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Promoting Access to the General Curriculum by Teaching Self-Determination Skills

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ABSTRACT: *Although participation and progress in the general curriculum is mandated for all students, models to achieve such access often neglect students with more severe disabilities. Promoting self-determination linked to standards is an entry point to ensuring access to the general curriculum for all students, including students with severe disabilities. In this study, middle school students with intellectual disabilities alternately learned problem-solving and study planning skills linked to language arts, science, and social studies standards. Students in both intervention groups showed significantly more capacity on the targeted skill as compared to the alternating control group, and all students achieved goals at better than average levels. Promoting self-determination provides students with disabilities with additional strategies to access the general curriculum.*

To "better align special education programs and policies with the larger national school improvement effort referred to as standards-based reform" (Nolet & McLaughlin, 2000, p. 2), the 1997 Amendments (Public Law 105-17) to the Individuals With Disabilities Education Act (IDEA) required that the individualized education program (IEP) of *all* students receiving special education services include (a) statements describing how the child's disability affects his or her involvement and progress in the general curriculum; (b) measurable goals to enable the child to be involved in and progress in the general curriculum; and (c) services, program modifications, and supports necessary for the child to be involved in and progress in the general curriculum. The intent of these mandates was to ensure that all students have access to a challenging curriculum, are held to high expectations, and are included in school accountability mechanisms.

IDEA regulations defined the "general curriculum" to mean "the same curriculum as for

nondisabled children" (Rules and Regulations, 64 C.F.R. 12592, 1999). Specifically, one must interpret the general curriculum as the formal curriculum adopted by state and local education agencies, that is, a curriculum usually designed under the auspices of standards-based reform efforts across the country. The regulations further specified that such involvement in the general curriculum should be "to the maximum extent appropriate" (Rules and Regulations, 64 C.F.R. 12592, 1999). The clear mandate from IDEA, therefore, is to maximize *all* students' involvement in the general curriculum. Yet, there has been limited attention paid as to how to achieve this for students with intellectual or developmental disabilities (Wehmeyer, Lance, & Bashinski, 2002; Wehmeyer, Lattin, & Agran, 2001). Agran, Alper, and Wehmeyer (2002) found an important reason to account for such limited effort. Teachers who work with students with intellectual and developmental disabilities indicated in a survey about the importance of the IDEA access mandates to students with severe disabilities, that although they agreed that holding students with intellectual disabilities to high standards and expectations was important, they believed that the focus on promoting success in the general curriculum (identified largely as core academic areas) was not relevant for their students.

IS ACCESS IMPORTANT TO STUDENTS WITH INTELLECTUAL AND DEVELOPMENTAL DISABILITIES?

The IDEA access mandates are intended to ensure that students with disabilities are part of the school accountability system. Ysseldyke et al. (1998) pointed to the "dramatic increase in the number of states indicating they used data from students with disabilities on school participation, exiting school, and achievement in their state or local accountability systems" as evidence of the effectiveness of this effort. The IDEA focus on access to the general curriculum and participation in testing has taken the first steps toward ensuring that students with disabilities are part of the accountability system in education. It is important that these steps not exclude students with intellectual and developmental disabilities.

The IDEA access mandates also are intended to ensure that all students are held to high expectations, which is particularly important for students with intellectual and developmental disabilities. Feldman, Saletsky, Sullivan, and Theiss (1983) pointed out "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). Research has shown that teachers form expectations according to special education labels independent of other information about student capacity, with students with mental retardation held to the lowest expectations (Bennett-Gates & Kreitler, 1999; Rolison & Medway, 1985). It seems evident not only that the law mandates that students with intellectual and developmental disabilities be involved and progress in the general curriculum, but also that such students receive a high-quality education.

DO STUDENTS WITH INTELLECTUAL DISABILITIES HAVE ACCESS TO THE GENERAL CURRICULUM?

