A Teacher's Guide to Implementing the Self-Determined Learning Model of Instruction

Adolescent Version

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IDEAs that Work
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INTRODUCTION

Change.

Anyone in the field of special education knows that change is inevitable. Virtually every aspect of teaching students with disabilities has changed in the last 25 years, from what is taught to where we teach. Some changes are brought by advancement in human knowledge about learning and development and consequent progress in instructional techniques emerging from that knowledge advancement. Other changes derive from advancements in technology, while others result from social and political forces and influences. It is not special education alone that experiences such upheavals. School reform, vouchers, standards, national assessment... the field of education in general is almost constantly changing. The American novelist James Baldwin noted that “most of us are about as eager to be changed as we were to be born, and go through our changes in a similar state of shock” (Columbia Dictionary of Quotations, 1993). To remain effective, however, teachers must acquire new skills and knowledge and be able to respond to changing environments and expectations.

Even teachers who approach change with more gusto than Baldwin suggested can be excused for feeling overwhelmed by political and social forces and by the sheer volume of information one is expected to process and utilize. It is useful, periodically, to consider those aspects of teaching that don’t change as frequently. One relative constant in education is that the purpose of instruction, of teaching, remains fundamentally unchanged. In his classic text Toward a Theory of Instruction, Jerome Bruner (1966) noted that “instruction is, after all, [simply] an effort to assist or to shape growth” and defined theories of instruction as “theories of how growth and development are assisted by diverse means” (pp. 1). A second stable aspect of teaching is the purpose of the educational process itself. While current social, political, and economic forces change the types of services that school systems provide and, indeed, the types of activities in which teachers engage, there are still common purposes that underlie the educational process. Yale University educator Seymour Sarason (1990) suggested that one important purpose of the educational process is to “produce responsible, self-sufficient citizens who possess the self-esteem, initiative, skills and wisdom to continue individual growth and pursue knowledge” (p. 163). Although this sense of the purpose of the educational process remains constant, it is increasingly true that our understanding about how we can achieve this has changed.

How do we enable adolescents with disabilities to become self-sufficient citizens, lifelong learners, and adults who make things happen in their lives? More specifically, how can we reverse trends highlighted by studies showing that important adult outcomes, like employment, independent living and community integration, remain out of reach for too many youths with disabilities (Chadsey-Rusch, Rusch, & O’Reilly, 1991). Our work promoting self-determination for children and youth with disabilities (Agran, 1997; Martin & Marshall, 1996; 1998; Mithaug, 1996-a;
1996-b; Wehmeyer, 1997; 1998; Wehmeyer, Agran & Hughes, 1998) has convinced us that one key answer to that question is to enable students to become more self-determined, a conviction that is also supported by emerging research findings (Wehmeyer & Schwartz, 1997). One of the reasons that students with disabilities have not succeeded once they leave school is that the educational process has not adequately prepared them to become self-determined young people. Martin, Marshall, Maxson, and Jerman (1993) put it this way:

If students floated in life jackets for 12 years, would they be expected to swim if the jackets were suddenly jerked away? Probably not. The situation is similar for students receiving special education services. All too often these students are not taught how to self-manage their own lives before they are thrust into the cold water of post-school reality.

There is an emerging core of materials and methods to enable teachers to teach students to become more self-determined (see Field, Martin, Miller, Ward & Wehmeyer, 1998 and Wehmeyer, Agran, & Hughes, 1998 for detailed information on these). These methods and materials focus on teaching students to set and attain goals, make decisions and choices, solve problems, self-advocate, and so forth. As important and effective as these instructional methods and materials are, however, they fall short of fully preparing students to attain the outcomes we’ve described. A critical element in “teaching” self-determination is to “teach” students to take greater control over their own learning. Thus, a fundamental concern to promoting student self-determination is to identify how we can teach students to, in essence, teach themselves.

We know that self-determined people are “causal agents” in their lives. They are actors in their lives instead of being acted upon. They make things happen in their lives. They take control of their lives and destiny. The instructional question of importance, therefore, is: How do we ‘teach’ students to become causal agents in their lives? The answer, we believe, lies in shifting from teacher-directed and teacher-driven instructional models to student-directed teaching models. Rather than continue to rely upon instructional models in which the teacher is given full responsibility for determining when, what, why, where, and how a student will learn, we are beginning to realize that there may be marked advantages in having the student more actively involved in educational decision making, as well as the delivery of the instruction itself (Agran, 1997). Student-directed learning strategies place the responsibility for learning primarily with the student, and involve the student in all aspects of his or her educational program.

That is the intent of the Self-Determined Learning Model of Instruction; to provide teachers with a model of instruction that enables them to “teach” students to become self-directed learners. This Teacher’s Guide provides a practical introduction to the model and serves as a guide for model implementation. It is our intent that teachers who want to promote student-directed learning and want their students to take greater responsibility for their education will be able to use this Guide to fully-
and effectively implement the model with adolescents. While our work has focused on the use of the model with students with disabilities, we believe that this model is applicable for all learners. As such, we will describe the model in terms of its use with all adolescents. Section I of the Guide introduces models of teaching, discusses important teacher roles and functions in the implementation model, and provides a step-by-step description of the model itself, accompanied by case studies to illustrate the process. Section II provides functional descriptions of the Educational Supports that provide the structure of the model, and additional resources for further information.

What you won't find in this Guide are the theoretical considerations upon which the model is based. One important feature of models of teaching, discussed in Chapter 1, is that they are derived from theoretical frameworks about human learning and cognition and theories of instruction, and this model is no different. However, the intent of this Guide is to provide information on the implementation of the model, not necessarily to provide a comprehensive treatment of the theory underlying the model. When it is necessary to discuss theoretical issues in order to explain some aspect of implementation, we have done so. Otherwise, we direct you to our theoretical work in the area of self-determination and student directed learning (Agran, 1997; Mithaug, 1991; 1994; 1996-a; Wehmeyer, 1997; 1998; Wehmeyer, Agran, & Hughes, 1998) and, more specifically, to a more detailed discussion of the theoretical underpinnings of the model (Mithaug, Wehmeyer, Agran, Martin, & Palmer, 1998).
Section 1

The Self-Determined Learning Model of Instruction
CHAPTER 1
Models of Teaching

A model of teaching, according to Joyce and Weil (1980), is “a plan or pattern that can be used to shape curriculums (long term courses of study), to design instructional materials, and to guide instruction in the classroom and other settings” (p. 1). Common sense suggests that, as teachers, much of what we do is driven, consciously or not, by models of teaching. If instruction refers to efforts to shape growth and development, how we design that instruction depends on what model of teaching we adopt. Models of teaching are derived from theories about human behavior, learning, cognition, social development, and so forth. Table 1.1 (next page) lists some models of teaching and provides a description of each model’s implementation and instructional outcomes. Effective teachers employ multiple models of teaching, taking into account the unique characteristics of the learner and types of learning. This Guide presents a model of teaching, the Self-Determined Learning Model of Instruction. Prior to describing this model (Chapter 3), several points about models of teaching need to be discussed.

No one model is the treatment of choice for every instructional circumstance. Multiple factors will impact the model of teaching implemented, including the student and his or her instructional needs, the environment in which learning will occur, the focus or content of instruction, and the preferences and knowledge of the teacher. Like all educators, teachers working with adolescents with disabilities have an arsenal of teaching models that they employ according to the student’s learning characteristics and the content under consideration. A teacher may use the role playing-model to teach social behaviors, social simulation and social inquiry models to examine social problems and solutions, assertiveness training to teach self-advocacy skills, or a training model to teach vocational skills. Likewise, special educators employ more traditional, cognitively-based models of teaching, such as the concept attainment model to teach thinking skills, the memory model for increasing the retention of facts, or inductive thinking and inquiry training models to teach reasoning and academic skills. The teaching model most frequently adopted by special educators is probably the contingency management model drawing from principles contained in operant psychology.

Similarly, the Self-Determined Learning Model of Instruction is not appropriate for use in every instructional situation. It seems unlikely, for example, that this is the most effective model to teach a student to write. As we will discuss later, however, we do believe that this model, because of its emphasis on actively engaging students in instruction, has broad applicability across numerous content domains, learning contexts and environments and across the age span.
### Table 1.1 Teaching Models
from Joyce & Weir, 1996

<table>
<thead>
<tr>
<th>Teaching Model</th>
<th>Description of Instruction</th>
<th>Instructional Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role Playing</td>
<td>Students are taught delineate a problem, enact problem situations derived from the problem</td>
<td>Students learn to develop problem solving skills by generating solutions to problems and evaluating their efficacy and consequences, while exploring their feelings and perceptions about topic.</td>
</tr>
<tr>
<td></td>
<td>statement, and discuss the enactment to identify solutions to the problem.</td>
<td></td>
</tr>
<tr>
<td>Direct Instruction</td>
<td>The teacher explains a new concept or skills to students, has them test their understanding by practicing under teacher direction (controlled practice), and encourages them to continue to practice under teacher guidance (guided practice). The model approaches academic content systematically, is designed to shape and sustain student motivation and ensure success through pacing, positive feedback and reinforcement.</td>
<td>Students learn specific skills or academic competency and are engaged in academic or educational tasks a large percentage of instructional time.</td>
</tr>
<tr>
<td>Social Learning</td>
<td>Teachers use principles of modeling and observational learning to promote skills acquisition and enhance students' behavioral and social repertoires.</td>
<td>Students learn, through observation, appropriate social skills and ways to respond to problem situations.</td>
</tr>
<tr>
<td>Contingency Management</td>
<td>Teacher's employ principles of behavior as observable, lawful phenomena, largely using a stimulus/response/reinforcement paradigm, to change behavior, and use systematic procedures to teach discrete tasks.</td>
<td>Students learn specific skills and tasks to mastery and, with certain strategies, learn to self-initiate and self-directed learning.</td>
</tr>
</tbody>
</table>

Models of teaching are not curricula, but drive the development of curriculum, assessment, and instructional strategies. Models of teaching provide a plan or a process, derived from theory about learning, development and behavior, that can be used to develop curricular materials, assessments, and specific instructional methods or materials. Like many other models, teachers who learn to use the model can do so without the guidance of written curricula. For example, teachers often design role play activities to teach specific skills without a specific curriculum to guide that activity. On the other hand, there is often value to creating written, sequenced instructional materials to drive instructional practice, and models of teaching are useful in doing this.

Joyce and Weir (1980; 1996) introduced four conceptual aspects of teaching models:

**Syntax**: Syntax refers to the sequence of activities called for by the model. What is the flow of instruction using the model? How does instruction begin? What happens next? What activities should be used?

**Social System**: The social system of a model describes student and teacher roles and relationships, the kind of norms that are encouraged, and the structure of the learning environment.
**Principles of Reaction:** Principles of reaction tell the teacher how to respond to the student, and provide guidelines by which to select model-appropriate responses to the student's actions.

**Support System:** Support systems refer to the supporting conditions that are necessary for the success of the model. This may include level of training, type of environment, or availability of materials.

We will introduce the *Self-Determined Learning Model of Instruction* using these concepts: providing information on the syntax, social system, principles of reaction and support systems necessary to implement this model.

**Models of teaching are for use by teachers.** Models of teaching are employed by teachers to promote student learning. The *Self-Determined Learning Model of Instruction* is a model of teaching designed for use by teachers to enable students to become causal agents in their lives and to self-direct learning. This model is written for teachers as the end users to enable students to self-direct learning. Many instructional materials written to enhance student involvement (for more information on promoting student involvement see Wehmeyer and Sands, 1998) are written with the student as the end-user. Teachers use the *Self-Determined Learning Model of Instruction* to "teach" students to, in essence, "teach" themselves. The model does, in fact, provide an effective plan for developing curriculum for direct use by students, but in and of itself, it is a teaching model... for use by teachers. The model was developed in response to the question, "how can we enable teachers to teach students to self-direct learning?"
CHAPTER 2
Student Involvement and Self-Determination

This chapter will provide a general introduction to student involvement, student-directed learning, and self-determination, while Chapter 3 provides specifically an overview of the Self-Determined Learning Model of Instruction. The remaining chapters in Section 1 will discuss the syntax, social system, principles of reaction, and support system for the model and provide essential information on implementing the model.

The impetus to develop the Self-Determined Learning Model of Instruction was the dilemma faced by many teachers who want to promote self-determination. That dilemma was: "How can we teach students to take control over their lives?" Certain answers to that question are evident. We could teach students to set and attain goals, solve problems, make decisions, be assertive, communicate effectively, and so forth. Yet, our experiences taught us that these skills development approaches were necessary, but not sufficient. The missing piece became more evident as more and more school districts attempted to implement the transition mandates in the Individuals with Disabilities Education Act (IDEA). This Act requires that schools begin to address the transition-related needs of students with disabilities, ages 14 and over. The transition mandate in IDEA requires that transition services be based on students' needs, and take into account students' interests and abilities. The mandate, along with the growing emphasis on promoting self-determination for youth with disabilities, brought about increased efforts to involve students in transition planning and decision-making. This, in turn, has highlighted the relative difficulty of achieving active student involvement! Well intentioned, hard working teachers found that, despite their diligent efforts to get students involved, a large proportion of their students too often remained largely unmotivated and uninvolved in their educational program.

Why? One reason, we believe, is that such efforts remain primarily teacher-directed. The educational experiences of students with disabilities can often be best described as unidirectional. Students are recipients of instructional programs that are almost uniformly teacher-delivered and based on plans and decisions made by others, including teachers, parents, administrators, school board members, and state legislators. There is no doubt in the minds of most students who is in control when they are in school. Sarason (1990) described the typical classroom as such:

Our usual imagery of the classroom contains an adult who is "in charge" and pupils who conform to the teacher's rules, regulations and standards. If students think and act in conformity to the teacher's wishes, they will learn what they are supposed to learn (p. 78).
This presents a problem for teachers because the act of teaching is, essentially, the use of power and authority to promote learning and development. The conundrum is that teachers must use their legitimate power and control to increase the power and control of students! Because successful implementation of the Self-Determined Learning Model of Instruction is dependent upon teachers' abilities to use their power and control in the classroom to promote student involvement while still ensuring learning and growth, it is important to consider a few of these issues prior to introducing the model and its phases of implementation.

**Teacher Factors in Student Involvement**

Traditionally, there has been a tendency to focus on the student when discussing barriers to student involvement, from student lack of motivation to student capacity to perform specific skills important to assuming control. However, the teacher and his or her skills, attitudes, expectations and actions are critically important to active student involvement. This section will discuss teacher factors that will influence the success of the Self-Determined Learning Model of Instruction. First, however, it is important to clearly describe what we mean by student involvement and student-directed learning.

**What is student involvement and student-directed learning?** What does it mean to involve students in the educational process? What is usually assumed is that we want students to participate in their educational and planning process, but student involvement goes beyond participation. If asked what they would like most from their students, many teachers will say that they want their students to be motivated to learn. They want students to be excited about education, to take responsibility for learning, and to work as a partner with the teacher to achieve learning. While a *participant* shares in and takes part in an activity, there is no sense of ownership or control rooted in a “participant’s” role, and no real sense of that partnership. Student involvement is more than simply having students participate in the educational planning process.

The word involve also means to connect closely and to influence or affect. Student involvement *connects* students with their educational program and enables them to influence or affect this program. One has to go back, however, to the etymological roots of the word “involve” to capture the full intent. The word “involve” is from the Latin “involvere”, which meant to enwrap or to completely engross. The Middle English form of the Latin “involvere” was “involver,” which meant to wind or *coil about*. Getting students involved in their educational program is more than having them participate, but instead means to connect students with their education, to enable them to influence and affect this program and, indeed, to become enwrapped and engrossed in their educational experience. The key to student involvement is that the student is an active, not passive, partner in the totality of his or her educational program.

Involvement in educational planning, decision-making, and instruction can take many
forms, from students generating their own IEP goals and objectives to tracking their progress on self-selected goals or objectives. It is important, however, not to equate independent performance of activities like making decisions or setting goals with student involvement. Student involvement is not synonymous with independent performance. It is true that as students become actively involved in their educational program they will become more independent in many of these tasks. It is not the independent performance of a set of specific skills which constitutes student involvement, but instead the degree to which the student is an equal partner in and, to the greatest extent, in control of his or her learning. Students with the most significant disabilities can be involved in their educational program every bit as much as students with less significant disabilities. Student involvement may look very different in these cases, and students with more significant disabilities may not be able to make independent decisions or solve problems, but that is not the criteria by which we should judge student involvement. It is, instead, the degree to which the student is "enwrapped and engrossed" in his or her learning and educational program. This is the intent of the Self-Determined Learning Model of Instruction, to enable students to actively direct learning, not necessarily to independently perform all aspects of the educational process.

Student-directed learning "involves the students' use of one or more instructional strategies that allows them to plan, perform, or monitor a learning task" (Agran, 1997, p. 4). If student involvement in educational planning, decision making and instruction is a goal of education, student-directed learning is one of the key ways to achieve that goal. In essence, applying strategies that promote student-directed learning involves transferring responsibility for activities typically performed by teachers, such as assessment, instruction and evaluation, to the student. More accurately, it means transferring responsibility for performing such activities and transferring the power and authority to perform them.

To many teachers it seems almost ironic to discuss teacher power in the classroom when they themselves feel powerless, dictated to by administrators, school boards, citizens, and state and federal lawmakers! Yet, despite the harsh reality that teachers often have too little voice in the school schedule, core curriculum, class size, or other factors that influence teaching, the fact is that teachers retain a significant amount of power and control over one particular group of stakeholders in the educational process: students! It is important to the success of the Self-Determined Learning Model of Instruction that teachers recognize that power and control and use it to promote student involvement.

**Teacher control and use of power.** Student involvement and student-directed learning is, fundamentally, about who is in control and has power in the classroom. Teachers who want to promote active student involvement must realize the importance of shifting control to the student while retaining ultimate control over and responsibility for the learning process. Research in education has linked excessive teacher control orientations with maladaptive student motivation and self-esteem (Deci, Spiegol, Ryan, Koestner & Kauffman, 1982), lower academic achievement (Boggiano & Katz, 1991) and decrements in performance (Fink, Boggiano & Barrett, 1990). This research suggests that students' perceptions of their classroom
There is a tendency to confuse issues around effective classroom management, organization and structure with control. Promoting student involvement and self-determination is not synonymous with giving up all structure in the classroom.

Teacher expectations of students will influence the success of the model. Teachers need to examine how they view disability and how the biases and stereotypes associated with that view of disability influence their expectations for students.

By setting and communicating high expectations, teachers communicate to students that they think they are capable and competent. Such expectations should be established based on the individual student's abilities, and should emphasize the importance of effort to meet expectations.

Environment are linked to the teaching style and control orientation of the classroom teacher.

It is important, however, to distinguish between excessive teacher control and effective classroom management, organization, and structure. There is a tendency to confuse issues of structure with control and there is the belief on the part of many educators that promoting self-determination and student involvement is synonymous with giving up all structure in the classroom (Wehmeyer, Agran, & Hughes, 1997). This is simply not true. As Deci and Chandler (1986) noted, promoting self-determination is not the same as allowing chaos. In classrooms with little structure and no expectations for appropriate behavior, students cannot learn. However, special education environments are often too tightly structured and controlling (lanacone & Stodden, 1987; Wehmeyer, 1992), and limit any meaningful opportunities to achieve self-determination or to promote students' positive perceptions of control. Within established structures and routines students can assume greater control and responsibility.

Teacher expectations. Another important teacher variable that will influence the success of the model will be the expectations teachers hold for students with disabilities and for people with disabilities in general. It is critically important for teachers to examine how they view disability and how the biases and stereotypes associated with that view of disability influence their expectations for students to become actively involved in their educational programs. Feldman, Saletsky, Sullivan, and Theiss (1983) pointed out that "one of the best supported findings in recent years demonstrates that the expectations that teachers hold about student performance are related to subsequent student outcomes" (p. 27). Those outcomes include student perceptions about themselves and control in their lives. By setting and communicating high expectations, teachers communicate to students that they think they are capable and competent. Such expectations should be established based on the individual student’s abilities and emphasize the importance of effort to meet expectations.

Research has also examined the effects on individuals’ perceptions of control and efficacy when teachers respond differentially to students. For example, Wigfield and Harold (1992) reviewed research on students' expectations and concluded that students' expectations for themselves are strongly associated with teachers' expectations for them. As for the influence of teachers’ responses to students on student perceptions, research by Weinstein and colleagues (Weinstein, 1985, 1989) has shown that students perceive teachers as providing more negative feedback and directed instruction to low achieving students. They also perceive teachers as providing more choice and messages of high expectations to high achieving students. Just these interactions, in and of themselves, serve to shape students' expectations of their own abilities. Students believe they must be low achieving when teacher interactions with them are overly directed, consist of negative feedback, or provide limited choice-making opportunities in the classroom.

Several conditions appear to make it difficult for teachers to monitor and control how their beliefs and values may inadvertently impact students. Primarily, although
most teachers are quite aware that their beliefs about students influence their performance, they are typically not aware that they are treating children differently. Chapter 5 (Social System) provides more explicit suggestions for creating a positive learning climate.

**Importance of Student Involvement, Student-Directed Learning and Self-Determination to Adolescents with Disabilities**

We believe that promoting active student involvement in the educational process is an important component to an effective educational program for all students, across all ages and independent of disability status. Research in education and psychology has begun to dispel some of the myths and stereotypes about students' capacities to participate in the educational process which have long served as barriers. Research in education and vocational rehabilitation has shown that student-directed learning strategies are as successful, and often more so, as teacher-directed learning strategies, and that student-directed learning strategies are effective means to increase independence and productivity (See Wehmyer, Agran, & Hughes, 1998 or Wehmeyer & Sands, 1998 for detailed discussion of this research).

There are, however, some reasons to promote student involvement and self-determination that are particularly important to adolescents with disabilities. These are discussed in this section.

**Transition services requirements in IDEA.** The 1992 amendments to IDEA contained language requiring that the IEP include a statement of needed transition services for all students 16 and older receiving special education services (the 1997 amendments lowered this age to 14 for consideration of transition needs). The IDEA also mandated “student-involvement” in transition planning, stating that needed transition services must be based on student preferences and interests. While the IDEA left the statutory language regarding student involvement in the individualized education program meeting as "when appropriate," the regulations regarding student involvement in transition planning are quite clear and unambiguous. These regulations state that if one of the purposes of the meeting is to consider transition services, than the school must invite the student [Sec. 300.344(c)]. The regulations then point out that “for all students who are 16 years or older, one of the purposes of the annual meeting will always be the planning of transition services, since transition services are a required component of the IEP for these students” (Sec. 300.344, Note 2). In other words, schools must invite all students ages 16 and over to planning meetings, and decisions made about students transition services must be based on students’ preferences and interests.

