project Name:	Project PROACT (Planning, Reviewing, and Ongoing Assessment among Classroom Teachers)
Project Emphasis:	Classwide curriculum-based measurement and peer-mediated instruction in general education
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☆———————☆
Coming together,
sharing together,
working together,
succeeding together.
☆———————☆

Beginning Reading Instruction **$5.00**
Effective School Practices, Winter 1994, Volume 13, No. 1

ABSTRACT: Research still shows that systematic phonics instruction with a code-based reader are important components of effective initial reading instruction and are not incompatible with most whole language activities. Read Keith Stanovich's analysis of reading instruction issues in *Romance and reality* and Patrick Groff's review of *Reading Recovery* research. Read how a highly successful school teaches reading to Spanish-speaking children. Edward Fry also provides a set of tools for solving common reading problems.

Achieving Higher Standards in Mathematics **$5.00**
Effective School Practices, Spring 1994, Volume 13, No. 2

ABSTRACT: The standards from the National Council of Teachers of Mathematics prescribe teaching practice more than they set standards for student performance. Several research articles provide evidence that the NCTM teaching practices are probably not the best practices for achieving the student performance standards implied in the standards.

OBE and World Class Standards **$5.00**
Effective School Practices, Summer 1994, Volume 13, No. 3

ABSTRACT: This issue is a critique of outcome-based education. Criticisms from educational researchers and from the American Federation of Teachers are featured. Positive suggestions for education reform legislation are offered, as well as some guidelines for evaluating standards. The standards of most states are criticized for their lack of rigor, for their non-academic focus, and for their evaluation systems that do not provide information regarding the effectiveness of the school programs, but rather only evaluate individual students.

Twenty Years of Effective Teaching **$5.00**
Effective School Practices, Fall 1994, Volume 13, No. 4

ABSTRACT: Two keynote addresses by Sara Tarver and Jean Osborn at the summer conference provide an overview of the history of Direct Instruction. Headline news articles featuring Direct Instruction and / or disappointing results from trendy approaches are reprinted. An exchange of letters between a Montana parent and the National Council of Teachers of Mathematics highlights issues regarding school adoption of unproven, faddish methods, textbooks, and philosophies. The NCTM is unable to provide evidence that the teaching methods they promote improve learning. NCTM claims there are no measures that assess the kinds of outcomes they wish to achieve. They expect to have a guide for assessment published in 1995, 4 years after the guide for teaching practice was published. The Montana parent argues that the assessment should be used to evaluate the practices before they are promoted nationwide.

Handbook for Grassroots Reform.....$5.00
Effective School Practices, Winter 1995, Volume 14, No. 1

ABSTRACT: An article by Russell Worrall and Doug Carnine describes the problem to solve: the irrationality of top-down educational decision-making. Individual school communities that wish to use a more rational process are provided with reference materials and guides for establishing bottom-up reform, particularly in the selection of the teaching practices and tools (textbooks, technology, media, software, and so on). A Handbook for Site Councils to use to improve schools guides local site councils in obtaining reliable information about what works, that is, site councils should select validated practices and tools or cautiously monitor the implementation of unvalidated practices. Reliable information is usually available in the form of research studies. Because research is often misused and abused, a guide for using research to identify superior teaching practices and tools is also provided.

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FREE WORKSHOPS ON MATHEMATICS

Free workshops (US public school districts only) are available to train professionals in the skills necessary to recognize effective instructional materials for math, both in regular classrooms and special education settings. Call about Project PRIME: Bonnie Grossen (503) 683-7543. (Sponsored by the US Department of Education, Office of Special Education Programs)

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New Web Page: Check out the web page of the National Center to Improve the Tools of Educators (http://darkwing.uoregon.edu/~ncite/). Find valuable documents, research syntheses and information on free math workshops.

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Message: subscribe adinews

On this list, you will receive announcements only, such as news of upcoming TV specials on DI, announcements from employers seeking persons with DI teaching skills and from those with DI teaching skills seeking jobs, and other news flashes.

CONTRIBUTOR'S GUIDELINES

Effective School Practices provides practitioners and decision-makers with the latest research and development news on effective teaching tools and practices. The journal emphasizes practical knowledge and products that have proven superior through scientific testing. Readers are invited to contribute to several different columns and departments that will appear regularly:

FROM THE FIELD: Submit letters describing your thrills and frustrations, problems and successes, and so on. A number of experts are available who may be able to offer helpful solutions and recommendations to persons seeking advice.

NEWS: Report news of interest to ADI's membership

SUCCESS STORIES: Send your stories about successful instruction. These can be short, anecdotal pieces.