There are findings emerging that suggest the answer to this question is too often "no." Wehmeyer, Lattin, Lapp-Rincker, and Agran (2003) conducted an observational study of students with mental retardation to examine the degree to which these students participated in tasks related to the general curriculum. They observed 33 middle school students with mental retardation for approximately 110 hours in self-contained and general education classrooms. They found that students were less likely to work on tasks related to the general curriculum in self-contained classrooms than in general education class-

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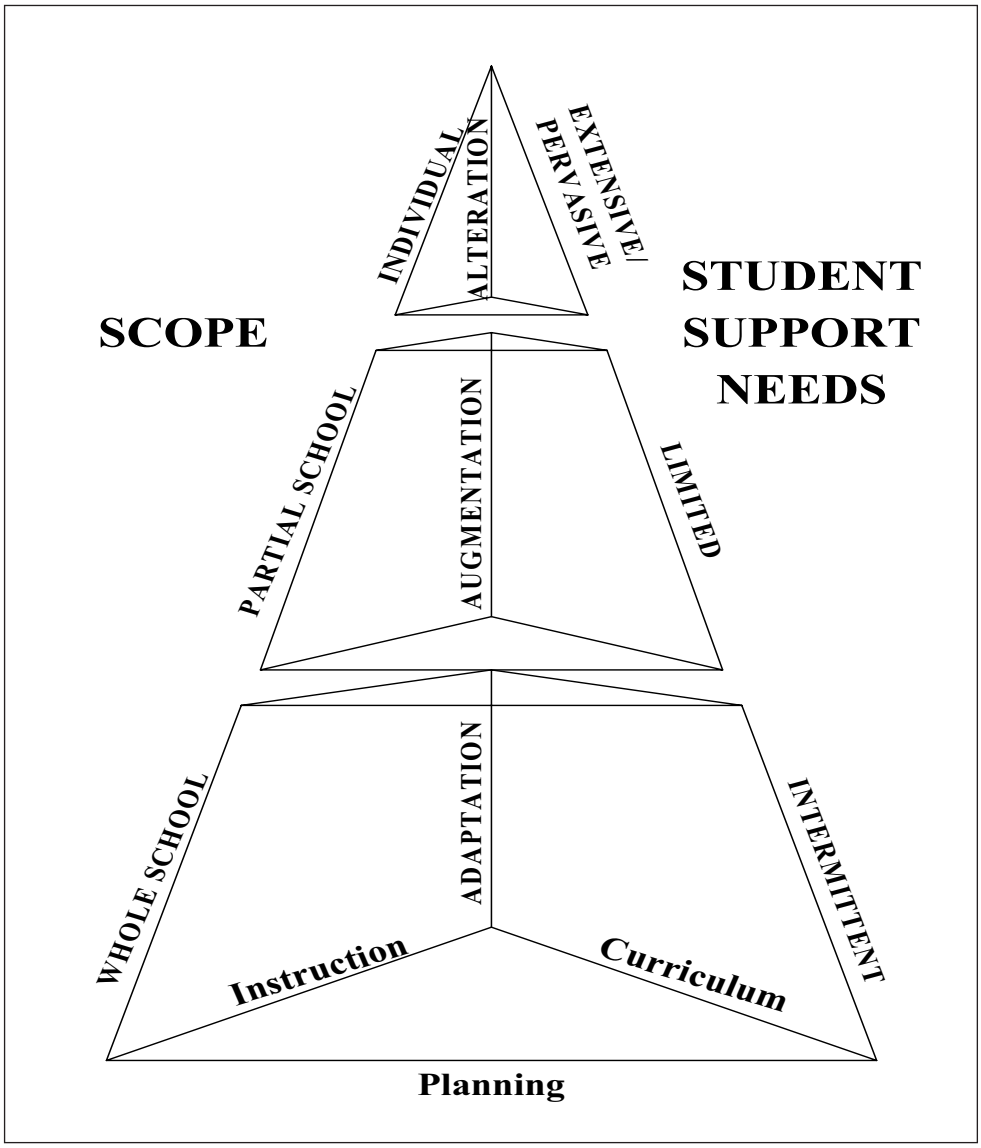
rooms. The data revealed that students in inclusive settings had three times the number of intervals in which they were working on a standards-linked task, wheras students in segregated settings had more than three times the number of intervals in which they were working on a task not linked at all to the general curriculum.

PROMOTING ACCESS FOR STUDENTS WITH INTELLECTUAL DISABILITIES

We have engaged in research and model development activities to identify ways to promote access to the general curriculum for students with intellectual and developmental disabilities (Wehmeyer,

FIGURE 1
Multilevel Focus for Gaining Access to the General Curriculum



Note: From Teaching Students with Mental Retardation: Providing Access to the General Curriculum (p. 43), by M. L. Wehmeyer, D. J. Sands, E. Knowlton, & E. B. Kozleski, 2002, Baltimore: Paul H. Brookes. Copyright 2002 by Paul H. Brookes. Reprinted with permission.