Mithaug, Wolman, and Campeau (1992) suggested that the requirements in the IDEA transition services language “comprise a logical sequence or causal flow beginning with student-determined and defined needs, which lead to plans for coordinated services, which, in turn, result in community-based experiences that culminate in
The student involvement requirements in the IDEA transition services language "comprise a logical sequence or causal flow beginning with student-determined and defined needs, which lead to plans for coordinated services, which, in turn, result in community-based experiences that culminate in post-school adjustments." Dennis Milhaug Peggy Campeau Jean Wolman

post-school adjustments" (p. 7). It is obvious that if the transition process begins with the student, then he or she needs to be an equal partner in the process.

Wehmeyer and Ward (1995) also emphasized the significance of the 'student involvement' language in the IDEA, arguing that this language places the intent and spirit of the IDEA in line with efforts to promote student self-determination and consumer choice. Kochhar and Deschamps (1992) linked the IDEA to other policy initiatives affecting the transition of youth from school to adulthood, including the Carl D. Perkins Vocational and Applied Technology Education Act (P.L. 101-392; 1990) and the Americans with Disabilities Act (ADA; P.L. 101-336; 1990), stating that these Acts "cross-reference each other and stand together to develop a far reaching mandate to include youth with special needs in the range of career/vocational and transition services options" (p. 9). A key component of this "broader mandate" is the requirement for active consumer participation in service planning and delivery, referred to as participatory planning, in each of these Acts.

**Promoting student self-determination.** There are obvious links between the emergence of student involvement, the transition mandates, and the increased attention to promoting self-determination. As a result of federally funded initiatives to define and describe self-determination as an educational outcome (Ward, 1996; Ward & Kohler, 1996), a number of conceptualizations of self-determination have been forwarded (see Field, Martin, Miller, Ward & Wehmeyer, 1998 for a comprehensive bibliography of educational efforts to promote self-determination). It is important that teachers implementing the Self-Determined Learning Model of Instruction have a basic understanding of what is meant by self-determination. This is particularly so because, as somewhat obviously indicated by the name of the model, this model is based on principles of self-determination.

Several conceptualizations of self-determination have been offered in the educational literature and, although each approaches self-determination from a slightly different perspective, there are common themes that run throughout them. Field, Martin, Miller, Ward and Wehmeyer (1998) summarize these similarities, stating that self-determination is:

...a combination of skills, knowledge, and beliefs that enable a person to engage in goal directed, self-regulated, autonomous behavior. An understanding of one's strengths and limitations together with a belief in oneself as capable and effective are essential to self-determination. When acting on the basis of these skills and attitudes, individuals have greater ability to take control of their lives and assume the role of successful adults. (p. 2)

Similarly, Martin and Marshall (1995) summarized the "evolving definition of self-determination in the special education literature" as describing individuals who:

know how to choose -- they know what they want and how to get it. From an awareness of personal needs, self-determined individuals choose goals, then
doggedly pursue them. This involves asserting an individual’s presence, making his or her needs known, evaluating progress toward meeting goals, adjusting performance and creating unique approaches to solve problems (p. 147).

Simply put, people who are self-determined take control over their lives and their destinies. They are actors, and not acted upon. They are, as we have suggested, causal agents in their lives. The *Self-Determined Learning Model of Instruction* enables teachers to teach students to become causal agents in their lives.

**What are some of the characteristics of self-determined people?** As illustrated by the previous descriptions and discussion, self-determined people exhibit a set of characteristics which enable them to fulfill roles typically associated with adulthood. Again, although there is not consensus as to what all of these characteristics are or which set of them best represents self-determination, there is wide agreement on some, if not most, of the characteristics of self-determination. The following are characteristics (adapted from Field, Martin, Miller, Ward & Wehmeyer, 1998) that have been proposed across multiple models or frameworks.

**Self-determined people:**
* Initiate events in their lives and take action when needed.
* Are aware of personal preferences and interests.
* Are aware of and can differentiate between their wants and needs.
* Make choices based on preferences, interests, wants and needs.
* Consider multiple options and consequences for decisions.
* Make decisions based on these considerations.
* Evaluate the efficacy of their decisions based on the outcomes of previous decisions and revise future decisions accordingly.
* Set and strive for personal goals.
* Define and approach problems in a systematic, if not always successful, manner.
* Strive for independence, while recognizing their interdependence with others in their world.
* Advocate on their own behalf when deemed appropriate.
* Possess a knowledge and understanding of their own personal strengths and weaknesses.
* Apply this knowledge and understanding to maximize their quality of life.
* Regulate their behavior.
* Are persistent toward the achievement of preferred goals and objectives and can use negotiation, compromise and persuasion to reach these goals.
* Hold positive beliefs about their ability to act in a situation and believe that if they do act, preferred outcomes will occur.
* Are self-confident and proud of their achievements.
* Can communicate wants and needs to others,
* Are creative in their response to situations.
CHAPTER 3
The Self-Determined Learning Model of Instruction: Overview

The purpose of the *Self-Determined Learning Model of Instruction* is to provide teachers a model of teaching they can use to enable students to become causal agents in their lives. However, it will be the rare student who gets excited when told that they are going to be "enabled to be the causal agent in their lives"! For students, the incentive to learn the strategies inherent in the model is that they can learn a way to solve problems to get what they want in life. Implementation of the model consists of a three-phase instructional process: (a) Set a goal, (b) Take action, and (c) Adjust goal or plan, as depicted in Tables 3.1, 3.2 and 3.3. The model revolves around a set of *Student Questions* that students’ learn, modify to make their own, and apply to reach self-selected goals. There are *Teacher Objectives* linked to each *Student Question*, and *Educational Supports* identified for each instructional phase that teachers can use to enable students to self-direct learning. The model is based on a universal problem-solving strategy and can be used across multiple content areas. In each instructional phase, the student is the primary agent for choices, decisions, and actions, even when eventual actions are teacher-directed.

A step-by-step process for implementing each instructional phase of the model, combined with case studies to illustrate model implementation, is provided in *Chapter 4: Syntax*. In this overview, we familiarize teachers with the model and discuss important aspects of implementation. Specifically, we want to discuss and emphasize the nature of the model as *self-regulated problem solving* to achieve *self-selected goals* using *student-directed* instructional strategies.

There are three instructional phases within the model. Each phase presents a problem to be solved by the student. The student solves each problem by posing and answering a series of 4 *Student Questions* per phase in a self-instructional manner. Each question is linked to a set of *Teacher Objectives*. Each instructional phase includes a list of *Educational Supports*. *Section 2* of this Guide provides directions on using each of the *Educational Supports* listed.

**Self-Regulated Problem Solving**

The *Self-Determined Learning Model of Instruction* is based on the premise that self-determined people persistently regulate their problem solving to meet their own
Table 3.1 Phase 1 of Model

<table>
<thead>
<tr>
<th>Set a Goal</th>
<th>Problem for Student to Solve: What is my goal?</th>
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<tbody>
<tr>
<td><strong>Student Question 1: What do I want to learn?</strong></td>
<td><strong>Teacher Objectives</strong></td>
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<tr>
<td></td>
<td>• Enable students to identify specific strengths and instructional needs.</td>
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<td></td>
<td>• Enable students to communicate preferences, interests, beliefs and values.</td>
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<td></td>
<td>• Teach students to prioritize needs.</td>
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<td><strong>Student Question 2: What do I know about it now?</strong></td>
<td><strong>Teacher Objectives</strong></td>
</tr>
<tr>
<td></td>
<td>• Enable students to identify their current status in relation to the instructional need</td>
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<td></td>
<td>• Assist students to gather information about opportunities and barriers in their environments.</td>
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<tr>
<td><strong>Student Question 3: What must change for me to learn what I don’t know?</strong></td>
<td><strong>Teacher Objectives</strong></td>
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<td></td>
<td>• Enable students to decide if action will be focused toward capacity building, modifying the environment or both.</td>
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<td></td>
<td>• Support students to choose a need to address from prioritized list.</td>
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<tr>
<td><strong>Student Question 4: What can I do to make this happen?</strong></td>
<td><strong>Teacher Objectives</strong></td>
</tr>
<tr>
<td></td>
<td>• Teach students to state a goal and identify criteria for achieving goal.</td>
</tr>
<tr>
<td><strong>Educational Supports</strong></td>
<td><strong>Student self-assessment of interests, abilities, and instructional needs</strong></td>
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<td></td>
<td><strong>Non-Directive Teaching Model</strong></td>
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<td></td>
<td><strong>Awareness Training</strong></td>
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<td></td>
<td><strong>Choice-Making Instruction</strong></td>
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<td><strong>Problem Solving Instruction</strong></td>
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<td></td>
<td><strong>Decision-Making Instruction</strong></td>
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<td></td>
<td><strong>Goal-Setting Instruction</strong></td>
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goals in life. This recognizes the simple fact that in order to live successfully in the community, students with disabilities must resolve one problem after another. Ruth Sienkiewicz-Mercer lived in a state institution for people with mental retardation the first 18 years of her life. When she finally moved from the institution to her own home, she had this observation:

*I had never had a place of my own. As a result, I had never worried about buying groceries and planning meals, paying the rent and the phone bill, balancing a checkbook, making appointments, figuring out how to keep the appointments I made — all of the things adults just do. But starting out in society at the age of 28, after living at a state institution for the mentally retarded for sixteen years, I found these everyday tasks confusing and wonderful and frightening* (Sienkiewicz-Mercer & Kaplin, 1989, p. 202).

Sienkiewicz-Mercer discovered that living in the community exposes a person to one problem after another... large problems such as how to pay the rent or get enough to eat and small problems such as what to do on a rainy afternoon. In Belchertown, the institution in Massachusetts where Ruth lived before her move to the community, she did not have these problems. The state coffers paid the rent,
### Table 3.2 Phase 2 of Model

<table>
<thead>
<tr>
<th>Take Action</th>
<th>Educational Supports</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Problem for Student to Solve: What is my plan?</strong></td>
<td><strong>Self-Scheduling</strong></td>
</tr>
<tr>
<td><strong>Student Question 5: What can I do to learn what I don’t know?</strong></td>
<td><strong>Self-Instruction</strong></td>
</tr>
<tr>
<td>Teacher Objectives</td>
<td><strong>Antecedent Cue Regulation</strong></td>
</tr>
<tr>
<td>- Enable student to self-evaluate current status and self-identified goal status</td>
<td><strong>Choice-Making Instruction</strong></td>
</tr>
<tr>
<td><strong>Student Question 6: What could keep me from taking action?</strong></td>
<td><strong>Goal-Attainment Strategies</strong></td>
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<tr>
<td>Teacher Objectives</td>
<td><strong>Problem Solving Instruction</strong></td>
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<tr>
<td>- Enable student to determine plan of action to bridge gap between self-evaluated current status and self-identified goal status</td>
<td><strong>Decision-Making Instruction</strong></td>
</tr>
<tr>
<td><strong>Student Question 7: What can I do to remove these barriers?</strong></td>
<td><strong>Self-Advocacy Instruction</strong></td>
</tr>
<tr>
<td>Teacher Objectives</td>
<td><strong>Assertiveness Training</strong></td>
</tr>
<tr>
<td>- Collaborate with student to identify most appropriate instructional strategies</td>
<td><strong>Communication Skills Training</strong></td>
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<tr>
<td>- Teach student needed student-directed learning strategies</td>
<td><strong>Self-Monitoring</strong></td>
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<tr>
<td>- Support student implement student-directed learning strategies</td>
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<tr>
<td>- Provide mutually agreed upon teacher-directed instruction</td>
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<tr>
<td><strong>Student Question 8: When will I take action?</strong></td>
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<tr>
<td>Teacher Objectives</td>
<td></td>
</tr>
<tr>
<td>- Enable student to determine schedule for action plan</td>
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<tr>
<td>- Enable student to implement action plan</td>
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<tr>
<td>- Enable student to self-monitor progress</td>
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The Student Questions in the Self-Determined Learning Model of Instruction are consciously constructed to direct the student through a problem solving sequence in each instructional phase. The solution to the student problem to solve in each phase leads to the problem-solving sequence in the next phase.

A problem is a task, activity, or situation for which a solution is not immediately identified, known, or obtainable.

Dieticians set the menu, and someone else planned her daytime activities. How did Sienkiewicz-Mercer respond to the sudden onset of problem after problem inherent in her move to the community? Did she long for the days when she didn’t have these problems? Of course not. Life is, indeed, full of problems. The opportunity to address these problems and to navigate one’s way through them is a hallmark of adulthood and independence. The Student Questions in the Self-Determined Learning Model of Instruction are constructed to direct the student through a problem solving sequence in each instructional phase. The solutions to the problems in each phase leads to the problem-solving sequence in the next phase. Before discussing the problem solving sequence represented in the four Student Questions in each instructional phase, however, we want to briefly discuss problem solving, in general.

**What is Problem Solving?** A problem is a task, activity, or situation for which a solution is not immediately identified, known, or obtainable. Solving a problem is the process of identifying a solution that resolves the initial perplexity or difficulty. Since most people equate a “problem” with something negative (e.g., a problem child, financial problems) it may be more useful to think of problem solving within
Table 3.3 Phase 3 of Model

<table>
<thead>
<tr>
<th>Adjust Goal or Plan</th>
<th>Problem for Student to Solve: What have I learned?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Student Question 9</strong>: What actions have I taken?</td>
<td><strong>Teacher Objectives</strong></td>
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<tr>
<td>Enable student to self-evaluate progress toward goal achievement.</td>
<td><strong>Educational Supports</strong></td>
</tr>
<tr>
<td><strong>Student Question 10</strong>: What barriers have been removed?</td>
<td><strong>Teacher Objectives</strong></td>
</tr>
<tr>
<td>Collaborate with student to compare progress with desired outcomes.</td>
<td>Self-Evaluation Strategies</td>
</tr>
<tr>
<td><strong>Student Question 11</strong>: What has changed about what I don’t know?</td>
<td><strong>Teacher Objectives</strong></td>
</tr>
<tr>
<td>Support student to re-evaluate goal if progress is insufficient;</td>
<td>Goal Setting</td>
</tr>
<tr>
<td>Assist student to decide if goal remains the same or changes;</td>
<td>Choice-Making Instruction</td>
</tr>
<tr>
<td>Collaborate with student to identify if action plan is adequate or inadequate given revised or retained goal;</td>
<td>Problem-Solving Instruction</td>
</tr>
<tr>
<td>Assist student to change action plan if necessary;</td>
<td>Decision-Making Instruction</td>
</tr>
<tr>
<td><strong>Student Question 12</strong>: Do I know what I want to know?</td>
<td><strong>Teacher Objectives</strong></td>
</tr>
<tr>
<td>Enable student to decide if progress is adequate, inadequate or if goal has been achieved;</td>
<td>Goal-Setting Instruction</td>
</tr>
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</table>

Within the context of goal-driven behavior, problem solving seeks to bridge the gap between a person’s current situation and a desired outcome. Bransford and Stein (1984) suggested that “a problem exists when there is a discrepancy between an initial state and a goal state, and there is no ready-made solution for the problem solver” (p. 7). The initial state is where you are when you encounter the barrier or obstacle and the goal state is where you want to end up when you solve the problem.

For example, if you fly into the airport of an unfamiliar city to attend a conference at a hotel in the downtown area, you are confronted with the problem of getting to that hotel. You may have an address for the hotel, and may even have specific landmarks to guide you. However, you are still at the airport (initial state) with the goal of traveling to the hotel (goal state). Problem-solving is a process of identifying the solutions to remove the discrepancy between the initial and goal state. Fortunately, you have many potential solutions from which to draw. You can take a cab, rent a car, take a bus, call a shuttle, or have a friend or colleague pick you up. In this case you probably already know how to hail a cab, have a driver’s license and could drive a rental car, or know how to call a shuttle. Your problem-solving activities pertain to “uncovering” the potential solutions, as opposed to learning them. Once you have identified all your possible solutions, you must then make a decision about which solution is the best for your current needs. Imagine the difficulty you would have if you weren’t aware of any of the available solutions!
Problem-solving and decision-making are often used synonymously, although that is technically incorrect. A decision is a process of selecting or coming to a conclusion about which of a set of potential solutions is the best. The problem-solving process focuses on identifying possible solutions. In fact, as the example shows, the decision-making process often includes problem-solving activities as the first step. In order to make a judgement about the best solution, one first has to know what solutions exist. Thus, the problem-solving process at the unfamiliar airport will consist of identifying those solutions available (there are several rental car companies; there is no shuttle to this particular hotel but there is an airport van that runs between the airport and several downtown hotels; there are plenty of cabs; there is no bus or subway system, etc.). Once potential solutions are identified, you will weigh the costs and benefits to each option to come to a decision (a cab is faster, but more expensive; the shuttle is less expensive, but takes longer and stops a block from the hotel; a rental car is fast, but is the most expensive solution, plus you don’t know your way around downtown and parking will cost you more money). Your decision will likely depend on such factors as how much time or money you have, how much luggage you have to carry to the hotel, how comfortable you feel driving in an unfamiliar city, and so forth.

In some circumstances, the solution to a problem is not already known. For example, if you want to use your new computer to make a professional-looking resume but don’t know anything about computers, the problem resolution process will be learning what software programs are available and appropriate for your needs and learning how to use the operating system and the hardware. Occasionally, problems may appear to be insolvable, though it is more likely that solutions exist, but are not available. However, in most situations, creativity and exploration can lead to the identification of one or more solutions to a problem.

Student Questions

As previously suggested, the Student Questions form the heart of the model. It is by teaching students to work through the Student Questions that teachers enable them to become self-regulated problem solvers. Several aspects of the Student Questions warrant consideration.

Problem solving sequence posed by Student Questions: The Student Questions in the model are based on theory in the problem-solving and self-regulation literature that suggests that there is a sequence of thoughts and actions that must be followed in order for any person’s actions to produce results that satisfy their needs and interests. This is referred to as a means-ends problem solving sequence and is what we mean when we say that the Self-Determined Learning Model of Instruction involves self-regulated problem solving to get what you need and want in life. Teachers implementing the model teach students to solve a sequence of problems in order to construct a means-ends chain – a causal sequence – that moves them from where they are – an actual state of not having their needs and interests satisfied – to where they want to be – a goal state of having those needs and interests satisfied. Its function is to reduce or eliminate the discrepancy be-
tween what students want or need and what students currently have or know. We construct this means-ends sequence by having students answer the questions which connect their needs and interests to their actions and results via goals and plans.

According to this analysis, self-directed learning, and for that matter much of self-determination, is more than solving one problem in order to get what one needs and wants in life. It is solving many problems that are connected in a means-end chain or chains. The basic strategy we have identified to teach students is reflected in the four Student Questions in each phase. In order to answer the questions in this sequence, students must regulate their own problem solving (1) to construct goals to meet needs, (2) to construct plans to meet goals, and (3) to adjust actions to complete plans.

Thus, each instructional phase poses a problem the student must solve (What is my goal? What is my plan? What have I learned?) by, in turn, solving a series of problems posed by the questions in each phase. The four questions differ from phase to phase, but represent identical steps in the problem-solving sequence. That is:

Identify the problem;

Identify potential solutions to the problem.

Identify barriers to solving the problem.

Identify consequences of identified solutions.

These steps are the fundamental steps in any problem-solving process, and they form the means-end problem solving sequence represented by the Student Questions in each phase and enable the student to solve the problem posed in each instructional phase.

Complexity of Student Questions. There are several aspects of implementation regarding the Student Questions that will be discussed in Chapter 4, and thus we will not deal exhaustively with those specific issues in this chapter. However, it is important to address an obvious concern about each of the 12 Student Questions at this juncture -- their relative complexity. Recall that the model itself is designed for teachers to implement, and thus the language of the Student Questions in the model are, intentionally, not written to be understandable by every student, any more than a student would understand what a non-directive model of teaching was or any of the other Educational Supports. The Student Questions are written in first-person voice in a relatively simple format with the intention that they are the starting point for discussion between the teacher and the student. Some students will be able to learn and use all 12 questions as they are written. Other students may need to have the questions rephrased to be more understandable. Still other students, due to the intensity of their instructional needs, may need to have the teacher paraphrase the questions for them. Chapter 4 describes a process of implementation by which teachers and students collaborate on each question to develop a set of questions which meet the intention of the means-end problem solving sequence listed above, and are understandable to the student. For some students, due to age or level of disability, this may mean rewriting the questions to be simpler or more understandable.

Each instructional phase poses a problem the student must solve (e.g., What is my goal? What is my plan? What have I learned?) by solving a series of problems posed by the questions in each phase. The four questions differ from phase to phase, but represent identical steps in the problem solving sequence.

The Student Questions are written in first-person voice in a relatively simple format with the intention that they are the starting point for discussion. A process of modifying the questions based on individual student needs is described in Chapter 4.
Other students may choose to keep the questions as currently posed. Students with more significant disabilities may need to have the questions posed by the activities in which teachers have them engage to meet the Teacher Objectives (e.g., identify strengths, communicate preferences), and may not be able to actually verbalize the questions independently. The key to success is not necessarily how the questions are worded or even that they are spoken (see discussion subsequently, however), but that the problem-solving sequence intended in the questions is maintained. There is a tendency, particularly when working with students with cognitive disabilities, to turn the process into a goal-setting process only. While learning to set and attain goals is important, it is the fact that students learn to apply a self-regulated problem-solving process that is important.

Verbalizing the Student Questions. The 12 Student Questions are, as described, written in a first-person voice. The intent of the model is that students ask those questions of themselves to, in essence, state the problem-solving step they have to complete. These questions, even when modified based on student characteristics, need to remain consistent across all instructional situations. That is, the intent of the model is that students learn this sequence of questions and, in so doing, learn a self-regulated problem-solving approach. Self-instruction, one of the most powerful self-management strategies (see Section 2 for description) refers to a process in which a person tells him- or herself to do something, then does it. The Student Questions do not comprise a self-instruction strategy because the statement is in the form of a question (e.g., What do I want to learn?) instead of an instruction (e.g., Finished waxing floor, next empty wastebasket). Nevertheless, we believe that learning and using the questions will enable the student to become more effective problem solvers in the same manner that self-instructions enable students to perform tasks independently. Thus, it is important to focus on enabling students to adopt the questions as their own, to focus attention on answering the questions, and to learn the sequence of questions. Self-instruction research has shown that such strategies are effective even if the self-instruction statement is not spoken, although it is more effective at the onset of instruction if students verbalize the questions. Students who cannot verbalize the questions or who have more significant disabilities can succeed using the model, they will simply need higher levels of external support and may need the teacher to verbalize the questions for them.