PERSPECTIVE: Submit critiques and perspective essays about a theme of current interest, such as: school restructuring, the ungraded classroom, cooperative learning, site-based management, learning styles, heterogeneous grouping, Regular Ed Initiative and the law, and so on.

RESEARCH STUDIES: Present data from your classroom or the results of scientific research. The data should guide other practitioners and decision-makers in evaluating alternative options for school reform.

TRANSLATING RESEARCH INTO PRACTICE Integrate a larger body of empirical research into a defined practice that can be implemented in schools.

BOOK NOTES: Review a book of interest to members.

NEW PRODUCTS: Descriptions of new products that are available will be featured. Send the description with a sample of the product or a research report validating its effectiveness. Space will be given only to products that have been field-tested and empirically validated.

LIST OF DEMONSTRATION SITES: We wish to maintain an on-going list of school sites with exemplary implementations and impressive student outcomes. Submit the name of the exemplary school or classrooms, the names of the programs being implemented, and contact information so that visitations may be arranged.

TIPS FOR TEACHERS: Practical, short products that a teacher can copy and use immediately. This might be advice for solving a specific but pervasive problem, a data-keeping form, a single format that would successfully teach something meaningful and impress teachers with the effectiveness and cleverness of Direct Instruction.

MANUSCRIPT PREPARATION

Authors should prepare manuscripts according to the fourth revised edition of the *Publication Manual of the American Psychological Association*, published in 1995. Copies may be ordered from:

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American Psychological Association
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Washington, DC 20036

Send an electronic copy, if possible, with a hardcopy of the manuscript. Indicate the name of the word-processing program you use. Save drawings and figures in separate files. Electronic copy should replace text that is underlined according to the APA format, with italic text.

Illustrations and Figures: Please send drawings or figures in a camera-ready form, even though you may also include them in electronic form.

Completed manuscripts should be sent to:

Bonnie Grossen, Ph.D.
Editor, *Effective School Practices*
PO Box 10252
Eugene, OR 97440

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Recommended Resources

School's Out: The Catastrophe in Public Education and What We Can Do About It (1993) by Andrew Nikiforuk.
ISBN: 0-921912-48-X
Price: $19.95 from Macfarlane Walter & Ross
37A Hazelton Avenue
Toronto, CA M5R 2E3
Ask for it at your local bookstore.

If Learning Is So Natural, Why Am I Going To School? (1994) by Andrew Nikiforuk.
Price: $16.99 from Penguin
ISBN: 0-14-02.4264-3
Ask for it at your local bookstore.

Beginning to Read: Thinking and Learning About Print (1990) by Marilyn Jager Adams (A summary by the Center on Reading).
Price: $7.50
Mail orders to: Center for the Study of Reading
University of Illinois
51 Gerty Cr.
Champaign, IL 61820

Becoming a Nation of Readers (1985) The Report of the Commission on Reading.
Price: $7.50
Mail orders to: Center for the Study of Reading
University of Illinois
51 Gerty Cr.
Champaign, IL 61820

Direct Instruction Reading (Revised, 1990) by Douglas Carnine, Jerry Silbert, & Ed Kameenui.
Price: $40.00
Order from: MacMillan Publishing
1-800-257-5755
ISBN: 0-675-21014-3

Direct Instruction Mathematics (Revised, 1990) by Jerry Silbert, Douglas Carnine, & Marcy Stein.
Price: $40.00
Order from: MacMillan Publishing
1-800-257-5755
ISBN: 0-675-21208-1

Antisocial Behavior in Schools: Strategies and Best Practices (1995) by Hill Walker, Geoff Colvin, & Elizabeth Ramsey.
Price: $28.70
Order from: Brooks/Cole Publishing Co.
1-408-373-0728 (ext 137)
Fax: 1-408-375-6414
Email:
adrienne_carter@brookscole.com
(Complimentary copies sent for review for college course. Send request on letterhead.)

Interventions for Achievement and Behavior Problems (1991) by 74 contributors, edited by Gary Stoner, Mark Shinn, & Hill Walker.
Price: $52.00
Order from:
National Association of School Psychologists
8455 Colesville Road, Suite 1000
Silver Spring, MD
ISBN: 0-932955-15-0

Failing Grades (Video) and Annotated Bibliography (1993) featuring Joe Freedman, M.D. & Mark Holmes, Ph.D.
Price: $17.95
Order from: Society for Advancing Research
c/o VICOM Limited
11603-165 Street
Edmonton, Alberta
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Higher Order Thinking: Designing Curriculum for Mainstreamed Students (1992) edited by Douglas Carnine and Edward J. Kameenui.
Price: $24.00 (prepaid orders postage-free)
Order #5199 from: PRO-ED
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