Curriculum augmentation enhances the standard curriculum with "meta-cognitive or executive processing strategies for acquiring and generalizing the standard curriculum."

2003; Wehmeyer, Lance, et al., 2002; Wehmeyer et al., 2001; Wehmeyer, Sands, Knowlton, & Kozleski, 2002). These activities resulted in a model to promote access containing three levels of curriculum modifications: adaptation, augmentation, and alteration. This model can be implemented across educational planning, instruction, and curriculum design activities, and can occur in whole school, partial school or group, and individual student levels, depending on the student's support need (see Figure 1).

One of the strategies used in this model involves the implementation of "curriculum augmentations" (Knowlton, 1998; Sands, Kozleski & French, 2000). Curriculum augmentations enhance the general curriculum with "meta-cognitive or executive processing strategies for acquiring and generalizing the standard curriculum" (Knowlton, p. 100). Such augmentations do not alter the curriculum, but expand it to teach students learning-to-learn, self-regulation, or other strategies that enable them to succeed. Most researchers examined the use of curriculum augmentations for students with learning disabilities; however, a number of successful learning strategies for students with intellectual and developmental disabilities have been documented. These include (a) self-prompted communication strategies (Hughes et al., 2000); (b) problem-solving (Agran, Blanchard, Wehmeyer & Hughes, 2001); (c) goal setting (Copeland, Hughes, Agran, Wehmeyer, & Fowler, 2002; German, Martin, Marshall & Sale, 2000; Wehmeyer, Palmer, Agran, Mithaug, & Martin, 2000); (d) self-regulation of behavior (Agran et al., 2001); (e) self-monitoring (Hughes et al., 2002); and (f) self-management (King-Sears & Cummings, 1996).

As discussed in a companion article in this issue (see Wehmeyer, Field, Doren, Jones, & Mason, 2004), promoting and enhancing self-determination has the potential to promote access to the general curriculum. State and local standards typically contain content and student achievement standards and benchmarks that require students to learn and demonstrate skills leading to enhanced self-determination, such as goal setting, problem-solving, and decision making, and, thus, provide an entry point for student involvement in the general curriculum. Second, teaching students skills to enhance self-determination is a form of curriculum augmentation that enables students to learn and then apply skills that support their enhanced self-direction of learning.

One empirically validated instructional model to promote student self-determination and that can serve as a curriculum augmentation to promote access to the general curriculum is the Self-Determined Learning Model of Instruction (SDLMI; Agran, Blanchard, & Wehmeyer, 2000; Mithaug, Wehmeyer, Agran, Martin, & Palmer, 1998; Palmer & Wehmeyer, 2003; Wehmeyer et al., 2000). The SDLMI, described in detail subsequently, is a model of teaching that enables educators to teach students to self-direct learning by enabling them to set educational goals, develop action plans to achieve those goals, and self-evaluate progress toward those goals. Wehmeyer et al. conducted a field test of the SDLMI in which 21 teachers were responsible for instructing 40 adolescents who had been identified with mental retardation, learning disabilities, or emotional/behavioral disorders. The field test indicated that the model was effective in enabling students to attain educationally valued goals. From a total of 43 distinct goals, teachers rated 55% of the goals on which students received instruction as having been achieved as expected or exceeding expectations. Of the remainder, teachers indicated that students made progress on an additional 25% of their goals; only 20% of the goals were rated as indicating no student progress on the goal.

Next, Agran et al. (2000) used a delayed multiple-baseline across three-groups design to examine the efficacy of the SDLMI for adolescents with severe disabilities. Students collaborated with their teachers to implement the first phase of the model (goal setting) and, as a result, identified one goal as a target behavior. Results indicated that 17 of the participants achieved

their personal goals at or above the teacher-rated expected outcome levels; only 2 students were rated as indicating no progress on the goal.

Recently, Palmer and Wehmeyer (2003) examined the utility of the model with young children. Fourteen teachers in two states implemented the model with 50 students (across 11 elementary schools) who ranged in age from 5 to 9 and were in Grades K through 3. Most students were receiving special education services, although the study also included some students who were not currently receiving such supports but were identified by teachers as needing assistance in these areas (e.g., at-risk students). Teachers implemented a modified version of the SDLMI (e.g., using graphics to pose questions instead of text). Results indicated that more students exceeded goal attainment expectations than failed to achieve them and that students showed significant pre- and postintervention changes in knowledge about goal setting.