Barriers to student-directed learning. In each instructional phase, the third Student Question addresses barriers to resolving the problem situation. There is a tendency to think of such barriers only in terms of student-based issues (e.g., the student lacks a specific skill). The Self-Determined Learning Model of Instruction recognizes that instructional needs are not only student-based, but also involve environmental modifications. There is considerable evidence that the environments in which students with disabilities live, learn, work, and play do not support, and in fact hinder, self-determination (Brotherson, Cook, Cunconan-Lahr, & Wehmeyer, 1995; Cook, Brotherson, Weigel-Garrey, & Mize, 1996; Wehmeyer, Kelchner, &
Richards, 1996). It is important that teachers who are implementing the Self-Determined Learning Model of Instruction recognize the environmental barriers to student self-determination and self-regulated problem solving, and both enable students to similarly recognize such barriers and design action plans that focus on external, as well as internal, barriers.

Teacher Objectives

Teacher Objectives within the Self-Determined Learning Model of Instruction are just that... the objectives a teacher will be trying to accomplish by implementing the model. In each instructional phase, the objectives are linked directly to the Student Questions. These objectives can be met by utilizing strategies provided in the Educational Supports section of the model. The Teacher Objectives provide, in essence, a road map to enable the teacher to enable the student to solve the problem stated in the student question. For example, the first Student Question is: What do I want to learn? Teacher Objectives linked to this question comprise the activities in which students should be engaged in order to answer this question. In this case, it involves enabling students to identify their specific strengths and instructional needs, to identify and communicate preferences, interests, beliefs and values, and to prioritize their instructional needs. This example illustrates the importance of the model to students of transition-age... the model begins with an exploration of student instructional wants and needs based upon individual preferences, interests and values, just at the IDEA transition mandate requires. Teachers should use the objectives in the model as a road map that assists them to enable the student to answer the relevant question. As teachers use the model it is likely that they can generate more objectives that are relevant to the question, and they are encouraged to do so.

Educational Supports

In the truest sense of a model of teaching, the Educational Supports are part of the Syntax of the model... how the model is implemented. However, because the implementation of this model requires teachers to teach students to self-direct learning, we believe it is important to identify some of the strategies and supports that could be used to successfully implement the model. The vast majority of these supports are derived from the self-management literature. As previously indicated, student-directed learning strategies involve teaching students to modify and regulate their own behavior. A variety of strategies have been used to teach students, including students with significant disabilities, how to manage their own behavior. Among the most commonly used strategies are permanent prompts (antecedent cue regulation), self-instruction, self-monitoring, self-evaluation, self-reinforcement and goal setting, among others. Section 2 of this Guide provides a detailed, step-by-step implementation plan for use of all the Educational Supports listed.

The emphasis in the model on the use of instructional strategies and educational supports that are student-directed provide another means of teaching students to teach themselves. As we have already indicated, teaching students to use the
**Student Questions** will teach them a self-regulated problem solving strategy. Concurrently, teaching students to use various student-directed learning strategies provides students with another layer of skills that enable them to become the causal agent in their lives.

As important, however, as it is to utilize the student-directed learning strategies, not every instructional strategy used will be student-directed. The purpose of any model of teaching is to promote student learning and growth. There are circumstances in which the most effective instructional strategy to achieve a particular educational outcome will be a teacher-directed strategy. One misinterpretation of self-determination is that it is synonymous with "independent performance." That is, people misinterpret self-determination as meaning that you do everything yourself. However, causal agents do not necessarily do everything for themselves, but instead are the catalysts in making things happen in their lives. One can be self-determined and have a personal care attendant perform routine daily living activities, have a tax accountant prepare one’s annual tax form, or pay the neighborhood kid to mow the lawn. Similarly, students who are considering what plan of action to achieve a self-selected goal can, in fact should, recognize that teachers have expertise in instructional strategies, and take full advantage of that expertise. For example, a student may identify learning to drive as an instructional need, and identify his reading level as one barrier to achieving that end. Together with his teacher, that student may decide that direct-instruction in word attack skills is the best way to achieve the literacy level he needs to take the drivers test. The student remains the causal agent in this process, even if he is not learning using a student-directed learning strategy.

This instructional focus changes the traditional roles of the teacher and the learner. **Chapter 5** (Social System) discusses these roles in greater detail. It should be noted, however, that there are multiple benefits to both the teacher and the student to promote student-directed learning. Agran (1997) noted several of these. First, active student involvement in educational planning, decision-making and instruction has well documented benefits for educational efficacy (Agran, 1997; Wehmeyer, 1998). Second, these strategies promote generalization of skills to environments outside the original learning environment. Third, student-directed learning enhances self-sufficiency, self-determination, and self-reliance, all valued societal outcomes. Fourth, by enabling students to do more for themselves, teachers spend less time engaged in those activities over which the student has assumed control and can spend that time in other educationally important activities.

The remaining chapters provide the "how to" to implement the model. This chapter has, to some degree, attempted to answer the "why" question about the model… Why use this model instead of other teaching models? Teachers employ models of teaching to provide effective instruction for students. The purpose of instruction is to promote learning and growth. It is the primary responsibility of a model of teaching to promote student learning and growth. The **Self-Determined Learning Model of Instruction** has been field-tested to ensure its educational efficacy. That is, teachers who use the model to teach educationally relevant skills or concepts to
students have succeeded. Students in our field-test learned a wide array of skills, from vocational and academic skills to social and functional life skills.

The *Self-Determined Learning Model of Instruction* has, however, other benefits that pertain to promoting learning and growth. Providing students with the opportunity to self-direct learning should enhance student motivation and commitment to educational goals. Students who are taught using the model learn a self-regulated problem-solving process that they can use to self-direct learning across multiple life domains. In the course of implementing the model, the students engage in activities that will increase their self-knowledge and self-awareness, enhance their decision-making and goal setting skills, and learn to assume control of activities previously done "to them" by others. All of these -- increased problem solving, goal setting, decision-making skills, enhanced self-awareness and self-knowledge, and enhanced perceptions of control -- will promote students' ability to take control over their lives and have experiences that provide opportunities to do so. Thus, students who receive instruction using the model can increase their self-determination.
CHAPTER 4
Syntax

As discussed in the Introduction, the syntax of a model describes that model's implementation. This chapter will provide a step-by-step description of how to use the Self-Determined Learning Model of Instruction.

The model is implemented sequentially, both within and between instructional phases. Model implementation begins with Phase 1, and the syntax for this phase is shown in Figure 4.1. The entry point for each phase is the "Student Problem to Solve" which in Phase 1, is "What is my goal?" However, prior to discussing the first problem to solve, teachers should talk with their students about the purpose of this approach to teaching.

Introducing the Model to Students

The purpose of the Self-Determined Learning Model of Instruction is to enable teachers to teach students to self-direct learning. The first step in implementation is to meet with the student to discuss the process and its purpose. This discussion will probably set the stage for what learning areas are considered, so it is important to consider the following points in your initial meeting with students:

Emphasize that you want to teach the student to learn a way to solve problems and learn what he or she needs to know to get what they want in life.

Emphasize that you want to teach the student to learn a way to solve problems and learn what he or she needs to know to get what they want in life. For many students, this will be their first experience with problem solving and goal setting. You will most likely need to define some of these concepts for them. Here are some "talking points" to get you started in that discussion.

Explain that a problem is something that keeps people from getting what they want or need. (Give the student an example. For example, if you want to get a driver's license, you have to pass the state driver's test. If you cannot read the test, that is a problem). A problem is a barrier to getting what you want. A barrier is something that stands in a person's way and blocks progress.

Emphasize that there are different ways to solve problems. Use the previous example to illustrate this. (In the case of the driver's test, the person could learn to read the manual for drivers or find alternate versions of the materials, such as one on audiotape.)

Emphasize that problems are not just "bad things" (like prob-
Figure 4.1 Syntax for Phase 1

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Problem behavior. Life presents a lot of different problems that have to be solved. Some life problems include how to pay bills, where to get health care, what job to get, how to get to work, etc. Encourage the student to generate some examples of life problems.

Explain that a goal is something you set out to do. It is something you work to make happen. Talk with the student to elicit some goal he or she has set, emphasizing that goals are things we want to accomplish or achieve.
Emphasize that you share a common goal with the student, preparing him or her to leave school with the skills and knowledge needed to be successful.

Be clear that your primary responsibility is to teach what the student needs to learn, and that you want to work with the student as a partner to find things that they want and need. It is the student's responsibility to learn. What may be different is that you are asking the student to take a greater role in deciding what it is that they need to learn.

Your role through this discussion as well as during the initial questions in the model will be one of support and scaffolding. You must build the scaffold or structure which the student can use to succeed without being overly directive or controlling. Students will vary a great deal in how much support they need during this process. Indeed, some students with more significant disabilities will need you to provide much external support. The key is that you provide only as much support and direction as is necessary for the student to succeed.

Many of the student-directed strategies must first be taught to students. For example, the outcome of the first phase is to set a goal. Many students do not have adequate experience with goal-setting, and will be prone to identify goals that are too broad or not achievable if they are not provided explicit instruction on goal setting, including how to set goals that are measurable and attainable.

Converting the Student Questions into Your Student's Questions!

As was discussed in Chapter 3, the Student Questions are critical to the success of the model. They comprise the means-end problem-solving sequence that will enable students to self-direct learning. We have written the questions to be as clearly understandable as feasible, without losing the problem-solving context of the question. We recognize, however, that some students are going to be confused by the questions as written. More importantly, perhaps, we recognize that imposing a set of questions on students takes out some of the self-direction in learning! We want students to take ownership over these questions, not just view them as some other person's way to learn. We suggest that the following procedure be implemented the first time a student addresses each of the twelve Student Questions in the model.
Model implementation always begins with the student question. The first time a teacher uses the model with a student, the first step in the implementation process will be to read the question with or to the student, discuss what the question means and then, if necessary, to change the wording to enable the student to better understand the intent of the question. Such wording changes must, however, be made such that the problem-solving intent of the question remains intact. As discussed in Chapter 3, changing Student Question 1 from "What do I want to learn?" to "What is my goal?" completely changes the nature of the question. The Teacher's Objectives associated with each student question can provide direction for possible wording changes. It is perhaps less important that actual changes in the words occur than
that the student takes ownership over the process and adopts the question as his or her own, even if there are minimal wording changes.

As illustrated in the following sequence, going through this process once as the student progresses through the model should result in a set of questions that the student accepts as his or her own.

```
Student Question 1  →  Your Student's Question 1
   ↓
Student Question 2  →  Your Student's Question 2
   ↓
Student Question 3  →  Your Student's Question 3
   ↓
Student Question 4  →  Your Student's Question 4
```

Obviously, this sequence will continue through all 12 questions. Depending upon the student, it may be best to modify one question at a time, or to modify groups of four questions in each phase. Given the importance of this activity, we suggest designing a sheet similar to that on the next page, which provides the original question in written format as well as the revised question. Once the student has generated his or her own set of questions, there are a number of ways you can assist the student to use these questions. For example, you might have business cards printed up with the student’s name and the list of questions on them... you will likely need both sides of the card, but the student could then have the questions with them at most times. Laminating a wallet-size list would serve the same purpose. Some students might benefit from pictorial representations of the questions, while others might use audiotaped versions of the questions.

**Implementing Phase 1: Set a Goal**

Once you have discussed the process with the student, the next step is to identify an area of instructional need. That is the purpose of Phase 1. Indicate to the student that the problem they need to solve first is "What is my goal?", and that he or she will do that by focusing on Student Question 1. Apply the question modification process described in the prior section to enable the student to understand the question and, if necessary, to reword the question.
# Solving Problems to Get What I Want and Need in Life

## Problem 1: What is My Goal?

<table>
<thead>
<tr>
<th>Questions</th>
<th>My Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>What do I want to learn?</td>
<td></td>
</tr>
<tr>
<td>What do I know about it now?</td>
<td></td>
</tr>
<tr>
<td>What must change for me to learn what I don't know?</td>
<td></td>
</tr>
<tr>
<td>What can I do to make this happen?</td>
<td></td>
</tr>
</tbody>
</table>

## Problem 2: What is My Plan?

<table>
<thead>
<tr>
<th>Questions</th>
<th>My Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>What can I do to learn what I don't know?</td>
<td></td>
</tr>
<tr>
<td>What could keep me from taking action?</td>
<td></td>
</tr>
<tr>
<td>What can I do to remove these barriers?</td>
<td></td>
</tr>
<tr>
<td>When will I take action?</td>
<td></td>
</tr>
</tbody>
</table>

## Problem: What Have I Learned?

<table>
<thead>
<tr>
<th>Questions</th>
<th>My Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>What actions have I taken?</td>
<td></td>
</tr>
<tr>
<td>What barriers have been removed?</td>
<td></td>
</tr>
<tr>
<td>What has changed about what I don't know?</td>
<td></td>
</tr>
<tr>
<td>Do I know what I want to know?</td>
<td></td>
</tr>
</tbody>
</table>
Phase 1 consists of four Student Questions:

1. What do I want to learn?
2. What do I know about it now?
3. What must change for me to learn what I don't know?
4. What can I do to make this happen?

What do I want to learn? The primary teacher objectives tied to this question are:

1. Enable students to identify specific strengths and instructional needs;
2. Enable students to communicate preferences, interests, beliefs, and values;
3. Teach students to prioritize needs.

These activities will be framed by the parameters you set in the initial discussion with students. That is, if your responsibility is to teach students specific vocational skills, then students should address this question as it pertains to vocational education, and the question will focus on what the student wants (and needs) to learn to achieve vocational goals of interest. Educational Supports that will enable you to support students in this phase are described in Section 2. Several aspects of implementing this phase are discussed subsequently.

Student motivation to learn. We have phrased the question "want to learn" instead of "need to learn" because the latter denotes something that someone "has" to do, or is forced into doing. The degree to which students want to learn any given skill or construct is tied, at least partially, to the degree to which it achieves a desired goal or outcome. One of the purposes of this initial question is to have a student and his or her teacher explore desired outcomes, identify the skills and determine what the student needs to do to achieve that outcome, and then develop a goal upon which to base an action plan (in Phase 2) to enable the student to achieve that outcome.

Broadly defined verses narrowly prescribed outcomes. This initial activity may begin quite broad or may be very targeted from the onset. For example, a student who hasn't given much thought to where he wants to live upon graduation will need to think through those broad issues before considering specific instructional needs. On the other hand, a student who is very focused on a specific outcome, like getting a drivers license, may be prepared to discuss specific instructional strengths and needs immediately. One theme that you will hear several times throughout the implementation instructions is that it may be necessary for the student to go through the process once in order to adequately narrow his or her instructional focus. Phase 3 of the model describes a self-evaluation process by which students evaluate their progress toward achieving their goal. At the end of the self-evaluation, students have several decision points. They may decide that they have achieved the original goal, and no further instruction is necessary. They may, however, also decide that they have not achieved their goal, in which case they must evaluate whether they have set a reasonable goal, if their action plan is adequate, or if they just need to stay...
the course and keep implementing their current action plan. As such, a student who has had limited experience with goal setting and attainment may, indeed, set a goal that is unrealistic or unattainable. While it is useful to encourage and support the student to select reasonable, achievable goals, it is not useful to take control over the process at this early stage and dictate that the student narrow his or her goal. The moment to discuss that is when the student, through a self-evaluation process, recognizes that he or she will not or cannot achieve the desired goal. You can then work with the student to refine their original goal and narrow the focus, while having enabled the student to learn more about goal setting by going through the process.

Focus on the student's strengths. The process purposefully begins with an assessment of the student's strengths in relation to the particular instructional area. Students should be encouraged to identify what they already have learned, and future instructional needs should emphasize building on those existing strengths. Too often education is a deficit-focused process... we identify what students don't do well and target those skills or constructs. While identifying instructional needs means, by definition, identifying what the student doesn't know, by starting with strengths the process emphasizes the student's worth, value and capacity.

Focus on preferences, interests, beliefs, and abilities. The second Teacher Objective related to Student Question 1 is to enable students to communicate their preferences, interests, beliefs, and values. Teachers working with adolescents with disabilities will recognize the direct link between this objective and federally-mandated requirements to base student transition services on students' interests and preferences. This is tied closely to enabling students to specify their strengths and instructional needs.

Once again, however, we are not suggesting that every instructional need addressed by implementing the model has to be an activity the student "likes." The reality of school is that students often have to learn skills and constructs they would not choose to learn. However, even when the particular area of instruction is one that students would not independently select, the process can still be based on student preferences and interests. There are almost always multiple ways to learn a particular skill, and student preferences and choices can shape the way in which instruction is conducted.

Prioritize instructional need. It is likely that there will be multiple instructional needs associated with any desired outcome. Once those are identified, students should be taught how to weight those to select a priority need. Obviously, there are several factors that need to be considered and students should be taught to examine if any of the identified needs are precursors to other needs, and thus would have to be acquired first; if specific resources (time, money, materials, teacher availability, etc.) needed to learn the skill or concept are available only at selected times, or if one need is clearly more important than others and should be acquired even if others cannot.
Outcomes from Student Question 1. Student consideration of the first question should result in the identification of an area of instructional need based on an examination of preferences, interests, beliefs and values. Students should have considered their relative strengths and needs in this area, and prioritized which needs are most important. Those instructional needs will be the basis for Student Question 2.

The worksheet on the following page could be used to enable students to think about and review their answers to each question.

What do I know about it now? The Teacher Objectives tied to this question are to:

1. Enable students to identify their current status in relation to the instructional need;
2. Assist students to gather information about opportunities and barriers in their environments.

These two objectives focus on supporting the student to examine what they know about the instructional needs and to examine what environmental opportunities and barriers exist. This question begins the process of identifying solutions to the problem that is concluded in questions 3 and 4, where students select a priority need for instruction and develop a goal to meet that need.

Evaluate current status: In Student Question 1, students examined their relative instructional strengths and needs taking into account their preferences and interests, and used that process to prioritize instructional needs. Students should pose the second question to themselves to determine how their current status is related to those instructional needs. That status may range from knowing nothing about the area and having to learn everything, to needing only to generalize already-learned skills or to strengthen areas of acquired knowledge or skills. Some instructional needs may be more intensive than others.

Environmental barriers and opportunities. In Chapter 3 we discussed the role of the environment in promoting self-determination and student involvement. In addition to needs related to student acquisition of knowledge or skills, there will also be environmental barriers to attaining the desired outcome. In fact, it is entirely plausible that the action plan built in the second phase will focus entirely on removing environmental barriers, and not "teaching" new skills or concepts. For example, a student may determine that the outcome he or she wants to achieve is a specific job, and upon closer examination of strengths, limitations, and barriers determine that he or she has the prerequisite skills to perform the job, but is unable to take a job due to transportation problems. The solution to this problem might be arranging for transportation, and not learning any new skills. In addition, however, to evaluating barriers, students should also describe opportunities presented in the environment related to the instructional need.

Outcomes from Student Question 2. The primary outcome from this question is that students understand their current status with regard to addressing instructional needs,
Progress Sheet

Student's Name

Problem to Solve: What is My Goal?

I began working on this problem on [Date you started]

What do I want to learn?

What do I know about it now?

What must change for me to learn what I don't know?

What can I do to make this happen?

I've solved the first problem, on the next one!
and have evaluated environmental barriers and opportunities related to those needs. They carry that knowledge into the third question.

What must change for me to learn what I don't know? The Teacher Objectives tied to this question are to:

1. Enable the students to decide if action will be focused toward capacity building, modifying the environment, or both.
2. Support students to choose a need to address from the prioritized list.

This question asks the student to identify what it is that must change in order to learn what they don't know. Students examine the capacity building, knowledge acquisition activities that need to occur, and examine barriers and opportunities that exist in the environment. They take that information and weigh it with information gathered in the prioritization phase (Student Question 1) to identify a priority instructional need.

What must change? The focus of this question should be the synthesis of information gained in questions one and two. Essentially, those questions identified the problem and identified potential solutions to resolving the problem. This question asks the student to select a particular instructional need, action on which will resolve the problem. The emphasis on "what must change" is purposeful. Students will benefit from coming to that decision (e.g., what it is that must change) in a self-directed manner.

Outcomes from Student Question 3. The primary outcome of this question is that students weigh all the possible options for instruction and select a priority instructional need.

What can I do to make this happen? The Teacher Objective tied to this question is to:

1. Teach students to state a goal and identify criteria for achieving that goal.

This question is the impetus for setting a goal and identifying criteria by which students will evaluate attainment of that goal.

The goal as the focus of action. In Phase 2 of the model you will teach, support and enable students to create an action plan based upon their goal and to implement that action plan. Again, it is purposeful that the answer to this question (e.g., What can I do to make this happen?) is a goal, not just an action. It would be simple to state an action in response to this question, but we want students to begin to think in terms of setting goals to achieve outcomes, not just acting independent of a goal. In fact, it is usually quite simple to translate the student's action-oriented response to this question (for example, "go get my driver's license") into a goal statement (e.g., I will pass my driver's license exam within six months).
Identifying criteria. Part of the goal setting and attainment process (see Section 2 for detailed information on teaching goal setting and attainment) is to identify steps that will enable you to reach the goal and to identify criteria that will indicate when you have achieved each step or the goal itself. Students need to consider what will show that they have reached their goal, and will use these criteria in Phase 3.

Outcomes from Student Question 4. Student Question 4 completes the process that enables the student to solve the first problem... What is my Goal?. The outcome of this question is that students have a specific goal on which they are going to work and have identified criteria to evaluate their progress on achieving that goal.

Implementing Phase 2: Take Action

The purpose of the second instructional phase (see Table 4.2) is to support students to solve the problem “What is my plan?” Once again, if this is the first time the student has received instruction using the model, apply the question modification process to enable the student to understand the questions and, if necessary, reword them.

Phase 2 consists of four Student Questions:

(1) What can I do to learn what I don't know?
(2) What could keep me from taking action?
(3) What can I do to remove these barriers?
(4) When will I take action?

As with Phase 1, we have developed a worksheet (next page) that would enable students to track their answers to each question.

What can I do to learn what I don't know? What could keep me from taking action? What can I do to remove these barriers? Because these three questions form a logical flow to enable the student to form an action plan to address the goal identified in Phase 1, we will consider their implementation together. The Teacher Objectives linked to these questions are to:

(1) Enable student to self-evaluate current status and self-identified goal status.
(2) Enable student to determine plan of action to bridge gap between self-evaluated current status and self-identified goal status.
(3) Collaborate with student to identify most appropriate instructional strategies.
(4) Teach student needed student-directed strategies.
(5) Support student to implement student-directed learning strategies.
(6) Provide mutually agreed upon teacher-directed instruction.

Enable student to self-evaluate current status and goal status. Phase 1 was completed with the student identifying his or her goal and the criteria by which progress
Student's Name

Problem to Solve: What is my plan?

I began working on this problem on __________________________ Date you started

What can I do to learn what I don't know? __________________________

What could keep me from taking action? __________________________

What can I do to remove these barriers? __________________________

When will I take action? __________________________

I've solved the second problem! Begin work on my plan, and go to the next problem.
on that goal will be evaluated. **Phase 2** begins with students evaluating current status compared to the mastery criteria set at the end of **Phase 2**. In more technical terms, this is the baseline data collection process, and these data will be the benchmark by which students will judge progress toward their goal.

**Devise plan of action to bridge gap.** Once the current status has been established, have the student begin the action-planning process by identifying a plan of action (learn skill or construct, modify environment), removing barriers that keep the student from implementing this plan and identifying instructional strategies, both teacher and student-directed, that will enable the student to learn the skill or concept.

**Identify instructional strategies.** Students will have little knowledge of or, perhaps, interest in the specific instructional strategies that might be the best way to address the instructional need. The teacher should inform the student of the various options that may exist. In some ways, you are preparing a menu from which students could participate in the selection of the strategies. The first line of selection for instructional strategies should be student-directed strategies, but there are some skills and concepts that are best addressed with teacher-directed strategies. In fact, it would be entirely consistent with self-directed learning if students delegated the responsibility for selecting strategies to the teacher. The key is that the student has an equal voice in the process. Particularly in cases where there is a strong rapport and trust between the student and teacher, the student may reasonably decide that designing instructional strategies is an activity for which teachers are well prepared, and turn actual decision-making responsibility for instructional strategy selection over to the teacher.

**Teach self-directed learning strategies.** As was emphasized at the beginning of this chapter, many students will not know how to set goals, self-instruct, self-reinforce, or engage in any of the self-directed learning strategies. Teachers will need to teach students to use those strategies in preparation for actually having the student use the strategy to set or achieve the goal.

**Provide teacher-directed instruction.** As discussed previously, this model does not prohibit the use of traditional teacher-directed activities, but instead places the responsibility for determining if teacher-directed strategies are the best course of action with both the student and the teacher.

Outcomes of **Student Questions 5, 6, & 7.** The outcome of these questions is that students have information on current status (e.g., baseline data) and goal status; have identified a plan of action, complete with instructional strategies; and have removed barriers to implementing that plan.

**When will I take action?** Teacher objectives associated with this question include:

1. Enable student to determine schedule for action plan.
2. Enable student to implement action plan.
3. Enable student to self-monitor progress.
The final question in this phase launches the student on implementing the plan he or she has designed.

**Enable student to determine schedule for action plan.** The final step in designing the action plan is to place activities into a time frame. Students should be encouraged to plan out details, including how much time per day/week he or she will devote to implementing the plan and how long he or she will implement the plan before evaluating progress (Phase 3). It would be useful to provide some way for students to visualize and record this schedule, including using a calendar and tracking the hours spent implementing the plan.

**Implement plan.** Once a schedule is set, the action plan should be set into motion, with the student receiving instruction, removing environmental barriers, and so forth.

**Self-monitor progress.** In Phase 3, students self-evaluate their progress toward achieving their goals. That evaluation is based on a basic determination if students have achieved their goals and, if not, what revisions are necessary. For a variety of reasons, it is useful to have students monitor their progress throughout the action plan implementation. First, self-monitoring has the benefit of focusing students' attention on the task itself, basically serving as an antecedent cue for learning. Second, the self-monitoring process provides multiple measurement or data collection points which the student can use during the self-evaluation phase. The purpose of self-monitoring is not to make a decision about progress, but to record information that can be used when the time comes to do so.

**Outcomes of Student Question 8.** The outcome of this question is that students solve the problem of "What is my plan?" by putting in the final piece of the plan (when?) and then implement the plan, putting in place a self-monitoring system to provide information for later evaluation purposes.

**Implementing Phase 3: Adjust Goal or Plan**

The purpose of the third instructional phase (see Table 4.3) is to support students to solve the problem "What have I learned?" Again, if this is the first time the student has received instruction using the model, the question modification process should be applied to enable the student to understand each question and, if necessary, to reword that question.

Phase 3 consists of four **Student Questions**:

1. What actions have I taken?
2. What barriers have been removed?
3. What has changed about what I don't know?
4. Do I know what I want to know?
Problem to Solve: What have I learned?

I began working on this problem on ____________________ Date you started

What actions have I taken? ____________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________

What barriers have been removed? ______________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________

What has changed about what I don't know? ______________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________

Do I know what I want to know? _______________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
Figure 4.3 Syntax of Phase 3

Phase 3: Adjust Goal or Plan

Educational Supports
- Self-Evaluation Strategies
- Goal Setting
- Choice-Making Instruction
- Problem-Solving Instruction
- Decision-Making Instruction
- Goal-Setting Instruction
- Self-Reinforcement Strategies
- Self-Monitoring Strategies
- Self-Recording Strategy

Student Problem to Solve: What have I learned?

Student Question 9: What actions have I taken?

Teacher Objectives
- Enable student to self-evaluate progress toward goal achievement.

Student Question 10: What barriers have been removed?

Teacher Objectives
- Collaborate with student to compare progress with desired outcomes.

Student Question 11: What has changed about what I don’t know?

Teacher Objectives
- Support student to re-evaluate goal if progress is insufficient.
- Assist student to decide if goal remains the same or changes.
- Collaborate with student to identify if action plan is adequate or inadequate given revised or retained goal.
- Assist student to change action plan if necessary.

Student Question 12: Do I know what I want to know?

Teacher Objectives
- Enable student to decide if progress is adequate, in adequate, or if goal has been achieved

Mastery

Is goal the right goal?
- Yes
- No

Is action plan still good?
- Yes
- No

Continue to implement current action plan.

No

Return to Phase 1 and set new goal.

No

Return to Phase 2 and make new action plan.

What actions have I taken? What barriers have been removed? These two questions form a causal chain that leads the student through a process of self-evaluation that provides the information, they need to make decisions about their progress and their next actions. This phase is an important one and is often missing from other models that focus primarily on goal-directed behavior. Through repeated use of this process, students should develop greater capacity to evaluate the effectiveness of their actions and to revise their actions accordingly. Because they are closely associated, it is useful to consider implementation of Student Questions 9 and 10 together. Student Questions 11 and 12 are also linked, and will be considered together.
Teacher objectives associated with Student Questions 9 & 10 include:

1. Enable student to self-evaluate progress toward goal achievement.
2. Collaborate with student to compare progress with desired outcomes.

Self-evaluate progress. The student should use the information gathered through the self-monitoring process and repeat the evaluation used to determine current goal status in order to determine the revised current status.

Compare progress. Once all the information is in place, assist the student to compare his or her revised current status with the initial or baseline status.

What has changed about what I don't know? Do I know what I want to know? The final two questions use the information gathered in the previous two questions in order to make a decision about future actions toward the goal. Teacher Objectives related to these questions include:

1. Support student to re-evaluate goal if progress is insufficient.
2. Assist student to decide if goal remains the same or changes.
3. Collaborate with student to identify if action plan is adequate given revised or retained goal.
4. Assist student to change action plan if necessary.

Determine what has changed. The process to examine what has changed in Student Question 11 should eventually lead the student to one of three conclusions:

1. Progress is adequate, but I'm not quite there yet!
2. Progress has been adequate, and the goal has been achieved.
3. Progress is inadequate.

Each conclusion leads to different actions, and those actions depend upon adequacy of the student's progress toward the goal and their evaluation of the utility of the goal and efficacy of the action plan. In addressing Student Question 11, teachers should work with students to take the information they have gathered from Student Questions 9 and 10 (e.g., their progress toward achieving the goal) and use that to evaluate the goal (Too broad? To specific? Too hard? Too easy? Okay?), the criteria (Good indicator? Poor indicator? Too hard to measure?), and the action plan (Effective? Ineffective? Need new or different strategies? Need to focus more time on implementing actions?).

Decide if progress is adequate, inadequate, or goal achieved. Once all the information and analysis is over, it is time for a decision. Each of the three potential conclusions from the data have different actions that students should pursue:

- Progress is adequate, but I'm not quite there yet!
Action Options
1. Keep working on current goal, using present criteria and current action plan. Repeat Phase 3 implementation after predetermined time to conduct re-evaluation.
2. Return to Phase 1 and revise goal or criteria if necessary. Implement Phases 1 - 3 accordingly.
3. Return to Phase 2 and revise action plan to implement new or revised strategies or to spend more time on action plan implementation. Implement Phases 2 - 3 accordingly.

» Progress is inadequate.

Action Options
1. Return to Phase 1 and revise goal or criteria. Implement Phases 1 - 3 accordingly.
2. Return to Phase 2 and revise action plan. Implement Phases 2 - 3 accordingly.

» Progress has been adequate, and the goal has been achieved.

Action Options
1. Return to Phase 1 and select new instructional need.
CHAPTER 5
Social System

The social system in which the Self-Determined Learning Model of Instruction should be implemented was described in Chapter 3 as one in which a learning community is created and supported. The social system of a model "describes student and teacher roles and relationships and the kind of norms that are encouraged" (Joyce & Weil, 1980, p. 15). Although we have emphasized several components of the social system for this model in previous chapters, it is useful to describe the type of learning community within which the model can be successfully implemented, and to elaborate on student and teacher roles.

Creating a Learning Community

The "norm" for the traditional teacher-directed classroom was described by Sarason (see Chapter 1) as one in which students do what teachers tell them to do. The classroom norms, both in terms of environment and structure, that will promote implementation of the Self-Determined Learning Model of Instruction are best illustrated in classrooms organized as "learning communities." The teacher's assumption in such classrooms is that the students in the class represent a group who have shared tasks to accomplish, yet have differing personalities and abilities to bring to that task. This model focuses on students as "important contributors to their own and others' learning, rather than the teacher as the source of all knowledge and as the only one responsible for creating the opportunity to learn" (Book & Putnam, 1992, p. 19). Book and Putnam (1992) identified three stages in the development of the classroom as a learning community in which students are actively involved. The first stage in the process, Beginnings, focuses on five primary tasks. Teachers should:

1. Inform students about life in a classroom learning community, with the emphasis on class members as a community;
2. Help students learn each others' names, become acquainted and begin to build trust among community members;
3. Foster appreciation of other students' multiple abilities;
4. Promote students developing a voice in the learning community;
5. Assess what students know and can do and use as a database for reflection (Book and Putnam, 1992; p. 23).

As Book and Putnam (1992) described it, "life in a classroom learning community" emphasizes the value of differences among students, participation, open communication, the importance of learning from mistakes, and the need to learn from and respect others in the community. To foster an appreciation of other students' abilities, they recommend designing group projects in which each student contributes something unique to the completion of the project. In such circumstances, students learn that their own goals and objectives can be reached by working with others who

The teacher's assumption in learning communities is that students in the class represent a group who have shared tasks to accomplish, yet have differing personalities and abilities to bring to that task.

Life in a classroom learning community emphasizes the value of differences among students, participation, open communication, the importance of learning from mistakes, and the need to learn from and respect others in the community.
have different talents and abilities. Teachers need to reinforce the importance of open communication and the value of students’ opinions and input to the learning community. Students are encouraged to ask questions, of themselves, their teachers and their peers, and are encouraged to show ongoing respect for themselves and others in the course of these interactions. Finally, this first stage of building a learning community focuses on determining what students know and do well, and works from that vantage point, as opposed to identifying deficiencies and starting there.

The second stage in the process of building a learning community is to establish expectations. Book and Putnam (1992) describe this stage as one:

In which the teacher and students build shared understanding through making norms, roles, rules and procedures explicit by providing students with
(a) descriptions,
(b) reasons for their existence,
(c) illustrations of what they look like in the learning community,
(d) practice opportunities,
(e) feedback to individuals and groups, and
(f) consequences to the individual and community when the norms, roles, rules, and procedures are not followed (p. 26).

At this stage, teachers work with students to establish appropriate behavioral norms for interactions within the community. Such norms include demonstrating respect for one another by listening, responding, questioning, and working cooperatively to solve problems and achieve mutually identified goals. The roles of each student within the community are defined and assigned. There are individual roles (small-group facilitator, timer, recorder, etc.) and group roles. Group roles involve those roles that all students are expected to undertake, including contributing to discussions, giving information, or asking questions. Based on these established norms and roles, community rules and classroom procedures can be established.

The next stage in the process of building a community learning environment is to identify and resolve the inevitable conflicts that emerge in any group. A key feature of a learning community is that power is distributed among members of the class, as well as teachers. However, as was emphasized in the discussion about power in the classroom, it is still the teacher’s role to use power to facilitate learning. One such use of power will be to resolve behavior problems. Conflict resolution strategies become important ways to structure problem solving and support within a learning environment. The fourth stage of building a learning community is to expand the community. This involves the use of a wider variety of instructional strategies across different environments outside of the classroom. Students may engage in project-related activities in alternative learning environments, such as a museum.

By creating a classroom climate that focuses on building a learning community, teachers, in essence, redefine their role as the power broker and enable students to take greater ownership over the classroom and their learning. It seems evident that student-involvement programs and self-directed learning strategies will thrive in such classrooms.
Peer Mediated and Cooperative Learning

A key component of creating a learning community is the use of peer-mediated and cooperative learning techniques. Research suggests that systematic use of cooperative learning can improve attitudes toward school, improve academic achievement and increase socialization (Berndt & Keefe, 1992). Cooperative learning involves situations in which students work together to reach common goals (Putnam, 1993). There are many benefits to cooperative learning, if it is implemented effectively. Cooperative learning teaches students cooperation skills, provides the perfect conditions for students to learn goal-oriented behavior, and provides opportunities for social interactions and the establishment of friendships. In addition, cooperative learning groups can provide an ideal support system for a student with special learning needs.

Teacher's Role in the Self-Determined Learning Model of Instruction

The teacher’s role in implementing the Self-Determined Learning Model of Instruction is both different from the more traditional teacher-directed process, and as important. As we alluded to earlier, the success of the model is dependent upon the effectiveness of the teacher. The teacher’s role in the Self-Determined Learning Model of Instruction combines a number of roles, facilitator, teacher, and advocate. In some ways, it may be more difficult to successfully assume and balance these roles than it is to rely on traditional teacher-directed and controlled activities, but if students are to become self-determined, self-directed young people, it will be necessary to accept the challenge of balancing these roles.

Facilitator. The growing use of person-centered planning procedures has acclimated many teachers to the role of facilitator. A facilitator’s responsibility is to do whatever it takes to enable the student to succeed. As a facilitator, you need to provide support without seeming to be the authoritarian figure who has all the answers. Students’ self-understanding and self-awareness will only emerge in a non-judgmental atmosphere where their efforts are valued and supported.

Teacher. A teacher, by definition, is someone who has expertise in an area and whose job it is to use that expertise to change students. As discussed previously, the model recognizes that this expertise exists, and encourages students to recognize that teachers are a valuable resource for achieving desired student goals. The student will need to tap into that expertise and information if he or she is to succeed. The key is that the student is an active partner in the educational process.

Advocate. The third role is one of advocacy. In this sense, it is not intended to mean advocacy on behalf of the student against any particular event or entity. Instead, the teacher’s role is to communicate to the student that she can succeed, that she will be provided support throughout the process and that the shared goal is a successful transition. This may mean that teachers do have to advocate on behalf of
the student, however, the important aspect of this role is that teachers work collaboratively with students to achieve a shared goal.

**Student's Role in the Self-Determined Learning Model of Instruction**

As has been emphasized throughout this Guide, the role of the student in the Self-Determined Learning Model of Instruction is an active one, in which students become equal partners in and have greater control over their educational process. The levels of supports needed by students to self-direct learning will vary considerably, but, as was discussed in relation to self-determination, it is not the intent that only students who can independently perform tasks like goal setting or decision-making should receive instruction using this model. It is our assumption that virtually all students can benefit from increased opportunities to take greater control over and responsibility for learning. To this degree, the question should not be "Can this student receive instruction with the model?" based on concerns about level or type of disability or age, but instead the question of merit is "What supports are necessary to enable the student to direct learning to his or her maximum extent?"
CHAPTER 6
Principles of Reaction and Support Systems

Principles of reaction provide teachers with guidelines about how to respond and interact with students when implementing the model. Support systems refer to other aspects of the educational process that will impact the implementation of the model.

The primary principle of reaction, as suggested throughout the Guide, is that teachers are to minimize the degree to which they control or direct students while ensuring that learning is occurring. Other principles of reaction vary according to the type of instructional strategy selected to achieve the goal, and, to the extent feasible, should be evident from the descriptions in Section 2.

One important way that children learn self-determination is by observing their parents and other adults as they make decisions, solve problems and achieve goals. Modeling appropriate behaviors is, at a fundamental level, an instructional technique and thus an Educational Support. However, since teachers model behavior all the time to students, intentionally or unintentionally, a description of effective modeling falls as much under the purview of principles of reaction as a specific strategy, and it is worth reviewing the "how to" of modeling behavior.

Effective Modeling

According to Albert Bandura's Social Learning Theory (1997), there are several component processes which govern the degree to which an individual learns through modeling. Teachers employing modeling as a strategy need to keep aspects of each of these components in mind to ensure success. There are several attentional processes, pertaining to both the model and the observer, which govern observational learning.

Several characteristics of the model stimuli (e.g., that behavior which is being modeled) influence learning. Perhaps most importantly, the stimuli needs to be distinct and observers must be able to clearly differentiate the modeled behavior. The purpose of using modeling as a teaching strategy is to transmit information about how to perform a specific behavior or action to observers. It seems self-evident that the success of that information transmission will be related to how clearly the behavior is modeled.

The success of modeling will also be influenced by the "affective valence" of the model, the complexity of the modeled behavior and the frequency with which the student sees the behavior modeled. The affective valence of the model, or the emotional strength of the model, can be influenced by the choice of the model or the
Behaviors modeled in circumstances which are motivating, interesting and reinforcing to the student may have more impact than behaviors modeled in less reinforcing situations. Observer characteristics also play a role in the success of modeling at the attentional phase, as would be expected. First, teachers need to take into account the capacity of the student to perceive the modeled behavior. This is particularly important for students with visual, hearing or physical impairments. Students may need accommodations to benefit from modeled behavior. Such accommodation may be as simple as making sure that a student with a visual or hearing impairment is seated close to the model, to as complex as providing a videotape of the modeled behavior with appropriate supports (closed captioning, large screen). Similarly, accommodations may be necessary for students with cognitive impairments, which may not impact the sensation or perception of the event (e.g., whether the student sees or hears the event), but instead the actual cognitive processing of the modeled behavior. Such accommodations include making the modeled behavior simple and highly differentiated from other behavior, providing repeated exposures to the modeled behavior, or, in some instances, providing specific training on observation or imitation skills.

Behavior complexity and repetition are important variables to the success of modeling for all students. The more complex the behavior, the more important it is that students have multiple opportunities to observe the modeled behavior. Thus, modeling goal-setting, problem-solving or decision-making behavior is most likely to be effective only if students see repeated examples of these behaviors. An additional consideration when using modeling as a strategy would be to model a behavior in multiple environments to promote generalization.

The second process influencing the impact of modeling involves student retention of the modeled behavior. Simply put, if students don’t remember what they see, they will be unlikely to learn that behavior! As indicated in this text, a number of self-management strategies can be used to enhance retention (e.g., self-instructions, picture prompts on self-monitoring forms. However, probably the best way to ensure that students remember the modeled behavior or action is by having students rehearse that behavior. This could include motor practice, (physically repeating the behavior as modeled immediately after the model performs the behavior), or verbal practice (for example, repeating a metacognitive strategy to solve problems). The third process, motor reproduction processes, deals not with practicing the behavior but with the actual reproduction of the behavior in other settings and removed from the actual modeling situation. In order to replicate the preferred behavior pattern, students need to have adequate social and behavioral skills in their repertoire. Again, students with disabilities may require some accommodations to achieve adequate reproduction of the desired behavior. Bandura (1977) also emphasized the importance of self-regulated learning in this phase and the next (motivational processes).
In both phases, students need to learn self-observation and self-reinforcement skills.

One criticism of the use of modeling is that students are expected to simply repeat exactly what they see, thus stifling creativity and individuality. However, contrary to this expectation, research on the use and effects of modeling as a teaching strategy indicate that observers usually do not pattern their behavior after a single source, but instead accommodate aspects of preferred models into a unique behavior pattern (Bandura, 1977).

By observing modeled behavior, students can learn much about skills important for successful transitions. In fact, it can be argued that one of the most important skills a person can take with them to the workplace or into interactions with others in the community is the capacity to learn from watching what others are doing. So, for example, while specific job skills are important for a potential employee to possess, there is simply no way that every possible workplace skill can be predicted, more or less learned, before the employee enters the workforce. As such it is critical that students be able to learn by watching others perform similar jobs.

Support Systems

Campus and District level issues in student-directed learning. Holding a value for and providing opportunities for increased student involvement does not stop at the classroom door, and there are variables outside the classroom that will influence the implementation of the model. Teachers do not operate in a vacuum, and while an effective classroom teacher can make a tremendous difference, he or she cannot act alone and ultimately succeed. One such factor is the school climate and governance, which are important to support teachers to create learning communities.

Golarz and Golarz (1995) summarized research examining effective schools and identified three overarching characteristics of successful schools:

1. High levels of parental involvement and support
2. Collaborative collegial instructional planning
3. Individual school autonomy and the resulting flexibility

Such schools adopt a participatory governance, where “participatory governance” is defined as “the transfer of authority and responsibility from those who hold power by virtue of law, contract or organizational role to those not so empowered” (Golarz & Golarz, 1995, p. 4). Schools that succeed are schools in which the power structure is not hierarchical, descending from school board member to administrator to teacher and, finally, to the student. Instead, the power structure of such schools actively involve all constituents, including parents, teachers, and students, in decision-making processes. Student involvement, as such, is as much a part of school reform as it is a component of transition planning. Thus, when individual schools and the district hold a positive value for student involvement, teachers are empowered to act in ways that facilitate this outcome.
The **Self-Determined Learning Model of Instruction** is a teaching model that can be used in virtually any setting. However, it is our unambiguous belief that the environment that most closely aligns with the commitment to supporting student involvement for adolescents with disabilities is the inclusive classroom. Students with and without disabilities need to become effective self-regulated problem-solvers, and we believe that the regular classroom environment is the optimal learning environment in which to implement the model.

Moreover, not only is inclusion important to promoting student-directed learning, so too is student directed learning important to the success of inclusion. Creating an inclusive school or community for students with severe disabilities has become a shared goal for many educators (Giangreco & Putnam, 1991; Hunt, et al., 1993; Kennedy & Itkonen, 1994; Stainback & Stainback, 1992; Thousand & Villa, 1990). Sands and Wehmeyer (1996) noted that the self-determination movement was closely aligned with the inclusion and school reform movements. The success of inclusive educational experiences of students with disabilities is dependent on the availability of appropriate supports (e.g., teachers, paraprofessionals, peers, friends, etc.). Such supports provide students appropriate models of behavior, opportunities for social interaction and friendship building, and promote integration (Ryndak & Alper, 1996).