This study extended the research on the SDLMI by investigating the effects on engaging middle school students with intellectual disabilities in instructional efforts to promote self-determination. Specifically, we used instruction in problem-solving and study planning skills as a way to promote student involvement and progress in the general curriculum.

METHOD

Participants

Study participants were 22 middle and junior high school students with intellectual disabilities who were recruited from three school districts in the Midwest that served urban, suburban, and rural populations. Twenty students were receiving special education services under the label of mental retardation. Two students who were identified as having a learning disability were judged by teachers as students who would benefit from participation in the interventions reported in the study. Four students were in sixth grade, 4 in seventh grade, 11 in eighth grade, and 3 in ninth grade. Students ranged in age from 11 to 15 years, with a mean age of 13.23 (*SD* = 1.23). Ten participants were male and 12 were female. IQ scores for the overall group ranged from 45 to 78, with a mean of 64.6 (*SD* = 9.97). IQ scores for two students were not available. Seventy-two percent of the students in the sample were White, and 28% were African American.

When feasible, we provided instruction using the SDLMI to enhance self-determination in a general education classroom. Nineteen students received instruction in the general education classroom and the 3 remaining students received instruction in a resource room. Once we obtained informed consent from a family member of each student participating in the study, we assigned students to one of two groups. We made an effort to equate groups on level of ability and self-determination; however, there were additional factors that determined group placement such as school location and instructional schedule. The composition of each group is described in Table 1 and includes student IQ scores, age, grade level, and total self-determination scores. Analysis of variance indicated that the two groups did not differ significantly on either IQ or self-determination score.

Procedure

The study employed a modified Interrupted Time Series With Switching Replication Design (Cook & Campbell, 1979). All students participated in all data collection activities with the exception of Goal Attainment Scaling (GAS) data collection, described subsequently. Following the first data collection, students in Group 1 received instruction to promote problem-solving skills linked to a school district social studies ("Students will incorporate problem-solving skills to address personal, cultural, or societal issues") or science ("Solve problems in a group setting and individually") standard. Students in Group 2 served as the control group for this phase. Following the second data collection period, students in Group 2 received instruction to promote goal-setting and planning skills linked to a different district standard in language arts ("Implement a study plan to accomplish daily, weekly, and long-term learning tasks and projects"). Students in Group 1 served as the control group for this phase. This design controls for threats to internal validity and en-

TABLE 1
Demographic Description of the Two Intervention Groups

	Group 1		*Group 2*	
Size	*n* = 12	7 Male	*n* = 10	3 Male
		5 Female		7 Female
IQ Scores	*M* = 63.27	Range 49-78	M = 66.22	Range 45-78
	SD = 10.40		*SD* = 9.76	
Age in Years	11 *n* = 2	*M* = 13.17	12 *n* = 3	*M* = 13.30
	12 *n* = 1	*SD* =1.34	13 *n* = 3	*SD* = 1.16
	13 *n* = 4		14 *n* = 2	
	14 *n* = 3		15 *n* = 2	
	15 *n* = 2			
Grade	6th *n* = 2	*M* = 7.58	6th *n* = 2	*M* = 7.60
	7th *n* = 2		7th *n* = 2	
	8th *n* = 7		8th *n* = 4	
	9th *n* = 1		9th *n* = 2	
SDS Total Score	*M* = 84.08	*SD* = 16.19	*M* = 91.30	*SD* = 24.42

hances external validity because two populations demonstrate an effect at two different times (Cook & Campbell).

The first author and two graduate research assistants conducted all instructional and data collection activities with all students. The first author trained the graduate assistants to implement the instructional method used to teach problem-solving, goal-setting, or self-monitoring skills (the SDLMI, described subsequently). The students' special education teachers provided support as needed, including answering questions about student interests, abilities, and possible topics for goal setting for each student.

This study extended the research on SDLMI, by investigating the effects on engaging middle school students with intellectual disabilities in instructional efforts to promote self-determination.

During the first measurement period, all students completed a measure of problem-solving capacity and a self-report measure of self-determination. All measurement instruments are described in the next section. Group 1 received 5 weeks of instruction on problem-solving that was derived from the district standard and based within the context of the SDLMI. Following instruction, goal attainment indicators were finalized for students in the treatment group (e.g., Group 1). During the second measurement period, all students again completed the problem-solving measure and the self-regulation/problem solving section of The Arc's Self-Determination Scale (Wehmeyer & Kelchner, 1995). In the third

measurement period, all students completed a measure of study planning capacity, which was repeated in the fourth measurement period. Following data collection on study planning capacity, students in the second group (e.g., Study Plan Group) received 5 weeks of instruction on goal setting and self-monitoring skills.