However, there is a growing realization that if inclusion is to succeed, we must maximize the participation of students with severe disabilities in decisions in school and in the community that affect their lives; that is, to enable students to become self-determined and self-direct learning (McDonnell, Hardman, McDonnell, & Kiefer-O’Donnell, 1995; Wehmeyer, Agran, & Hughes, 1997). Essentially, students need to learn that they can serve as their own “supports.” By using student-directed learning strategies, students can assume greater control over their own lives and the management of their behavior. This will provide students with increased competence and respect from others (Lovett, Pierce, & Harding, 1994), and will provide a powerful strategy to enhance inclusion and self-determination.
Section 2

Educational Supports for The Self-Determined Learning Model of Instruction
INTRODUCTION

As indicated previously in this guide, the *Self-Determined Learning Model of Instruction* is designed to enable students to become self-regulated problem-solvers and to self-direct learning. Inherent in the model is the strong conviction that to achieve self-selected goals, the student must act upon his or her environment — in other words, serve as the causal agent in his or her own life. In a broad sense this refers to a problem-solving process in which the student is taught to problem solve to identify their goal, identify their action plan, to achieve those goals, and identify what they have learned. Specifically, it involves the student’s use of one or more self-management or student-directed learning strategies, which in the current guide we will refer to as educational supports. Many of these educational supports allow students to direct and manage their own behavior, independent of external manipulation by others; in short, to support themselves. Other supports remain teacher-directed, but the student is the decision-maker as to whether they receive instruction using such supports. In both cases, these supports permit the student to become the primary change agent in his or her life.

Apart from the specific goals set, teaching the student to serve in this capacity is highly desirable and sets the stage for promoting self-determination and self-sufficiency. Thus, desired change—achievement of self-selected goals—can be assessed across two dimensions: the extent to which the goal has been achieved (e.g., the educational efficacy of the teaching model), and the extent to which the student was actively engaged in the entire educational process. To achieve the former, we must teach the student to be involved in the latter.

The education supports described in this section include those identified in Tables 3.1, 3.2 and 3.3. Each of these supports is described in this section, using the following format. First, an overview is presented, and a description on how this strategy fits into the *Self-Determined Learning Model of Instruction* is provided. Following, the cost of delivery, the support needed, and the strategy’s amenability to behavior change are discussed. Next, a functional analysis of the strategy is presented. Then, the behaviors most amenable to change are suggested. Last, recommendations on how to teach the strategy are presented.
Educational Support

Choice- and Decision-Making Instruction

Overview
Choice-making has been frequently cited as the single most critical factor in determining an individual’s quality of life and one's involvement in making decisions about one's life is also clearly a critical component of a more positive quality of life. Choice-making and decision-making are vital skills that students must be given opportunities to learn and practice to promote and enhance their quality of life and develop and acquire self-determination. Educational settings can be effective environments for teaching students these skills.

Choice making has been identified as having two components: “the act of choosing and the identification of a preference (Reid, Parsons, & Green, 1991).” The first component involves identifying one's preference between two or more alternatives, and the second focuses on communicating that preference the preference. Although there is a strong similarity between choice making and decision making, there is a major difference. Decision-making refers to a broader set of skills than that of choice making; it incorporates choice making as but one of its elements. Specifically, decision-making is a process of weighing or judging the adequacy of a variety of solutions to identify a preferred alternative and incorporates both a choice-making step and a problem-solving step. Without these skills individuals will continue to have little control or power over their own lives, with other persons continuing to make decisions for them. They will remain “other-” determined rather than self-determined.

Relevance to Self-Determined Learning Model of Instruction
Students will engage in choice-making and decision-making activities across all three phases of the Self-Determined Learning Model of Instruction. As students strive to generate responses to Student Questions in Phase 1, Set a Goal, they identify strengths and instructional needs, and communicate preferences, interests, beliefs, and values. They list personal priorities, resources, and barriers. Once all the relevant information is “on the table,” they must make choices and take decisions.

Through instruction in Phase 2: Take Action students decide on an action plan to achieve the goal they set in the previous phase. This process guides them through self-evaluation of their current status versus their goal status (Student Question 5: “What can I do to learn what I don’t know?”). This phase
teaches students how to determine a plan of action to bridge the gap between their current status and their goal status. Once that action plan is determined, teachers collaborate with students to decide which instructional strategies and educational supports will be best suited for the student given his or her instructional needs and the nature of the goal. Also, students will learn to determine what time frame or schedule is feasible for their action plans (i.e., “I will have to work 1 hour a day for the next 3 weeks to finish sewing my dress in time for the prom.”)

Student Questions in Phase 3: Adjust Goal or Plan involve decision making in the self-evaluation process, making decisions about what barriers have been removed through implementation of the action plans, and determining if the action plan was adequate. The student also makes choices and takes decisions in this phase about if and how the action plan should be changed, or adapted.

Cost of Delivery
Students must be given the opportunity, with teacher facilitation, to learn the steps and practice the processes of making choices and decisions. The amount of time required to successfully teach and implement the strategies will be dependent on the students’ capabilities, self-knowledge, and previous experience. Given the potentially reinforcing quality of choice-making (i.e., providing the student with an opportunity to select what he or she desires), it is anticipated that these skills can be taught in a few instructional sessions (e.g., two to four sessions).

Many adolescents will already be quite proficient at making choices and may not need explicit instruction to learn how to make choices. Particularly, however, for students with more significant cognitive disabilities who have led relatively sheltered lives and haven't had sufficient opportunities to express preferences and make choices, there may be a need to provide explicit instruction or to provide students with instruction in more appropriate or effective ways to communicate preferences. For example, a student might consistently act aggressively or in another equally inappropriate manner to communicate specific wants or needs. As such, teaching choice-making skills might involve teaching the student to communicate his or her preferences in a different manner. Similarly, a student with a learning disability may be able to perform most of the steps in the decision-making process and require instruction to learn only one or two steps.

Some students may not be able to independently perform all steps of the decision-making process and as such teachers should provide necessary accommodations that enable the student to compensate for limitations to their decision-making capacity and then enable students to perform all steps of the process at their maximal level of participation.
Support Needed

Teachers have a variety of ways they can provide opportunities for students to make choices and decisions. The number of choice-making opportunities offered, the types of choices, and the manner of presenting options will vary depending on the student’s capabilities, the environment, and available resources. A teacher can present a variety of options to students either individually or two at a time, or an array of options can be presented and the student’s response noted. The manner in which options for choice-making are presented also can vary, ranging from simple questioning to presenting an object representing an option, to providing an activity, or demonstrating an option. Options can also be generated through the process of individual or group brainstorming or in-group discussion. Teachers can also pose questions intended to probe the student’s preferences, interests, values, resources, and dreams.

Teachers need to work closely with students in the decision-making process to guide them through the process of listing a wide range of alternative courses of action and identifying possible consequences of those options. For instance, if Juan wants to improve his physical health, he and his teacher can brainstorm options (i.e., take weight training class in school, join an athletic club, improve diet, purchase exercise equipment to be used at home). As they begin to talk about possible consequences of each option, Juan expresses a preference for taking weight training during school time over going to an athletic club in the evening since he does not want to give up time with his family and friends in the evening. Also, transportation is a problem that will limit his ability to consistently get to a gym. He thinks he would enjoy working out with and getting to know some of the members of the football team who are in the weight training class. Because of space limitations, Juan decides he cannot accommodate exercise equipment at home. He said he loves to eat so he will likely not follow through with a diet. He wants to focus on exercise first, then tackle diet issues later, if his initial results with exercise alone are not satisfactory. Juan and his teacher talk about the fact that he will likely make new friends in a weight training class, and that will be an added benefit to this choice. One possible drawback of the decision is that he will probably delay the achievement of his goal because exercise is not immediately coupled with improved diet. According to this pattern, teachers facilitate students as they survey a full range of objectives and values implicated by the choice, carefully weighing the positive and negative consequences associated with each alternative.

Next, teachers need to encourage students to search for new and relevant information that may have an impact on their decisions and to incorporate this information even when it may be unpleasant. Using the example of Juan and the goal of improving his physical fitness, the teacher may discuss the possibility that Juan visit his family physician for an exam and request recommendations about how to proceed with his plan. His teacher may also encourage him to visit the library, search the internet, or talk to the
weight training coach about how he can proceed. Once all the information is compiled and reviewed, Juan’s teacher facilitates his planning process allowing for the implementation of the decision.

Because the decision-making process may involve some risk, it is important for teachers to discuss the concept of uncertainty (i.e., “What is uncertainty? Are there different kinds?) and its relationship to the amount of information a student may have in the decision-making process. For example, if a student is considering the purchase of a 1964 vehicle, there are risk factors about the car’s mechanical reliability that might be raised due to it’s age. The student can reduce the risks associated with purchasing an older car by having it checked out by a good mechanic. An estimate of needed repairs and their respective costs could be provided. If the base cost of the car and the cost of repairs are within reason, the student may determine that the benefit of saving money on the purchase and insurance costs of an older car will offset the risks of additional repair costs. Of course, there is no guarantee that because a mechanic has evaluated a car and found it to be in good operating condition, the vehicle will be problem free over the next few months or years. Students need to understand that risks and benefits are not certain, but can often be evaluated with the particular student in mind with some degree of accuracy.

Teacher support in the choice- and decision-making processes is essential. Students will require mentoring and facilitation to learn and refine their skills in these processes. Teaching the steps of each process can be accomplished through direct instruction, in a group, or with an individual student. However, guiding students through the actual processes will likely require some one-on-one time. Some students may be able to work in small groups to generate alternative courses of action, discuss consequences, and search for new information but teacher guidance is essential even under these circumstances.

Functional Analysis
There is mounting evidence confirming the positive contributions of choice- and decision-making behaviors to students’ personal lives and their academic outcomes (Doll & Sands, 1998). Since these skills are not naturally acquired by some students, the skills may need to be overtly taught. Educational environments can facilitate student choice and decision making skill acquisition by teaching the processes, providing opportunities for student practice, and by providing support and feedback.

Choice-Making
As we have indicated, most people are already proficient at making choices, but needed educational activities revolve around providing students with the opportunity to make choices within the educational setting, and teaching students how to effectively communicate preferences. The latter can be
accomplished through a variety of means, from teaching more effective communication skills (listening, communicating effectively) to providing alternative or augmentative communication devices.

To achieve increased opportunities for students to make choices at school, Brown and colleagues (1993) developed a *Model of Choice Diversity* for embedding choice-making opportunities throughout the natural course of a student's day. The model identifies seven potential areas of choice within an instructional activity: (a) choice of materials, (b) choice among different activities, (c) choice to refuse to participate in an activity, (d) choice of persons to be included or excluded in an activity, (e) choice of location of an activity, (f) choice of time an activity should occur, and (g) choice to end a particular activity. Teachers can enhance student choice-making opportunities in each of these areas.

A number of studies have reported success using the choice training procedure developed by Wuerch and Voeltz (1982) to teach students with mental retardation to make choices related to leisure activities (e.g., Nietupski et al., 1986). This procedure involves providing students with a choice between two or more previously learned leisure-time activities and reinforcing students when they make a choice or prompting them when they do not. Subsequently, students are given access to the chosen activity and prompted to engage in the activity for increasing periods of time. Nietupski and colleagues (1986) used *Choice Charts* to provide picture and written word examples of activities (e.g., video games, magazines, stationary bicycle) when implementing the choice training procedure with teenagers with moderate to severe mental retardation.

**Decision-Making**

The decision-making process includes five steps. Students begin the process by listing all the possible options and alternatives that have relevance and importance to their goals. Next, they identify the possible consequences of those actions. Following, the students assess the probability of each consequence occurring; they ask themselves questions about likely outcomes (i.e., "If I increase my running practice by 10 minutes each day, will I increase my chances of becoming a stronger runner?"). Step number four requires students to determine the relative importance or value of each consequence; students decide what alternative has the most benefit and the fewest negative consequences. Finally, they integrate their preferences, interests, and values to identify the most attractive or desirable course of action. By encouraging students to express their preferences and interests and make choices and decisions, schools can promote self-determination as an educational outcome.

In a study done by Tymchuk, Andron and Rahbar (1988), women with mental retardation who had children were taught decision-making skills through vignettes describing child-raising situations. Four vignettes, each describing a different situation, were presented by a trainer. As each vignette was introduced, the trainer guided participants through the steps of the decision-making process (i.e.,
decision identification, goal definition, who should make the decision and where help can be obtained, alternatives and weighing risks, selection of an optimal decision. The trainer verbally reinforced each appropriate response and provided guided feedback on incorrect responses. To generalize the training, participants were then asked to address additional vignettes. Results indicated that there were significant improvements in decision-making step identification and use as well as improvement in the appropriateness of decisions in high-risk situations. Training was offered through lecture and discussion formats. Tymchuk et al. suggests that the same model of instruction would be equally effective for such topics as alcohol use, sexuality and sexually transmitted diseases, safety, hygiene, employment, and independent living. The instructional strategies used in Tymchuk et al.'s study can be coupled with Mithaug's (1996) suggestion that skills learned through direct instruction be used frequently with varied opportunities to make choices and decisions in order for the skills to persist and be used by a student in his or her natural environment.

Wentzel (1992) maintains that educational environments afford students many opportunities to pursue academic and social goals. Students can be provided with repeated opportunities to be involved in daily choice- and decision making through daily scheduling of what they want to eat, what leisure activities they want to participate in, and what academics they prefer to work on. From a global perspective, they can use their choice- and decision-making skills in futures planning, life planning, and IEP planning. Student motivation is increased when students recognize that they can systematically affect their interactions in the environment. By regularly providing students with a variety of opportunities to practice choice- and decision-making skills, teachers can enhance student success. Further, teaching them the skills of self instruction, self evaluation, self monitoring, and other strategies from the Self Determined Learning Model of Instruction will increase the effectiveness of their choice- and decision-making skills (Wehmeyer, Agran, & Hughes, 1998).

**Recommended Target Behaviors**

Choice- and decision making are essential to every phase of the *Self-Determined Learning Model of Instruction* and for every possible target behavior. Research indicates that the student's use of these skills may greatly reduce disruptive behavior and other problem behaviors. They have also been shown to increase autonomy-oriented behaviors, awareness of personal strengths and weakness, higher levels of conceptual learning and retention, student involvement and investment in a goal, independent mastery, academic skills, and self-efficacy.

**Instructional Recommendations**

Students often struggle when attempting to decide between alternative courses of action, not knowing which alternative will move them nearer their goal; the *Self-Determined Learning Model of Instruction* provides teachers with
systematic ways to teach students these skills. Facilitating the acquisition of choice- and decision-making skills requires that teachers focus on fostering effective decision makers. An effective decision maker generates a wide range of alternative courses of action; considers a full range of objectives and values implicated by the choice; carefully weighs the positive and negative consequences that could result from each alternative; searches for new information that may have some impact on the decision; incorporates new information even when it is unpleasant (i.e., uses all relevant information, even when it may be inconsistent with what the student thought or hoped it would be); and plans for the implementation of the decision (Mann, Harmoni, & Power 1989).

Decision-making competencies can be fostered by school personnel and families alike by providing children with opportunities to learn and practice the skills previously listed. At home, young people can make choices between desired meals, chores, family activities, and leisure activities. Choices can also be offered to young people about with whom, when, and where they work and participate in activities. In school settings students can be offered choices about with whom they would like to complete a project or if they want to terminate or continue a task or activity, of if they would prefer to work at their desks or at a table. They may also be offered choices between two or more activity options, whether they prefer to study math with flashcards or worksheets, and if they would prefer to do the spelling assignment before or after lunch. Embedding choice in daily routines affords students opportunities to practice and become proficient at choice- and decision making.

The “how to” of teaching choice and decision making skills has been addressed by Doll and Sands (1998), who provide a number of application principles for educators to use in educational settings. They include:

(1) Plan classroom activities such that students are provided with opportunities to set their own goals for learning (at least some of the time). Avoid judging the “correctness” of a student decision by the standard of matching it to an adult decision. Help students recognize that multiple pathways can lead toward a single goal.

(2) Enhance student decision making by extending the list of options from which students make their choices; students are bound only by the optional responses they can envision. One implication of this application principle demonstrated by research is that students who list more solutions to a given social problem are also those who are more socially competent.

(3) When students’ lists of decision options are meager, provide students with additional options that they have not considered. One young man needed transportation to work and was considering the purchase of his friend’s racing car. His teacher suggested that he
check out the local auto auction, while his parents added another option—they would sell him the family’s second car at discounted price.

(4) Before students make their decisions, prompt them to think about what other information they might need to have in order to make an informed decision. Encourage them to verify the accuracy of the information and determine if it is unbiased.

(5) Ask students to think aloud when analyzing their decisions—this allows the teacher to monitor the students’ understanding of key information. Having understandable information that is detailed enough to avert misinterpretations is essential. Dialogue between students and teachers can avert misunderstandings about and misinterpretations of bits of information that may have an impact on the decision outcome.

(6) Encourage students to examine the relevance of information they have collected regarding a particular decision and to discard information that is irrelevant or unimportant. More complex decisions usually require the gathering of more information. Gathering more information oftentimes requires contacting an increased number of sources. Students need to be aware that some sources may have a vested interest in providing biased information, so students should be cautious about how they use it. Young people can be taught to discriminate between valuable and misleading or unimportant information, then discard what is not relevant to their decision.

(7) Coach students to consider the reliability of their information sources, the accuracy of the information, and the degree to which the sources might have a vested interest in influencing student choices.

(8) Provide students with assistance in considering the possible risks and benefits of each different course of action. There is frequently an element of confusion, however, because each course of action may have both positive and negative consequences. Students need to consider the probability of each consequence, and understand that some positive and negative consequences may emerge simultaneously. Students must also be taught that some consequences occur almost immediately, while others may occur days, months, or years later. Be aware that students can envision immediate consequences more easily than those that are expected to occur in the future; further, both adults and students tend to select courses of action which produce immediate positive consequences.

(9) Engage students in analyses of errors in thinking patterns, including their own, and discuss consequences of each decision. Poor decision-making by adolescents has often been attributed to taking
unnecessary risks, but Beyth-Marom and her colleagues (1991) suggest that the trend actually shows how the same consequences are valued differently by adults and teens. Explore the values that students attach to the risks, and discuss beliefs about those risks.

(10) Teach students to reasonably simplify decisions by ruling out some alternatives as unacceptable and then analyze the remaining options before making the decision.

(11) Assist students in comparing the likelihood of different consequences of decisions based on the students’ identified options. Students struggle when they have to compare disparate types of risks (e.g., diminished leisure time due to working extra hours to pay for a car versus more spending money but no vehicle to get around).

(12) Be sensitive to the way that emotions can influence students’ decision making. Many decisions are emotion-laden. Encourage the students to slow down in order to avoid decisions that are biased or hasty. Research indicates that in the face of anxiety or stress, higher-order thinking may diminish. Students often experience emotional interference in decision making when their goals are not in line with the goals of their family members or friends. Some students have a difficult time compromising and/or negotiating in situations of conflict.

(13) Ensure that all students, even those who are reluctant to make decisions, commit to their decisions in writing or make public statements about their decisions.

(14) Remind students to monitor the impact of their decisions, evaluate their effectiveness, and make changes as appropriate. In order to foster on-going purposeful behavior, student involvement in the total process, beginning to end, is essential.

For many educators, turning control for choice- and decision-making over to students represents a radical change. Often educational systems place the primary responsibility for learning on the shoulders of teachers. However, research indicates that learning is most effective when both teachers and students share in that responsibility. Students will never truly share in the responsibility for their learning until they share in the "authority governing their educational experiences" (Doll & Sands, 1998, p. 68). To include students in this authority, they must be involved in decision-making.
Educational Support

Problem-Solving Instruction

Overview

As discussed throughout Section 1, a problem-solving orientation is the foundation for the Self-Determination Learning Model of Instruction. Simply put, the model enables teachers to teach students to be self-regulated problem-solvers. Receiving instruction and supports through the model, students can learn to solve problems. The inability of students with disabilities to solve problems has been frequently reported and observed by professionals, parents, and the students themselves. Functioning successfully at work and in the community requires the ability to determine multiple solutions to multiple problems (Agran & Hughes, 1997), and, regrettably, youth with disabilities have considerable difficulty in this area. When confronted with problems at school, work, or in their communities, they often respond impulsively and do not weigh the consequences of their actions, or do not respond at all. In short, many students with disabilities do not know how to identify problems, or to determine ways to resolve those problems. Without these skills, there is little likelihood that these students will achieve any true sense of autonomy or self-determination.

The maxim that a whole is greater than the sum of its parts is especially true as it applies to problem solving. As noted by Mithaug and colleagues (1998), the primary thrust of the Self-Determined Learning Model of Instruction is to teach students a problem-solving sequence that will allow them to get what they want and to respond optimally to the many uncertainties and difficulties they experience. Consequently, problem-solving not only serves as a specific educational support but, most importantly, it serves as the overriding orientation of the model. Problem solving is the means by which students can use to meet their goals and, ultimately, become self-determined. It represents the student’s key to success.

Relevance to Self-Determined Learning Model of Instruction

As indicated previously (see Chapter 3), the Self-Determined Learning Model of Instruction is based on a problem-solving orientation. As such, problem solving is recommended as an educational support in each of the phases of the model. Phase I involves the students in a series of Student Questions designed to solve the problem "What is my goal?" This corresponds to the first component of any problem solving process—problem identification. To develop an action plan, a student first needs to know what the problem is—what is preventing him or her from achieving a desired outcome. Students
may experience great difficulty changing their circumstances because they do not really know what the basis of their difficulty is. By understanding what the problem is, they can then proceed to figure out what needs to be done to change the situation.

Since Phase 2 involves teaching the student to come up with an action plan and to implement this plan, problem-solving is a support strategy appropriate for this phase. It provides the student with a means to select a course of action (or solution) that is most effective in resolving the problem—that is, narrowing the gap between the student’s current status and his or her goal status. In this phase, the second and third components of problem-solving—designing a solution and implementing the solution—are conducted.

In Phase 3 the student is instructed to evaluate the appropriateness of the action taken and to ask if he or she believes adequate progress has been made to resolve the problem. In this phase the last component of a problem-solving set is executed—evaluating its effectiveness. To ensure that the problem is resolved satisfactorily, it is critical that a self-evaluative procedure be incorporated into the instructional model. This component is included in all problem-solving sets and, by extension, the last phase of the Self-Determined Learning Model of Instruction.

**Cost of Delivery**

Teaching problem-solving is cost effective. The amount of time is ultimately based on two factors. First, should single or multiple solutions to a problem be discussed? For example, when discussing the need to be careful when working in an area that frequently has water spills (e.g., a kitchen), a single solution approach would be to instruct the student to walk around the spill. When discussing multiple solutions, acceptable responses may include walking carefully over the spill, putting cardboard down over the spill, wiping up the spill, etc. The former approach may be more cost efficient but limits the number of responses that can be performed. The latter approach may be confusing to the student if he or she is unable to determine which response is most efficient, but it provides a variety of responses that may be satisfactory to the situation and promotes generalized responding. The teacher needs to determine which approach is best for his or her students.

Second, similar to self-instruction, problem solving can be taught using an individual or group instructional format. In the former format, the student and the teacher can work through the problem-solving sequence. In group instruction, an additional advantage is that it provides ample opportunity for each of the group members to discuss the value of a proposed solution and its relative pros and cons. This expanded discussion can provide added insight to the target student. Again, the teacher will need to determine which approach is best for his or her students.
Support Needed

Similar to most of the educational supports described in this guide, problem-solving can be systematically taught. Role-plays provide an appropriate context for instruction. As indicated previously, problem-solving includes four components: identifying the problem, designing a solution, implementing the solution, and evaluating its effectiveness. Instruction may be directed towards teaching one or all of these skills. Consequently, the amount of support a student receives depends upon his or her instructional needs. Needless to say, students who have a clear idea as to why they are having difficulty in a given situation are in a more advantageous situation than students who have no idea as to why they are not getting what they want and believe that their problems are due either to fate or the meanness of other people. Likewise, students who have had some experience in managing their own behavior—for example, using one or more self-management strategies—may be more motivated and responsive to designing solutions for themselves, then implementing these solutions. Last, students who can discern differences in their own behaviors will move through Phase 3 more quickly.

The type and amount of problem-solving instruction a student should receive depends on his or her instructional needs. A point, however, that should be emphasized is that a student’s facility in problem-solving will greatly promote their movement through the model and, hopefully, later application of the model to everyday problems. Problem solving is a curricular area that has been virtually neglected, and instruction, at some level, should be conducted.

Functional Analysis

A myriad of explanations has been advanced to understand problem-solving. Several researchers have suggested that problem-solving involves teaching a student to modify his or her thoughts or mental representations. The difficulties they may have responding to problematic situations is due to their inability to correctly analyze task demands and process information. They are unable to retrieve pertinent information from previous experience. They do not know how to classify or organize information, or to encode incoming information and relate it to previously stored information (Senf, 1976). The problem is at the level of representation (thinking). Thus, problem solving involves teaching students to develop more acute executive or thinking skills. Instruction, then, involves changes in the student’s thoughts, cognitions, and internal representations.

In contrast, a behavioral explanation emphasizes the importance of change at the response level — what an individual does. As such, instruction is directed towards teaching students to manipulate their environments so that they will have greater access to preferred reinforcers. The discriminative characteristics of the situation represent the problem, and the solution is the response that will gain a potential reinforcer. Thus, the student will select a
solution that most efficiently provides a desired reinforcer. As Skinner (1953) indicated, “Problem solving may be defined as any behavior (that) . . . makes the appearance of a solution more probable” (p. 247). The emphasis, then, is one of developing or modifying an effective response to a given situation. If you want a student to problem solve, you need to teach them how best to behave. Change is at the level of what they do, not what they think about.

**Recommended Target Behaviors**

It is safe to say that students can use a problem solving strategy to resolve virtually any problem they may have. As Agran and Wehmeyer (in press) noted, a problem is any task, activity, or situation for which a solution is not immediately identified, known, or obtainable. At one time it was believed that problem solving was relevant only to academic or intellectual activities. We have realized, however, a student’s systematic use of a problem-solving strategy may be of great value in ameliorating any difficulties they may have in social interactions, at work, and in the community; in short, any situation he or she is not responding to adaptively. The problem-solving strategy discussed in this section provides the student with a basic framework to deal with problems that may be very frustrating or perplexing. At best it provides the student with a means to identify a response that will remove an intractable situation. At least it helps the student understand the nature or the magnitude of the problem and the steps that must be taken to resolve it.

**Instructional Recommendations**

Students with disabilities too often do not learn problem-solving skills through observation because these skills have rarely, if ever, been demonstrated to them and they would not know which specific behaviors comprise this activity (Agran & Wehmeyer, in press). As with many other cognitive processes, problem solving must be systematically taught.

As indicated previously, problem-solving is comprised of three components: (1) problem identification (identifying the problem, selecting a goal), (2) problem analysis (identifying one or more solutions), and (3) problem resolution (implementing the solution and determining its effectiveness). However, we cannot assume students have one or more of these skills. Teachers or parents may assume that a student is aware of the nature and severity of a problem but is just unable to solve it. Students must learn each of these skills if they are to be effective and consistent problem solvers.

Students should be encouraged to identify problems that perplex them. The advantage of this is clear: Students may be more motivated to change their own behavior or the situations they are in when they can determine themselves their problems. For students unable to identify their problems, specific instruction may be necessary. Specifically, students will be taught to determine if they, someone else, or an existing situation is responsible for the problem; how serious the problem is; and if the problem can be resolved
by learning or doing something new (or performing an existing behavior more frequently). In such situations it is imperative that relevant and discriminable problems (clearly defined) are identified. Also, problems that are easily resolvable need to be identified. Intractable problems will provide little incentive for the students to engage in problem solving in the future.

As indicated previously, an advantage and benefit of teaching problem solving is that it can be taught in a group format. Needless to say, solutions to student problems will be individually determined, based on the student’s needs and preferences, parents’ concerns, appropriateness to their transition plan, etc. But group instruction may be particularly valuable because it provides students the opportunity to discuss and evaluate the solutions presented and to learn from each other. Also, it provides opportunities for all of the students involved to practice problem solving and to generate multiple solutions. As Agran (1997) indicated, problem solving is not guess-work but a systematic way to generate a solution to an identified problem. It is hoped that with increased practice students will realize that problem solving can be useful, practical, and, ultimately, reinforcing.

As described earlier, students can be taught to determine a single or alternative solutions to a problem. Although the former approach may be recommended for a student who needs an immediate solution and may have great difficulty determining alternative solutions, the latter approach — determining alternative solutions — is most often recommended. Such an approach promotes generalization and provides the student with a diverse set of solutions (responses) for a diverse set of problems. Again, employing group instruction is invaluable in this regard.

Most problem solving instruction involves the use of role play situations or structured discussions. For example, students may be asked to think about what they would say if someone at work asked them if they wanted to sneak out and have a smoke, or to lie about the number of assembled units they were supposed to finish in a given period of time. In such instructional experiences students are asked to think about what they would say or do if they were in a given situation. Such instruction may potentially be of value since it allows them to practice problem solving, but it does have a major drawback: it involves at best only a student’s verbal behavior, and does not ensure that the student will transfer the skill to a real and similar situation. Consequently, a staged instructional assessment is suggested in which the student without his or her knowledge, is exposed to staged or set-up problems. For example, a teacher may ask a peer to say something objectionable to a student, then observe how this student responds. Such staged assessments may be conducted in school or community settings, and will provide a satisfactory assessment of a student’s response to and use of a problem-solving process.

As indicated previously, problem solving involves a number of components.
To assess how well the student is using the procedure, it is important to collect data on the appropriateness of the student’s responses and whether he or she is performing each step in the sequence. Each step in the process is designed to cue and provide insight about the next step of the process. The problem-solving strategy described in this section is designed to serve as a learning set, and the student needs to achieve mastery in each part of the set.

Last, for students who have difficulty remembering each step in the sequence, the use of a cue card, which lists the components, is recommended. Also, to help the student remember the strategy, the student may be taught to record on the card what he or she did to resolve the problem.
Educational Support

Goal Setting and Attainment Instruction

Overview
Goal setting is an essential skill for self-directed learning, and it is essential to successful implementation of the Self-Determined Learning Model of Instruction. It involves defining a result clearly so that the individual knows when the desired outcome is achieved. Inherent in goal setting is understanding that there is a discrepancy between “where I am” and “where I want to be.” The anxiety created by this discrepancy has been shown to motivate people toward change. Young people need to be provided with opportunities that will help them define the discrepancies they experience. They must learn and be given opportunities to practice goal-setting strategies in order to achieve their goals and enhance their self-efficacy, independence, and self-direction. Students also need to be aware of the specific benefits the achievement of their goals will bring into their lives in order for them to be motivated toward achieving those goals.

Clear, reachable, quantifiable, and specific goals that students can monitor at frequent intervals are best for enhancing student performance. When students can monitor their progress, make adjustments, and guide their progress through achievement of their goals, they tend to be more successful at achieving the desired outcomes. Further, their feelings of self-competence and efficacy will increase. Although many students with disabilities, especially those with severe disabilities, have not had an opportunity to learn how to set their own goals, or lack the skills associated with goal setting, evidence strongly suggests that implementing the procedures in this strategy will enhance positive student outcomes.

Relevance to Self-Determined Learning Model of Instruction
The Self-Determined Learning Model of Instruction offers two points at which goal setting is essential: Phase 1, Set a Goal, and Phase 3, Adjust Goal or Plan. Embedded in Phase 1 are Student Questions that probe the student’s interests, preferences, limits, values, beliefs and needs. The phase involves student identification of strengths and instructional needs. It requires that students gather information relative to their capacities, physical and social environments, and possible existing barriers. Students collaborate with teachers regarding the focus of possible actions. Last, students are taught to prioritize their needs and make choices about their goals. When a student learns the process of goal identification and can set a goal, he or she has fulfilled the function of this first phase.
In **Phase 3**, students are taught to assess and evaluate changes in their situations, compare those changes with their goals, and decide if they want to adjust their goals or their plans. Teachers collaborate with students to compare their progress with the student’s desired outcomes, provide feedback, assist students in deciding if the action plans are adequate, and assist them in changing the plans if necessary. Evaluation often involves the setting of new goals as part of the adjustment process. The function of **Adjust Goal or Plan** is to teach students the process of self-assessment and self-evaluation and to provide them with strategies for adjusting their plans as needed.

**Cost of Delivery**
Teaching the strategy of goal setting involves minimal costs for supplies—generally limited to paper and pencil. The goal-setting instructional process requires little time, however, dialogue and collaboration between teacher and student are essential elements in the goal-setting strategy and may require teacher time. The amount of time will vary depending on how well the student understands what he or she must do to affect change. As teachers increase their proficiency guiding students through the goal-setting process, it is expected that their effectiveness and efficiency in the facilitation process will increase resulting in reduced demands on teacher time.

**Support Needed**
There is growing evidence to support the value of teaching goal setting to students. Wentzel (1992) suggests that classroom environments have the potential to provide opportunities for student pursuit of both academic and social goals, and suggests that understanding and valuing goals and rewards will enhance student outcomes.

Goal setting involves teaching students a set of introspective questions that lead them through the process of self-assessment. Teachers are provided with objectives guiding them through the instructional process. They assist students in identifying specific strengths and instructional needs; encourage them to communicate preferences, interests, beliefs and values; and teach them how to prioritize their needs and preferences. They provide assistance to the student in identifying their current level of performing the target behavior and facilitate student collection of information about resources and barriers that may exist in the student’s environment.

Help is provided to students in deciding what the focus of action will be—**capacity building** (i.e., increase productivity at work, improve school attendance, learn a new skill), **modifying the environment** (i.e., open a savings account and save money, buy a bicycle, move out of parent’s home into an apartment), or **both**. When necessary, assistance is given to the student to determine what his or her priorities are. Students are taught to state a goal clearly and identify criteria for achieving the goal.

**Functional Analysis**
Varied cognitive, behavioral and psychological interpretations exist to explain the goal-setting process. Behavioral explanations suggest that in order for students to
set goals, they must be aware of both the consequences of their behaviors and the contingencies in their environment. Students have to understand that there is a relationship between what they do and the resultant consequence or outcome of the behavior. Further, they need to know what circumstances in the environment will impact their ability to achieve the target goal. For example, if Susan, a high school student, wishes to become a welder, she must first understand that her behavior impacts her ability to achieve her goal. Second, she must understand that such environmental factors as the kind of classes she takes, her class attendance, the amount and quality of time she devotes to study and practice, and job availability are all factors that may impact her goal attainment.

Research indicates that highly successful people tend to have a personal sense of mission which serves as a motivator and leads them to act on their envisioned goals. Acting to set and work toward goals is thought to produce a positive mental attitude, a sense of self-efficacy, and the motivation to achieve desired goals (Mithaug et al., 1988). Data indicate that student-set goals are generally as effective or more effective than teacher-set goals and will enhance student performance (Rosenbaum & Drabman, 1979). There is also evidence that announcing goals publicly may enhance more stringent performance standards, perhaps because the behavior is moved from a personal to a social context (e.g., Skinner, 1953). Educational settings provide excellent environments for teachers to put these findings to use and for students to learn and practice the skills associated with goal setting within their individualized educational programs.

Doll and Sands (1998) note that "goals are an a-priori specification of what students intend to accomplish through their own actions. More than a good intention to do well, a goal defines an end result, with sufficient clarity to make it self-evident when that result is or is not reached." Educational efforts to promote goal setting and attainment skills should focus on teaching students to identify and enunciate specific goals, develop objectives and tasks to achieve these goals, and identify actions necessary to achieve a desired outcome. Martino (1993) identified several important considerations in goal identification and enunciation:

1. Goals should be specific and measurable.
2. Goals should be attainable.
3. Goals should reflect something that the student wants to improve on.
4. Goals should have specific, practical starting and finishing dates.
5. Goals should be written.
6. Goals should be stated in terms of anticipated outcomes.
7. Students should be able to visually track their progress on the goal.

The educational planning and decision-making process is an enterprise that revolves around goal setting, implementation, and evaluation. The involvement of students in this process, from elementary school through graduation, is a good way to promote effective goal setting and attainment skills. Teachers and parents can model effective skills like identifying short and long-term goals, describing objectives, implementing plans based on these goals and objectives, and reevaluating and refin-
ing these plans.

Recommended Target Behaviors
Goal setting is essential for achieving all target behaviors. The processes of defining, discussing, and eventually adjusting goals are integral in achieving any desired outcome. This strategy is one that will be used repeatedly by students in several phases of the model, no matter what the target behavior may entail (i.e., improving quality of work, increasing work productivity, improving academic performance, decreasing inappropriate social behaviors).

Instructional Recommendations
As outlined by Doll and Sands (1998), there are six application principles related to the effective teaching of goal setting across all grade levels. They are:

(1) Help students set and define their goals in specific terms, so that they know immediately whether the goals have been met.

(2) Assist students to set realistic goals that they can achieve within a defined time interval (i.e., one class period, a day, week, month, or trimester). Shorter time intervals allow students to receive more frequent feedback on their progress and make adjustments as needed.

(3) Help students set goals that provide a challenge with a standard that is somewhat beyond what the students are expected to achieve but within their competence. The challenge educators may find in this application principle involves finding a balance between setting goals high enough to enhance performance but not so high as to overwhelm students.

(4) Work with students to help them set goals with meaningful connections between their learning and their life domains (i.e., home, community, vocational goals). Relevance is an important issue for students who want to know and understand the ultimate purpose in an activity. When a rationale for a particular goal is understood, the student's potential for achievement is enhanced.

(5) Assist students in setting goals that define or describe the processes they will use to achieve their goal. Process goals help students focus on the processes of their learning, not just the task being completed. Educational research indicates that achievement, student self-efficacy, and the performance goals are improved when instruction is guided by process goals.

(6) When students are unable to set their own learning goals, teacher-set goals can be effective. It is important to set goals that have interest or value to the student.
Educational Support

Self-Instruction

Overview

Self-instruction represents, arguably, the most “portable” and adaptable educational support. It involves teaching students to make task-specific statements out loud prior to their performance of a task. That is, they are taught to tell themselves what they need to do. These verbal statements allow students to direct and manage their own behavior as if they were being verbally directed by a teacher or job coach. By having the response consistently paired with the stimulus condition (the self-instruction), it is hoped that the likelihood of the response being performed is increased.

Because many students with disabilities have difficulty relating to problem solving and short-term memory retention, self-instruction provide students with additional information (verbal cues) to promote desired responding. It allows the student to verbally rehearse what she or he needs to do and to engage in meaningful problem solving. Since our behavior is largely controlled by language, self-instruction allows students to control their own behavior—clearly, a valued skill if someone is to become more self-determined.

Relevance to Self-Determined Learning Model of Instruction

Self-instruction is particularly suited for Phase 2 of the Self-Determined Learning Model of Instruction, Take Action. Teaching self-instruction involves teaching student, in essence, a problem-solving strategy. Self-instruction allows students to identify a problem situation, determine an action that will resolve the problem, develop a plan of action, implement the plan, and finally, evaluate and revise their plans accordingly. The problem-solving questions in Phase 2 are very similar to the kinds of questions persons address when self-instructing. Overall, the advantage of self-instruction is that it both provides the student with a means to identify a problem and to take an appropriate action. It identifies for the student what is wrong (why he or she can’t do or get what he or she wants), and what he or she can do to achieve the desired outcome (tell him- or herself what to do).

Cost of Delivery

Teaching self-instruction is cost effective. It has been reported that instruction takes approximately 2 hours, either in one session or four to five 30-minute long sessions (Note: For students with more significant learning needs, additional time may be needed). Additionally, an individual or instructional format can be used (i.e., students can be taught individually or in a group). An advantage of the group format is that it may result in reduced instructional time. When the self-instructions are simi-
lar for all students, group instruction is strongly recommended. However, even when the self-instructions differ, group instruction is often appropriate (see Instructional Recommendations).

**Support Needed**

Basically, self-instruction involves a two-step process: teaching the student to produce the self-instructions, then to complete the task. A data-based, behavioral intervention is recommended in which the student's verbal behavior (production of the self-instructions) and task completion are shaped over time. An assumption is made that, as long as the target behavior can be operationally described, a self-instruction can be identified and subsequently taught.

Self-instruction programs have been effectively delivered by teachers, instructional assistants, job coaches, and transition specialists. There is also a growing body of research suggesting that peer tutors, both with and without disabilities, can teach other students to self-instruct (Agran & Moore, 1994). The advantage of using peer tutors is two-fold: it can reduce teacher instructional time and be highly motivating to students. Peer tutors deliver the instructional program the same way as teachers, following the task analysis and instructional sequence of the program. Reinforcement and feedback to the peer tutors are provided as necessary. Role-plays provide an appropriate context for instruction.

**Functional Analysis**

Two major explanations of self-instruction have been suggested. First, self-instruction represents an additional environmental cue or stimulus to increase the probability that desired behavior will follow (Hughes & Lloyd, 1993, Malott, 1984). This cue prompts a student to perform the targeted behavior to achieve a desired reinforcer (e.g., teacher praise, satisfaction in completing task). Additionally, a self-instruction set may include a verbal reinforcer or praise statement. That is, after repeating the task-related self-instructions and completing the task, the student is taught to say, "Great job! I finished moving the boxes to the stockroom." This statement serves as the positive consequence for performance of the target behavior. Also, it may serve as a short-term consequence for a more delayed consequence such as break-time.

Since language and thought are integrally linked, self-instruction has also been thought of as a verbal mediator which can regulate or control behavior (Whitman, 1990). Rather than serving as a cue to trigger the desired behavior, the self-instruction instead changes the way the student thinks about a phenomenon or behavioral event. In effect, self-instruction allows the student to think aloud. For example, teaching a student to tell herself to "work faster" doesn't serve as a prompt, but helps the student think about the effects of working faster and efficient ways to achieve it and to regulate her behavior.
Target Behavior Suitability

Self-instruction can be used to teach a wide variety of transition skills (Agran & Moore, 1994). As indicated previously, if you can define the target behavior, the relevant self-instruction can be easily identified. Typically, self-instruction applications have followed a problem-solving approach in which the student is first taught to identify a problem. Such a problem may be a condition which prevents the student from completing a task (e.g., “I keep mixing up the boxes. What am I doing wrong?”), or the realization the student lacks some knowledge relevant to completion of the task (e.g., “My supervisor wants me to meet the quota but I don’t even know how much that is”). Following, the student is taught to identify a solution to the problem (e.g., “I’ll find out many I need to do and check off each completed unit until I meet the quota”). Then, the student is taught to tell him-or herself what to do (e.g., “Now, I’ll check off each completed item”). An example appears below.

Self-Instruction Example

<table>
<thead>
<tr>
<th>Training Sequence</th>
<th>Verbalization</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Problem:</strong></td>
<td>runs out of work materials</td>
</tr>
<tr>
<td></td>
<td>“I ran out of __________.”</td>
</tr>
<tr>
<td><strong>Solution</strong></td>
<td>“I need to get up and get</td>
</tr>
<tr>
<td></td>
<td>more __________.” (Or “I</td>
</tr>
<tr>
<td></td>
<td>need to ask __________ for</td>
</tr>
<tr>
<td></td>
<td>more __________.”</td>
</tr>
<tr>
<td><strong>Planned Response</strong></td>
<td>“I’ll get up and ask for</td>
</tr>
<tr>
<td></td>
<td>more __________.”</td>
</tr>
</tbody>
</table>

Self-instruction can be used to teach complex task sequences. The "Did-Next-Now" strategy teaches the student to learn how to complete a complex sequence by stating what response he or she just completed, what responses needs to be done next, then to direct him or her to perform the response. An example is presented below.

Did-Next-Now
Self-Instruction Example

<table>
<thead>
<tr>
<th>Training Sequence</th>
<th>Verbalization</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Did</strong></td>
<td>“I have the key for the machine.”</td>
</tr>
<tr>
<td><strong>Next</strong></td>
<td>“I need to open the outside door.”</td>
</tr>
<tr>
<td><strong>Now</strong></td>
<td>“I’m going to open the outside door.” (The student would open door.)</td>
</tr>
</tbody>
</table>
The What-Where strategy can be used to help establish stimulus control and is suitable for a response the student performs inconsistently. The strategy involves teaching the student to repeat what he or she must do and where the response is to be performed. It has been used to teach instruction-following skills. An example is presented below.