The Self-Determined Learning Model of Instruction

Joyce and Weil (1980) defined a model of teaching as "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). Such models are derived from theories about human behavior, learning, or cognition, and effective teachers employ multiple models of teaching, taking into account the unique characteristics of the learner and types of learning. The SDLMI (Mithaug et al., 1998; Wehmeyer et al., 2000) was designed to provide a model of teaching that enables educators to teach students to self-regulate problem-solving, decision-making, and goal-setting processes that lead to student self-directed learning and enhanced self-determination. This model is appropriate for students with and without disabilities across multiple content areas, and enables teachers to engage students in their educational programs by increasing opportunities for self-directed learning. Implementation of the SDLMI consists of a three-phase instructional process.

In each phase of the model, a problem is posed. In phase 1, the problem is "What is my goal?" In phase 2, the problem is "What is my plan?" The problem in the final phase is "What have I learned?" Students solve each problem by asking and answering a series of four Student Questions (per phase) that they learn, modify to make their own, and apply to reach self-selected goals. Student Questions direct the student through a problem-solving sequence in each instructional phase. The solution to the problem in each phase leads to the problem (and problem-solving sequence) in the next phase. The Student Questions differ from phase to phase, but they represent identical steps in the problem-solving sequence. That is, students answering the questions must identify (a) the problem, (b) potential solutions to the problem, (c) barriers to solving the problem, and (d) consequences of each solution.

The Teacher Objectives within the model provide suggestions for teachers such as scaffolding instruction, using direct teaching strategies, or collaborating with students, that not only enable them to support students working through the Student Questions but also help them determine the best strategies to achieve student goals. They provide, in essence, a road map for teachers to assist the student to solve the problem stated in the Student Question. The Educational Supports are part of the model's *syntax*—how the model is implemented. The majority of these supports are derived from the self-management literature. A variety of strategies, such as choice-making (Cooper et al., 1992), goal-setting (Schunk, 1985), and self-monitoring techniques (Agran, 1997), have been used to teach all students, including students with disabilities, how to manage their behavior.

Instrumentation and Measurement

The impact of the implementation of the SDLMI on students with disabilities in this study was examined using multiple measures and is described in the following section.

Measuring Self-Determination. Prior to the problem-solving instruction, all students completed The Arc's Self-Determination Scale (Wehmeyer & Kelchner, 1995), a 72-item self-report measure that provides data on four essential characteristics of and overall self-determination. The measure was normed with 500 students with and without cognitive disabilities in rural, urban, and suburban school districts across five states. The Arc's Self-Determination Scale operationalizes an empirically validated theory of self-determination (Wehmeyer, 2001). Its concurrent criterion-related validity was established by showing relationships between the scale and conceptually-related measures. The scale had adequate construct validity, including factorial validity established by repeated factor analyses, and discriminative validity. The scale had adequate internal consistency (Chronbach alpha = .90); (Wehmeyer, 1996).

Measuring Problem-Solving and Study Plan Skills. We developed a 14-item criterion-referenced measure to provide an indicator of

change in problem-solving or study planning skills. This measure examined a student's knowledge of problem-solving steps and his or her capacity to apply the steps in situations that a student in middle school might encounter (i.e., missing a ride after school, finding a wallet in the school hallway, borrowing a book and spilling something on it). The items required students to (a) identify steps to solving a problem; (b) define key terms in the problem-solving process; and (c) apply problem-solving steps such as identifying the problem, a solution to and assessing identifying the problem, and assessing how well the solution will work on typical problems that occur in schools.) We also developed a similar, 13-item criterion-referenced measure of study planning knowledge and skills for students in middle school. This criterion-referenced measure provided a number of scenarios to use a plan of study (i.e., learning spelling or vocabulary words, working on a social studies project, completing math problems). Students were asked to identify key steps in study planning, define terms in study planning, and then apply those steps to the scenarios. (Copies of both assessments can be obtained from the lead author.)

Measuring Goal Attainment. We implemented the GAS process (Kiresuk, Smith, & Cardillo, 1994) when intervention was underway and a goal was set. According to Carr (1979), the GAS "involves establishing goals and specifying a range of outcomes or behaviors that would indicate progress toward achieving those goals" (p. 89). Each student's GAS scale was prepared with five potential outcomes arranged in a continuum, as identified by each student's special education teacher. Raw scores were converted to standardized *T*-scores, with a mean of 50 and a standard deviation of 10, to allow comparison across goal areas and participants (Cardillo, 1994).