**What-Where Self-Instruction Example**

<table>
<thead>
<tr>
<th>Training Sequence</th>
<th>Verbalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>What</td>
<td>&quot;I need to wipe food...&quot;</td>
</tr>
<tr>
<td>Where</td>
<td>&quot;off front of stove.&quot;</td>
</tr>
</tbody>
</table>

Last, in responses in which the student may be engaged in a social interaction (e.g., serving a customer), the "Did-Next-Ask" strategy was developed. This strategy allows the student to verbally direct his or her behavior and to use the interactive comment as, in effect, a self-instruction. The student is taught to indicate the response just performed, followed by what he or she needs to say or do, and last, to emit the interactive comment. An example is presented below.
Did-Next-Ask
Self-Instruction Example

<table>
<thead>
<tr>
<th>Training Sequence</th>
<th>Verbalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did</td>
<td>“I’d like to order a sandwich.”</td>
</tr>
<tr>
<td>Next</td>
<td>“Bread next.”</td>
</tr>
<tr>
<td>Ask</td>
<td>“What kind of bread would you like?”</td>
</tr>
<tr>
<td>Customer:</td>
<td>“I’d like rye bread, please.”</td>
</tr>
<tr>
<td>Did</td>
<td>“I have the rye bread.”</td>
</tr>
<tr>
<td>Next</td>
<td>“Spreads are next.”</td>
</tr>
<tr>
<td>Ask</td>
<td>“What type of spreads would you like?”</td>
</tr>
</tbody>
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Instructional Recommendations

First, a rationale is presented to the student on the value of using self-instruction. Following, the instructor models the self-instruction strategy while completing the task. Next, the student is asked to repeat the self-instructions and to perform the desired response. Reinforcement and corrective feedback are provided as needed. At first, it is recommended that the student be reinforced for self-instructing and reinforced for appropriate task performance. As mastery in both is achieved, the student should be reinforced when he or she both self-instructs and completes the task appropriately. Additional training sessions may be needed for students who experience difficulty in acquiring the strategy.

Typically, self-instructions are comprised of complete phrases or sentences. They need to contain sufficient information so that the student can attend to the salient dimensions of the task. For students who are language deficient, it may be necessary to shorten the self-instructions and use only a word or two. For example, if the student has difficulty saying, “I need to mop the floor under the table,” it may be necessary to teach the student only to say “mop under table.”

Additionally, for students who have difficulty learning to self-instruct, other educational supports may concurrently be taught. If, say, task completion can be enhanced by teaching the student to self-instruct and refer to picture cues (i.e., repeat the self-instructions and refer to picture cues), the use of an additional educational support may be appropriate. The focus of self-instruction is to get the student to attend to task requirements. Additional support strategies may serve as additional cues for desired responding or more immediate and powerful reinforces.
Educational Support
Antecedent Cue Regulation

Overview
A student’s achievement of transition goals often requires him or her to complete complex or extended tasks in work situations where there will be little or no supervision. Also, students may have difficulty remembering which steps to perform and in what order for a given work task. Furthermore, they may not understand a teacher’s or job coach’s orders, or may resent being given these directions (or the manner in which they are delivered) and regard them as nags. For these students, the use of antecedent cues — that is, picture cues — is highly recommended (Note: A prompting system such as recorded messages on a cassette player is also considered to be an antecedent cue regulation strategy). There are many applications in the transition research literature to support the use of picture cues as a means to promote student competence and independence. They provide students, particularly students with severe learning needs, with an easy-to-use learning strategy and memory aid.

From symbols designating special parking areas to restroom signs to computer icons, we are surrounded by many picture cues and symbols. They serve as clear and easily identified stimuli that provide information on a place we want to go to, a task we need to complete, or a function or service that we desire. Unlike verbal cues that may be vague or confusing, picture cues are less ambiguous. They portray or illustrate exactly what one needs to do. Independent of teacher assistance, the student can literally cue or prompt his or her behavior and determine his or her own success.

Relevance to Self-Determined Learning Model of Instruction
Like many of the other educational supports, picture cue use is well suited for Phase 2 of the model. It serves as a permanent prompt system that allows the student to frequently refer to or remind him or her what he or she needs to do and in what order. Picture cues may be of value for many students with disabilities, but have particular relevance for students with more severe learning needs, who may need the amount of information a picture provides, or who are better able to process visual than verbal input.

Cost of Delivery
It is safe to say that picture cues are the easiest educational support strategy to teach to students with disabilities. In contrast to the other support strategies, the student does not need to monitor or evaluate his or her performance or respond to verbal stimuli, but only perform the response pictured. Consequently, the instructional time needed to teach this strategy may be quite short. In essence, two skills are
involved in picture cue use instruction: learning to refer to the appropriate picture in the appropriate sequence (and match the picture to the actual task to be completed), and performing the responses illustrated. As long as the desired responses are within the student’s skill repertoire, instruction will involve minimal cost.

Picture cues may include a variety of presentation formats: graphic symbols, simple line drawings, published instructional materials, magazine pictures, single photographs, and detailed photographic sequences, among others. Some students may respond better to one method than another. For example, line drawings are less costly to produce but are more abstract than photographs. Consequently, it is recommended that you determine the visual method the student responds to best. Unless the picture cues are already available, preparation of these cues may involve some cost: purchase of film, time to take photographs, processing, etc.

Support Needed

Instruction involves two phases. First, the student needs to be taught to identify the picture and to follow the picture sequence correctly if more than one picture is shown. It is assumed that the student will be able to match the picture to the actual stimulus condition or task, but this level of instruction may also need to be provided. Second, the student is taught to refer to the picture and perform the response pictured. In the first phase, the student is reinforced for following the pictures. In the second phase the student is reinforced for following the picture cues and performing the illustrated pictures.

By definition, picture cues serve as permanent prompts. These represent supplemental prompts that may be of value for students who have difficulty responding to the transient, verbal cues of teachers. Ultimately, this may present a problem to the teacher. Central to all instructional programs is the emphasis on systematically fading cues and instructional prompts as the student achieves mastery. This is done to reduce stimulus (cue) dependency. However, won’t teaching students to use and rely on picture cues as educational supports serve only to exacerbate this situation – that is, make the students dependent on these cues? Isn’t this what we are trying to prevent? Like other cueing systems, do picture cues also need to be faded.

Ultimately, the decision to fade the picture cues is contingent on the student’s instructional needs. If, after a few sessions, the student is able to complete the task without referring to the pictures, then it is clear that he or she does not need them. However, a student’s ability to perform the task may be very dependent on his or her consistent reference to the pictures. With this student removing the pictures may be counterproductive. Ultimately, the question to be made is whether it is better to have the student depend on the cues so that he or she can complete the task versus removing the pictures and running the risk that the student will be unable to do the task. By and large, researchers in this area support the former approach (see Agran, 1997), and suggest that, if a student’s success depends on whether the cues are or are not present, these supplements should always be present.
Functional Analysis
The ability to make discriminations is the basis for all work tasks (Bellamy, Horner, & Inman, 1979). Accordingly, individuals need to know when it is appropriate to initiate a work task. This is accomplishing by discriminating that a certain stimulus is present (e.g., work materials are present at designated work area). Also, the individual needs to follow a specific sequence, and this is done by discriminating that the response just performed serves as the stimulus for the next response. As Bellamy and colleagues indicated, discrimination operates across two levels: stimulus dimensions and stimulus levels. Dimensions refer to such variables as height, shape, color, position, and function. Levels refer to the appropriate dimension (which dimension is most relevant) and the amount or quantity of that dimension. Successful work completion depends upon the student’s ability to make these dimensions.

Students oftentimes have difficulty making these discriminations. This may be due to lack of supervision, ambiguous directions, or the student’s difficulty in attending to the relevant or salient dimensions of a task. An advantage of using picture cues is that they alter the stimulus conditions that precede the target behavior by limiting the range of discriminative stimuli present in the environment (Agran & Martin, 1987; Wehman, 1975). That is, they limit the number of discriminative stimuli the student may attend to. In short, the pictures enhance the likelihood that the student attends to the relevant stimuli associated with the task, which are illustrated in the cues, and remind the student of the relevant dimensions.

Recommended Target Behaviors
Picture cues can be used for virtually any observable behavioral sequence. When identifying target behaviors the issue that is most important to consider is the number and types of pictures that will be needed. For some students a single picture or graphic symbol may be sufficient, whereas in other cases many detailed photographs may be needed to illustrate a task sequence. A simple way to make this determination is to observe the appropriateness of a student’s task performance when he or she is presented with varying types and numbers of cues. For example, if a student is being taught to perform detailed work at an automotive shop, you may want to start off with only a few illustrations. For those responses omitted or performed incorrectly, additional pictures can be presented.

Instructional Recommendations
Because of the nature of the format, teaching picture cue use represents an easy strategy to teach to students with disabilities. First, after an analysis of a work task is completed, a determination of the appropriate picture cues to be used is made. Following, the way the pictures will be presented needs to be determined. Among the options are in an album or notebook, publicly displayed at the work area, or in a reduced size as cue cards that can be kept by the individual in his or her wallet. Particular attention should be paid to the intrusiveness of the picture system.

Second, the student needs to be taught how to refer to the pictures in the right sequence and to demonstrate what response is required. Next, after referring to the
pictures, the student is asked to perform the desired responses. If an error occurs, the student is provided feedback and asked to look at the picture again. Reinforcement should be provided for both picture referral and correct responding.

As the student achieves mastery (consistently refers to the pictures, then performs the desired responses) teacher supervision should be faded and the student reminded to rely on the picture cues.

It goes without saying that to promote generalization, students should be encouraged to refer to the pictures across different settings and situations. An advantage of picture cues is that they may serve as common stimuli across settings and, thus, promote generalized responding.
Educational Support

Self-Monitoring

Overview
Self-monitoring consists of a student's self-observation of a target behavior followed by recording the behavior's occurrence. The strategy requires that a student understand and successfully implement two functions: (1) the student recognizes that the desired or goal behavior was or was not performed, and (2) the student accurately records the occurrence on a card or chart. Self-monitoring is easy to teach in a straightforward manner. A variety of recording forms can be used to meet the needs of the specific student and the target behavior. Essentially any discrete behavior (i.e., a response that has a distinguishable beginning and end) that can be operationally defined can be self-monitored.

Relevance to Self-Determined Learning Model of Instruction
Self-monitoring is best suited for Phase 2, Take Action. In this phase, students are taught the following steps: (1) check out your situation; (2) make a plan to meet your goal, based on your situation; (3) do your plan; and (4) check to see if you did your plan. Within the context of Phase 2, students are taught specific strategies intended to enhance their learning skills. The self-monitoring strategy includes systematic observation and recording of a target behavior. The function of Phase 2 is to instruct students to use a self-directed learning strategy to change their own behavior. The assumption made with self-monitoring is that when an individual observes his or her behavior, it will change in a desired direction.

Cost of Delivery
Common methods of self-monitoring include the use of golf counters, grocery store counters, or wrist counters (Agran, 1997). In effect, paper and a pencil (or marking pen) are all that are required to successfully use this strategy. Because the supplies for self-monitoring are simple, the cost of the strategy is minimal. As long as the target behavior is easily discriminated, instruction is straightforward and takes little time.

Support Needed
Teachers will need to determine the most effective means of monitoring the behavior and design a monitoring card accordingly. It is helpful if students are involved in the development of the self-monitoring card since the goal is to teach them the process. If students are to generalize the strategy to other settings, they must understand how to use the process from beginning to end.
First, the teacher determines if the monitoring card will best suit the student with pictorial, numerical, alphabetical or verbal cues. Color codes may also be used as cues for a student. Then, the teacher makes certain that the student can identify or read and understand each cue on the card.

Next, the teacher works with the student to do a functional task analysis of the target behavior. The teacher can ask the student probing questions about the target behavior and the sequence of steps in completing the behavior or goal. In so doing, the student operationalizes the behavior.

The level of support needed to successfully implement this strategy will vary depending on the student’s instructional needs. Another factor which may figure into the level of support may be the involvement of additional support personnel such as employers, work supervisors, or job coaches. Factors such as family support may play a role in a student’s success, especially in cases where the student’s target behavior requires financial assistance, transportation after school hours, or some other element that is not generally considered the responsibility of the educational system.

**Functional Analysis**

Self-monitoring produces behavior change because it may serve as a discriminative stimulus and, thus, cues the desired response. The self-monitoring process allows the student to recognize the specific target behavior, as well as to remind the student of the present and future contingencies that exist in the environment (i.e., “If I perform this response, this will happen.”) The target behavior is more likely to occur when this information is available to the student. Malott (1984) suggested that oftentimes students with disabilities have difficulty responding as desired because the available contingencies (i.e., reinforcers) are too delayed or ineffective. Self-monitoring may serve as a mediator because it reminds the student that when the behavior is performed, a desired consequence is made available.

Of particular value is the fact that self-monitoring appears to have a reactive effect. That is, the behavior will change in a desired way just because the student is monitoring his or her own responding. The self-monitoring procedure seems to produce and sustain the desired outcome in the absence of any other intervention, even when the student’s record keeping is not accurate. Evidence suggests that desired self-regulated behaviors can often be increased simply by being attended to and recorded (Mahoney & Thoresen, 1974).

**Recommended Target Behaviors**

Recommended target behaviors may include practically any behaviors that the student would like to increase or decrease — as indicated before, essentially any behavior for which frequency of occurrence can be observed. Examples of such behaviors may include on-task-behavior, increasing social-interactive skills (e.g., accepting criticism appropriately), a variety of conversational skills (e.g., initiating conversation), or any productivity skill (e.g., cleaning tables).
This strategy also lends itself well to teaching students the steps of a process, or a list of tasks to be accomplished. If a student is learning a new process, the task analysis of the process or behavior provides the necessary cues for the student to follow. For example, a student may want to work on skills related to getting himself ready for school each morning. A list of steps that will help him take care of his personal hygiene and grooming can then be developed. Such a list may include such tasks as: shower or bath, wash hair, use deodorant, brush teeth, comb hair, shave face, use foot powder, and put on clean clothing.

**Instructional Recommendations**

Teaching students to monitor their target behaviors/goals involves the following steps:

1. Determine the performance levels. These can be different for every student, but must be realistic.

2. Set a goal with a realistic performance level. Students can question and observe other students or adults who are competent in a target behavior to determine the steps of the skill and the acceptable level of performance. Students can participate in brainstorming with others to initiate a list of how the behavior could be improved.

3. Develop a self-monitoring card according to the student’s needs and capacity (cards may range from pictorial representation to verbal checklists).

4. Show the student how to use the card or form. Specify consequences for correct monitoring. Provide appropriate and inappropriate examples of the target behavior by modeling, role playing, or observing other people. Help the student learn to discriminate appropriate and inappropriate examples of the target goal by reinforcing the appropriate behavior.

5. Let the student practice. Have the student record occurrences of the target behaviors.

6. Provide corrective feedback as needed.

7. Reinforce the student for discriminating and recording occurrence of the target behavior. The student must correctly discriminate and record the occurrence in order to receive reinforcement.

8. Designate a time and place when the student will begin to monitor him- or herself.

9. Ensure that an overt reinforcer is associated with the self-monitoring procedure.
(10) Last, teach the student to discriminate the target behavior, record its occurrence, and reinforce him- or herself.

In the course of providing the instructional steps listed, a teacher may find that the monitoring device is not meeting the needs of the student. In such a case, the card should be adapted with student input.

The time a teacher takes to create a monitoring card will vary depending on the simplicity or the complexity of the strategy being taught and the design of the card. The rule of thumb is, “Keep it simple.” Students are more likely to use a strategy they find easy and helpful.
Educational Support

Self-Evaluation

Overview
Self-evaluation involves the comparison of the behavior being monitored with the student’s desired goal. It is an important component of the self-regulation process because it keeps the student aware daily of whether she or he is meeting the desired goal. Having students evaluate their work performance allows them to determine the extent to which they have achieved their goals. The experience of monitoring and evaluating is potentially a reinforcing event.

Self-evaluation serves as the last step in the problem-solving process. It provides information to students about the extent to which they have reached their goals. The students can use this information to determine if the goal or the action plans need to be modified. During this process, self-evaluation can provide valuable feedback for the students. Rather than waiting for an outside source, such as a teacher or parent, a young person can receive immediate feedback. These factors increase the chances that students will perform the desired behavior.

Relevance to Self-Determined Learning Model of Instruction
Self-evaluation involves the comparison of the behavior being self-monitored (observed and recorded) and the performance goal. Both Phase 2, Take Action, and Phase 3, Adjust Goal or Plan, of the Self-Determined Learning Model of Instruction are appropriate phases for use of self-evaluation strategies.

As students learn to address the Phase 2 Student Questions they provide themselves with immediate feedback using self-monitoring and self-evaluation procedures to determine if the appropriate outcomes are occurring. Essentially, all of the Student Questions in Phase 3 are evaluative and rely on the use of self-evaluation techniques. Depending on the student’s needs, capacity, and choice, the evaluation method may be responding to verbal questions, a pictorial format, or a written checklist.

Cost of Delivery
Self-evaluation is highly cost effective. It involves teaching the student to monitor a response, then to compare it to a standard. Supplies for self-evaluation are generally limited to paper(s) and pencil. However, there may be a need for calculator, watch, or counter, depending on the type of behavior the student targets.

The costs of developing a card/paper for student data keeping are limited primarily
to the time a teacher takes to create the evaluation device and teach the student how to properly use it. Depending on the complexity of the card, it will likely take between 5 and 15 minutes to create. The time involved in teaching the student to use the card will vary depending on the nature of the student’s capability and the complexity of the target behavior. Generally, however, most students can learn rapidly simple recording and evaluation procedures with the use of consistent, systematic, direct instructional methods.

If an external standard exists (e.g., desired level of class performance), self-evaluation is fairly straightforward. However, if such a standard doesn’t exist, this component may be more difficult to execute. The standard will then need to be developed by the teacher and student. It is essential that the student be able to discriminate the achievement of this standard. Needless to say, this is easier to do with a quantitative outcome (for example, the number of times a target behavior should occur. For a qualitative outcome (e.g., the overall quality of a student’s social interaction), the evaluation will be more difficult unless specific criteria are set (e.g., voice level, number of verbal initiations, number of praise statements emitted).

**Support Needed**

Teachers will need to determine the most effective means of monitoring the behavior and designing an appropriate monitoring card. In order for the student to evaluate his or her behavior he or she must first understand self-monitoring. It is helpful for the student to be involved to the greatest extent possible in the development of the self-monitoring card since the goal is to teach him or her the process.

The level of support needed to successfully implement this strategy will vary depending on the nature of the target behavior and the student’s instructional needs. Another factor which may be considered is the role that peers, employers, or job coaches may play. In such a case, these individuals may serve as natural supports to assist the student.

**Functional Analysis**

Self-evaluation provides the student with a standard to assess his or her behavior (Agran, 1997). If the standard is not being met, the comparison may serve a corrective function. If it is being met, it serves as a reinforcing event and promotes the likelihood of the behavior being performed in the future. Consequently, it functions as a feedback loop, which provides the student with the appropriate consequence. Of practical significance is the fact that the student provides him- or herself with the feedback and is not dependent on a teacher or other individual.

Self-evaluation is a necessary component of any self-management program and is of critical importance to the Self-Determined Learning Model of Instruction. It serves as the basis on which the student knows how successful he or she has been in changing his or her behavior. In effect, it serves as the agent of change.
Recommended Target Behaviors

Self-evaluation lends itself well to target behaviors that can be observed and recorded, in effect, those behaviors that can be self-monitored. This strategy is also effective for teaching students the steps of a process or the list of tasks to be accomplished. If a student is learning a new process, the task analysis of the process or behavior provides the necessary cues for the student to follow.

For example, in one application of self-evaluation conducted by the authors, a student was taught to give herself the correct amount of insulin at lunch time. Information was collected from the student, her mother, and doctor to develop a list of steps that guided her through the process. The list consisted of the following items: (1) using the access kit (which included the supplies to test her blood, a chart to determine how much insulin to take and when to take it, a chart giving her information about her carbohydrate intake for the lunch meal, and her insulin and syringe), (2) testing blood, (3) writing down blood level, (4) finding blood level on the chart, (5) following what the chart says, (6) finding lunch items on the chart and add the correct number of carbohydrates for the meal, (7) dividing the total by five, (8) turning the syringe to the correct number of units, and (9) giving herself the insulin. The decision to teach the student to self-evaluate was based on the medical implications of making an error. The goal was to become 100% proficient in following the procedures outlined; anything less than that could have life threatening consequences. The strategy proved to be successful.

Instructional Recommendations

Teaching students to monitor their target behaviors/goals involves the following steps:

(1) Set a goal with a realistic performance level.

(2) Develop a self-monitoring card according to the student’s needs and capacity.

(3) Specify consequences for correct monitoring. The teacher provides, through role play or modeling, or observing other people, examples of the target behavior. The teacher helps the student learn to discriminate by reinforcing identification of appropriate and inappropriate examples of the target goal.

(4) Provide corrective feedback as needed.

(5) Reinforce the student for discriminating and recording occurrence of the target behavior.

(6) Discriminate the target behavior, record its occurrence, and reinforce oneself.

(7) Compare the total number of tally marks to the target goal -- evaluate if the goal has been met.


Educational Support

Self-Reinforcement

Overview

Self-reinforcement represents the major theoretical component of most conceptualizations of self-management (Brigham, 1989). There is evidence to suggest that it is as effective, if not more effective, than teacher-delivered reinforcement. Since the purpose of teaching students the strategies of self-regulation and self-determination is to promote their independence, self-reinforcement can be an important strategy in student learning and life functioning.

Self-reinforcement involves a system in which students can reinforce their own behavior immediately (Wehmeyer, Agran, & Hughes, 1998). Students are always present to administer their own consequences or feedback, so the possibility of lost reinforcement is greatly minimized. Students may often have difficulty acquiring desired outcomes because the natural consequences are too delayed, too small, or not achievable, so self-reinforcement essentially fills in the deficit by providing immediate feedback (Malott, 1984).

Two operations are involved in self-reinforcement: discrimination and delivery. A student must discriminate that the target behavior has occurred before he or she can reinforce him or herself. It has also been suggested that self-reinforcement has stimulus properties that may cue appropriate responding. In any case, the essential element of the strategy is that the student determines and provides the consequences for his or her own behaviors.

Relevance to Self-Determined Learning Model of Instruction

Self-reinforcement involves identifying a target behavior, defining it, learning how to observe and record its occurrence, then dispensing a reinforcer when the performance goal is achieved. The strategy can be effectively used in Phases 2 and 3 of the Self-Determined Learning Model of Instruction. Self-delivery of consequences can serve as an effective motivator. As a student addresses the Student Questions in Phase 2, Take Action, he or she can incorporate self-reinforcers into the action plan. After a goal is set in Phase 1, a method of self-reinforcement should be mutually determined. A format for self-reinforcement should be developed with substantial student input and agreement. The reinforcer must be realistic, practical, and available. Natural consequences are considered the optimal reinforcers.

Cost of Delivery

Supplies for implementing the self-reinforcement strategy are minimal. They will generally consist of paper and pencil for keeping a tally of the occurrence of the
target behavior. If a tangible reinforcer is used, the cost of the item must be considered. Reinforcers such as verbal statements, time riding bike or roller blading, walking to the park, or watching a favorite TV program are cost free.

Working with students to teach them the tally process and negotiate the particulars of the nature and kind of self-reinforcement dispensed will represent the greatest “cost” of delivery. However, the process of developing a card, teaching self-monitoring, and identifying an effective reinforcer can be completed in as little as 10 minutes, depending on the student’s abilities and self-awareness. In more complicated or challenging instances, the process may require several work sessions over a week or more.

**Support Needed**

As explained earlier, self-reinforcement involves two primary functions: discrimination of the target behavior and delivery of a reinforcer upon completion of the criterion. The student must be taught to correctly recognize the behavior and discriminate its occurrence. Teaching discrimination of the target behavior generally begins with teaching self-monitoring. When the child learns to correctly monitor the behavior, instruction on self-delivery of contingency rewards can begin.

The token economy is the most common form of reward system used in reinforcement. Under the system, young people can easily be taught to reinforce themselves without disruption or delay. It is vital to understand that whatever reward or consequence is selected, it must be a serve as a known reinforcer for the student.

**Functional Analysis**

Conceptualizing the process of self-reinforcement can be very complex. Reinforcement involves an increase in the frequency of the desired behavior when a desired or positive reinforcer is delivered after the behavior’s occurrence. The advantage of teaching the student to select and administer the reinforcement is that it provides for immediate reinforcement and provides the student with increased control of his or her learning. This by itself may be highly motivating.

**Recommended Target Behaviors**

Self-reinforcement applications have generally pertained to work productivity. Research demonstrates that self-reinforcement increases work productivity levels comparable to or in excess of work levels produced with external reinforcers. However, the strategy has also been used to teach social skills, work skills, and a number of self-regulation behaviors across a wide variety of transition-related goals (e.g., being punctual, listening skills, organizing time, planning what to do first, and budgeting).

To determine if a behavior is appropriate for self-reinforcement, the student must be able to discriminate that the target behavior has occurred. Another essential element of success is that the student must be involved in determining/negotiating the reinforcers and when and how they are dispersed.
Instructional Recommendations

The most effective use of self-reinforcement is when it is combined with self-monitoring or self-evaluation (Agran, 1997). Many students have not learned how to monitor or evaluate themselves. Often, student opportunities to self-regulate have been very limited. Students may consequently feel uncomfortable evaluating and consequently reinforcing their own behavior.

Ensuring that young people learn the use of self-monitoring and self-evaluation strategies will allow them to respond favorably to self-reinforcement learning options. A target behavior that is both positive and frequently occurring should be identified for initial practice. This allows the student repeated opportunities to practice observing the consistently occurring behavior. Learning how to identify the target behavior and establishing the criterion to be met are the first and second steps of self-reinforcement.

Identifying and clearly defining the criterion to be met is an important step in the self-reinforcing process. As the student participates in defining the criterion, he or she learns to operationalize the behavior and clarifies for him- or herself what the expectation is. This step of the process may require input from an employer, supervisor, or teacher. If the student’s goal is to increase productivity to match the mean production of other employees, he or she will have to talk with the supervisor to find out what that production level or expected range is.

Third, the student needs the responsibility of selecting the reinforcers. When considering appropriate reinforcers, the ideal would be to select a natural consequence (e.g., earnings or positive supervisor evaluations). However, natural reinforcers may be delayed, and the student may require more immediate reinforcement initially. The teacher and student will have to work together closely to establish reinforcers and schedules of reinforcement that will meet the student’s needs, but will also stretch his or her potential for growth.

The self-monitoring procedure should be developed next. The student needs to be taught to discriminate and record the occurrence of the target behavior. Once he or she can perform these behaviors, the procedure for self-reinforcement is taught. When the specified level of performance occurs, the student is instructed to review the tally card to assure that it was correctly completed. Errors in recording interfere with the student completing the target goal. Students are then taught to deliver the reinforcer.

The teacher provides corrective feedback to the student as needed throughout the process. Then, he or she teaches the student to set new criteria, expanding or increasing the target goal to new limits as the student gains competency.
Educational Support

Assertiveness and Self-Advocacy Training

Overview

Assertiveness training and self-advocacy skills training are combined in this section, although they really are separate entities as educational supports. However, these skills often are needed by individuals with disabilities and some overlap of purpose can be assumed. Assertiveness training uses strategies and interventions to teach individuals to be more assertive, to express positive and negative feelings appropriately, to initiate and terminate conversations when needed, and to say what is on their mind, when appropriate. Assertive behavior is a learned expressive skill, combining both verbal and nonverbal components, which involves some risk of negative reaction by the recipient of this interpersonal interaction (Rakos, 1991). Self-Advocacy training involves learning of basic civil rights, leadership skills, and how to engage in collaborative team work. Individuals who wish to advocate for themselves often must use the above-named assertive behaviors in their interactions with others.

Relevance to Self-Determined Learning Model of Instruction

Assertiveness training might be of use to a student during each of the model phases. For example, in Phase 1, Set a Goal, a student might need to use assertive behavior to answer Student Question number 4, “What can I do to make this happen?” The student may have decided to try to work harder during math class rather than be enticed by another student to talk or complete off task behavior. In order to make that happen, he or she needs to attempt to stay on task, but if this does not work, assertive behavior regarding interruptions by others might need to be used.

In Phase 2 a student could use assertiveness training to answer the student question related to removing barriers to their goal. For example, “I can do better in math class if I will attend to task and also tell others that they should not bother me or talk to me.” Then, of course, in Phase 3 the student might be able to say that they have been able to change what they did not know, by the results of using assertiveness in their interpersonal activities. Use of assertive behavior dependent on the individual’s needs and the circumstances of the goal set or problem to be solved.

Self-Advocacy training could be used to support a goal such as “I want to be on the dance committee for the Senior Prom”. In order to do that a student would have to find out how that committee functions, who appoints or elects the members, and other details. This training would be used in all three phases of the model to support students to attain goals such as the one listed.
Cost of Delivery

The degree to which a student may need work on assertiveness depends on their individual goals and their ability to interact with others in a way which benefits their stated goal. Often students with mental retardation have had limited opportunities to express their needs in this way. Although students with behavior disorders may not need to learn to talk about their needs, they may require some assistance with moderation of assertive behavior for effective communication.

Assertiveness training has specific steps to follow that may need varying amounts of teacher support, again being dependent on the individual student. However, the time that it takes a teacher to engage in assertiveness training and support assertive behavior is well worth the effort, when students show results in guided practice and independent functioning. One student with learning disabilities included in regular education classes was failing several courses due to her inability to ask for accommodations. When her special education teacher used assertiveness training to facilitate the student’s need to do better in classes, the student learned to approach the regular education teacher at appropriate times to ask for alternate programming. Consequently, the student developed some degree of independence and was doing better in her school work.

Like the components of assertiveness training, Self-Advocacy training would involve some direct teaching, independent activity by the student, and the acquisition of skills which make the person a more effective leader. Of course, the student who wishes to advocate for him or herself will be aware of this and realize that they might need to use assertiveness skills in combination with leadership activities.

Support Needed

Assertiveness training involves the following basic elements which can be directly taught to students. These include: (1) modeling, (2) behavioral rehearsal, (3) reinforcement, (4) feedback and coaching, (5) positive self-statement training, (6) relaxation training, and (7) homework assignments (Roffman, 1993). Modeling effective behavior can be done live, on video, or audio. The most effective model is one who is closest in age, gender, and social characteristics but with a higher social status. Thus, a peer who can model for a student with disabilities might be more effective than a teacher. An effective model will focus on coping skills and express some fear of what their assertive behavior might cause. Role playing will give behavioral rehearsal and reinforcement can be implemented when any successful approximation of the training elements are completed. By offering corrective and supportive feedback, a teacher can emphasize positive aspects of student behavior. Some students may need to use self-verbalization in order to reinforce use of assertive statements. Teachers can enable students to do this by rehearsing and reinforcing this. Then, of course, assignments can be given to support generalization of assertiveness, either as homework or classroom tasks.

Many of the above listed training elements for assertiveness would also apply to self-advocacy training. For example, role playing, behavioral rehearsal, and posi-
tive self-statement training would be effective in assisting self-advocacy. In terms of self-advocacy training, basic leadership skills are: learning to locate and use beneficial resources, effective communication, understanding group and individual needs, helping others as a teacher or mentor, and being able to direct group activities. Some barriers to leadership have been identified by Wehmeyer and Berkobien (1996): the perception of others that people with disabilities are incapable of leadership, the lack of accommodations to support people with mental retardation in leadership roles, people with disabilities are not afforded the opportunities to become effective problem solvers, and people in leadership positions with disabilities are often excluded for reasons other than personal incompetence.

**Functional Analysis**

Assertiveness has been defined and characterized in a number of ways. Rakos (1991) listed assertiveness as a basic human right, the expression of honest and appropriate emotions, and as a specific response class or functional properties of that response class. Another definition of assertiveness by Rimm and Masters (1979) listed the overt expression of spontaneous and appropriate feelings (other than anxiety) as being assertive behavior. In fact, Rakos' defined assertive behavior as the ability to say 'no', to ask for favors or to make requests, being able to express positive and negative feelings, and the ability to initiate, continue and terminate general conversations. Thus, a person who is assertive can not only refuse, but can request and be in command of the situation through various assertive language and behavior.

Assertive behavior can be both overt and covert (observable or nonobservable). According to Rakos (1991) overt components of assertive behavior can be (1) the actual content of what is said to another person, (2) paralinguistic elements or the tone of voice or-how-the person sounds, and (3) nonverbal behavior such as body positioning and facial expressions. Nonobservable or covert assertiveness skills include: interpersonal problem solving, knowledge, philosophical beliefs, self-efficacy and outcome expectations, self-instruction, self-monitoring, and social perception skills. In order to become assertive, one must have some of these covert skills and know when it is appropriate to use them.

Teaching assertiveness skills is often combined with social skills training. Using role play and direct teaching in context, students are taught when to be assertive. A student who may not agree with several classmates in an assigned work study group may learn how to say, "No, I really don't think that is the way we should do that" or "No, I do not agree". Upon entering a restaurant, the proprietor may ask, "Do you want the special - pizza and a drink?" and assume that the person with disabilities who was not initially responsive will agree. Assertive behavior would control this possible misunderstanding, since the person ordering may have wanted pizza and a salad, but went along with what the manager offered.

Some students may need to understand their rights in order to be assertive. For example, a student with mental retardation may not know that he or she can get a job outside of school that actually pays a salary. They may spend many months training for a position and not realize that they have every right to request such a job and
work independent of their school placement. Students with learning disabilities may not realize that they have to sign up in advance for a time to take their tests with support personnel instead of in the regular classroom.

A student’s personal planning meeting or educational review is an excellent place to practice self-advocacy skills. The structure of the proceedings is often standard, the input of the people attending is solicited, decisions are made that impact the individual student, and legal documents are signed that are outlines for future services. Students could also join clubs and school groups to gain self-advocacy skills. In these contexts, students who want to become self-advocates would also use assertive behavior to attain their goals related to self-advocacy.
Educational Support
Nondirective Teaching

Overview
The nondirective teaching model is one in which the teacher acts as a facilitator in an interactive relationship with the student. It is a nurturing model which guides rather than directs. It enables a teacher to support a student’s development of ideas in their lives, their schoolwork, and in this instance in what they want “to do or learn” using the Self-Determined Learning Model of Instruction. The nondirective teaching model is directly derived from the counseling work of Carl Rogers in the 1960’s. Rogers believed that positive human relationships enabled people to grow and the facilitation of learning should be based on concepts of human relations as opposed to concepts of subject matter (Joyce & Weil, 1996).

A teacher supporting student choice and self-directed learning must keep the student frame of reference in mind. Particularly with students who may be more passive, it is important to listen effectively to what is being expressed by the student and provide sufficient time for student response when in conversation with them. In this manner, a teacher enables a student to be a part of the process of goal setting and evaluation as an active participant rather than one who is being acted upon by the teacher or others.

Relevance to Self-Determined Learning Model of Instruction
The nondirective teaching model should be used in Phase 1 of the Self-Determined Learning Model of Instruction when the teacher enables students to determine what it is they want to do or learn. In order to promote student self-direction of the process of setting a goal, teachers should allow and actually promote student expression of feelings and ideas. Thus, even though it is evident to the teacher and others exactly what interests and preferences a student might favor, it is important to encourage the student to freely investigate ideas generated independently and talk about them. For example, a student with mental retardation who was very focused on activities related to sign language actually chose a math goal, to the complete surprise of her teacher. Without using a nondirective teaching model approach, the student would have been drawn in another direction entirely. Of course, the teacher’s use of the Self-Determined Learning Model of Instruction with transition outcomes will limit the student to a certain subject area. But within that area, a student should be encouraged to state their own preference with teacher support.

When the student is determining a plan of action to achieve their stated goal (Phase 2) and also when the plan is being evaluated (Phase 3), teachers should recall the principles of the nondirective teaching model. The student should be allowed to
present their ideas in an interactive climate that is supportive and non-threatening. Then if modifications are needed, the teacher can guide the student in becoming aware of what it is they need to change or investigate further in order to work towards their stated goal.

Cost of Delivery

Students working through the three phases of the model should be encouraged to use principles of student directed learning whenever possible. Thus, allowing time to listen and guide a student in coming to conclusions as they are working through the Student Questions is a necessary part of what teachers must do. In the initial stages of working with a student, a teacher may need to allow more time to use nondirective teaching techniques. But once a student is comfortable with this type of enabling interaction, the time of interaction can be limited - depending on the issue to be discussed. Students may be surprised by the teacher support of student ideas, when a more typical "teacher control" is usual. However, teachers who have used the Self-Determined Learning Model of Instruction report that supporting student ideas is well worth the time it takes to initiate the use of a nondirective teaching model. Students appear more motivated to work on a goal or problem of their choosing. Teachers report that giving up some control is only a small "gamble" that reaps large rewards in terms of student accomplishment.

Support Needed

The nondirective teaching model is used in a semi-structured interview process in which teacher and student discuss the student’s ideas and plans within the Self-Determined Learning Model of Instruction. The teacher establishes a partnership with the student so that he or she can serve as collaborator during a period of student self-exploration of goal setting and problem solving.

This interview centers on the student’s feelings, experiences, insights, and solutions. Thus, a teacher needs to use reflective listening skills in order to implement the nondirective teaching model. In general, teachers needs to realize that there is value in all messages that the student delivers, and that each message contains two parts: the content (factual information, thoughts, feelings) and the intent (purpose for the message). The teacher needs to be able to listen for both the content and the intent in what the student is discussing.

In order to listen effectively, the teacher must have enough information to get a clear picture of what the student is discussing. The teacher might ask "how?", "what?", "where?", and "who?" questions but not "why?". The first four questions help to clarify what it is the student wants to convey. However, asking "why?" questions redirects the student from their information provision into a justification of their ideas. Instead of finding out more about the activity or thought, and investigating interests and possibilities, we begin to judge and analyze the student’s thoughts when "why?" questions are included.

Another important aspect of effective listening is to paraphrase what someone else
is saying to clarify or learn more about the topic. For example, a student may be describing a goal that they wish to achieve in very general terms. A teacher will be listening and perhaps coming to a different conclusion if they do not restate what it is the student is saying. This restatement by the teacher is a way to check to make sure what was heard is what the student actually expressed. Many students are easily led by others, so the teacher must be cautious about restatements which lead the student in another direction.

When the student has stated their ideas and those ideas have been clarified in restatement, the teacher should enable the student to determine what is needed to resolve the situation or achieve the goal that has been described. Throughout this effective listening process, the teacher must be aware of any non-verbal behaviors they are using that might inhibit or devalue the process of interactive communication. For example, a student with cognitive disabilities may be describing the type of job that he wants. Joe, who has problems with math, may state that he wants to become a civil engineer and build large highway projects. A grimace or disgusted facial expression given by his teacher could end this discussion. Although Joe may not have the ability to work on such projects as the designer or person in charge of calculations, he may investigate this career path and find an associated one that he will enjoy.

**Functional Analysis**

The description of the nondirective teaching model appears to make this a “model embedded within another model”. That is, the *Self-Determined Learning Model of Instruction* employing three phases requires the use of the nondirective teaching model, a style of interaction between teacher and learner that supports student self-direction.

Students in teacher preparation classes often get the impression they must be the authority and have the last word on all subjects. Teachers tend to be “helpers” by nature, wanting to provide assistance and answers to relieve uncertainty. However, in the nondirective teaching model, teachers should be allowing student feelings and frustrations to be presented. Negative perceptions and frustrations related to a student problem usually are a source of limitation in the solution. By using a nondirective approach, teachers can assist in investigating three sources of student problems: (1) present feelings; (2) distorted perceptions; and (3) other solutions which have remained dormant due to emotional reactions to the problems, (Joyce & Weil, 1996).

**Recommended Target Behaviors**

The recommended target behaviors include the student discussing their interests and taking some initiative in selecting their goal or defining their problem. This strategy encourages student thought, student self-direction, and teacher support of student initiative.

Encouraging a student with disabilities to determine what it is they want to learn or...
do must always involves their independent thought. Unfortunately, students are often attuned to what it is the teacher might like and student positive agreement (acquiescence) is often a problem. Thus, teachers need to promote student investigation of their interests and support the identification of a goal, how that goal will be achieved (plan), and the assessment of that plan. One teacher recently mentioned that although students often accomplish some milestones in regard to achievement, much of the impetus for that is with the teacher. Although transition plans are in place and being implemented, how much of that activity is being initiated by the student? In order for students to acquire independence after school completion, some portion of the impetus for change must be encouraged in that individual. The Self-Determined Learning Model of Instruction using problem solving-and goal setting strategies and the nondirective teaching model should encourage and support that independence.

**Instructional Recommendations**

The student and teacher need to meet in a quiet environment that will put the student at ease. If other students are listening and perhaps commenting on the conversation between teacher and student, this might inhibit the student or devalue their ideas. Even the student who may appear not to mind if someone else is in the room, will be affected by that fact. Once the process begins, then the meetings can be conducted in a less formal atmosphere, but care must always be taken to support a student’s privacy in their goal attainment process.

In order to facilitate the discussion, teachers need to explain the parameters of the goal or problem to be identified. For example, a teacher of reading would want to make sure that the student knows that he or she must identify a goal within that subject matter, or a behavioral or social goal that impacts their work in reading. Then they must facilitate, not direct the discussion related to student-identified goals.
Educational Support

Communication Skills Training

Overview
Communication is a primary need in any environment. The student who can communicate effectively is one who can say what they mean, successfully interact with others by listening and taking turns in talking, and attempt to solve social problems that may occur.

Relevance to Self-Determined Learning Model of Instruction
Communication or social skills training would be conducted in conjunction with a student goal or problem revealed while working through the Student Questions in the Self-Determined Learning Model of Instruction. Depending on the goal, communication skills training could accompany each of the three phases of the model. A student must be able to communicate the answers to the student questions. Although they may do this using written language, they are more likely to discuss the questions and their answers with their teacher prior to recording them. Thus, a student may need support for their communication at any time during teacher-student discussions of the model.

When a student goal is identified that relates to social interaction, assertiveness, advocacy, or any problem related to communication, then communication skills training will take a central role in the teacher’s enabling of the student to achieve their goal. For example, a student wishes to have friends at school, but is unable to interact in a way which promotes even the simplest positive interaction. Thus, the teacher’s role is to investigate why the student has this problem, enable the student to self-identify why it is that people do not choose to spend time with him, and work through some role playing and direct instruction sequences to enable the student to practice some needed communication skills.

Social problem solving involves use of communication and social skills in the solving of a problem related to a social situation. Thus, a person would use the strategies discuss in choice making, decision making, and problem solving to find a solution to a social problem. One student working through the Self-Determined Learning Model of Instruction was unable to determine what her problems were that kept her from doing well in her history class, in which she was included with learning supports. Upon further investigation, she was in constant conflict with another student in her project group. Alternatives to the current interaction style were investigated, and the student decided to talk with this student outside of class to find out how they could solve the problem they were having. The discussion the two students had away from class helped begin a more cooperative way to work which was.
beneficial to both these students. When needed, the teacher gave support and suggestions for improved interaction to achieve class goals.

Cost of Delivery
The time spent for direct instruction will vary considerably according to the ability and skills that a student brings to the setting. A student whose primary needs are communication skills would need more intensive work in this area. The student who only needs some “fine tuning” in this area may require less time.

Numerous curricula for training social skills and social problem solving exist. For use with the Self-Determined Learning Model of Instruction, a teacher can select the skill or skills that need support and choose the most appropriate resource that they can find. However, using student self-evaluation of communication skills will help to involve the student in this process and make them more aware of strengths and needs in their communication abilities.

Support Needed
Teachers will need to have a general idea of the numerous social skills and social problem solving scenarios that might be used with a particular student. As a student works through the three phases of the Self-Determined Learning Model of Instruction, the student will be a partner in identifying and working towards more effective use of social and communication skills. Role playing in small groups is an effective way to work with student in enabling communication skills to develop. Discussing scenarios in which communication is used gives more practice. Actual rehearsal and direct teaching of the needed skills is another method of teaching these skills.

Functional Analysis
According to Wehmeyer, Agran and Hughes (1998), the skills involved in assertiveness training, social skills training, and role playing have been validated as effective for increasing the communication skills of youth with disabilities.

Platt and Hermalin (1989) suggest that social problem solving requires the following activities: (1) recognition of the problem, (2) optional thinking or generation of alternatives, (3) causal thinking, (4) means-end thinking or step by step planning, (5) consequential thinking, and (6) role taking or metapresentation. These are difficult individually, but when combined and coordinated, constitute a major task for students and teachers. Wehmeyer and Kelchner (1995) investigated the social problem solving skills of a group of adults with mental retardation and found this group was less able to generate possible solutions to problems and gave many irrelevant solutions in a group setting.

Instructional Recommendations
The use of role playing in settings where a teacher can facilitate the discussion is a teaching model for developing and refining the communication skills of an individual with cognitive disabilities. Guided participation in settings in the commu-
nity would also be helpful. Developing a reminder list for students that is tailored to their situation and needs should be accomplished.

Some typical skills needed by people who wish to become self-advocates have been adapted from a list by Van Reusen, Bos, Schumaker, & Deshler (1994). This general list could be a starting point for a personalized checklist for each individual student. It is written in the first person from the student perspective. Items could be added to this array that are specific to the location and situation in which students are functioning. Depending on the student, a shorter list may be better. Even if a teacher thinks that a student’s skills seem adequate in their classroom, letting a student self-evaluate communication skills will provide the student’s view of their own skills. Often classes have a set pattern of operation, student interaction is programmed to a point, and students are comfortable. However, when a student leaves that class and moves to another environment, he or she may not appear as socially competent due to the increased demands on their abilities.