After the problem-solving intervention, we repeated the criterion-referenced problem-solving measure and administered Part 2a, (items 33-38) of The Arc's Self-Determination Scale (measuring student problem-solving capacity). In addition, we finalized the GAS for Group 1 (the Problem-Solving Group) and computed the raw and standard scores. Prior to implementing Group 2's intervention for study plans, all students completed the 13-item criterion reference study plans measure. Following a 5-week intervention for the Study Planning Group, students again completed the study planning criterion-referenced measure and the GAS was scored.

Examples of goals selected for implementation included: (a) learning five new sight words a week, (b) increasing reading comprehension using the newspaper, (c) learning safety rules, (d) improving note-taking ability in social studies, (e) completing work in science, (f) reading at least four books for language arts class, and (g) improving idea organization for writing assignments.

Interventions

Interventions in both problem-solving and study plans were structured within the context of the SDLMI. Students learned a strategy that was applied in language arts, science, or social studies through various targeted examples and probes relevant to each student's needs. Intervention 1 included learning the problem-solving steps listed in Figure 2. Materials such as games and matching activities were created for review and practice. The students in Group 1 (the Intervention Group) received at least 5 weekly sessions lasting an average of 35 min each. Participants spent additional time working on their goals independently or with their teacher or a paraeducator. A similar process was used with regard to teaching students in Group 2.

Analyses

We examined the differences between the pre- and postintervention scores on criterion-referenced measures of problem-solving and study planning using repeated measures analysis of variance (ANOVA). As another means of examining changes in problem-solving capacity, we combined the total frequency of problem solutions generated pre- and postintervention by students in both groups on the problem-solving measure and responses on items 33-38 of The Arc's Self-Determination Scale. This too was examined using repeated measures ANOVA. Data from the GAS process resulted in standardized scores that are presented in tabular and percentile formats in Table 2.

FIGURE 2
A Listing of the Problem-Solving and Study Plan Interventions

Intervention 1: Problem Solving	Intervention 2: Study Plan
Learn 5 problem solving steps: 1. Identify the problem 2. Think about a few solutions: a. What ways could I solve the problem? b. How would each solution work? 3. Choose a solution. 4. Try it. 5. Ask, "How well will my plan work?" Source: Agran & Wehmeyer (1999)	**Thinking about Learning:** 1. What do I have to learn? 2. When do I have to have it done? 3. Do I have what I need to do it? 4. Start it. 5. Do I need help? 6. Work at it. 7. I did it! **I'm Stuck! What do I do now?** 1. Read, say, and think about the directions again. 2. Try the task again 3. What's the problem? a. Need more information? b. Can't remember how to do it c. The words/problems are too hard. d. I need a calculator or dictionary 4. Ask for specific help. Source: Bosch & Kersy (1993)

RESULTS

Repeated measures analysis of variance for pre- and postintervention problem-solving criterion scores and study planning scores as well as pre- and postintervention problem solution frequency scores (calculated from responses to both problem-solving indicators) revealed significant group by measurement time differences. On the criterion-referenced problem-solving measure, mean scores for the preintervention assessment were 18.50 for Group 1, and 17.80 for Group 2. After Group 1 received the intervention, mean scores were 22.92 for Group 1, and 17.4 for Group 2, $F(1,20) = 4.84$, $p = .04$. Similarly, on the problem solution indicator, mean scores for the preintervention assessment were 9.33 for Group 1, and 11.4 for Group 2. After Group 1 received the intervention, mean scores were 15.4 for Group 1, cores for the preintervention assessment were 19.75 for Group 1, and 16.3 for Group 2. After

TABLE 2

Pre-and Post-intervention Mean Scores (With Standard Deviations) and Goal Attainment Scale Scores for Groups 1 and 2

	Problem-Solving Intervention					*Learning Plan Intervention*		
	Problem Solving Pretest	Problem Solving Posttest	Solutions Score (Pretest)	Solutions Score (Posttest)		Learning Plan Pre-test	Learning Plan Post-test	GAS Scores[a]
Group 1	18.50	22.92 **	9.33	15.42 *	*Group 1*	19.75	19.16	52.82
(treatment)					*(control)*			
	(6.92)	(6.08)	(4.53)	(6.64)		(6.86)	(7.60)	(14.83)
Group 2	17.80	17.40	11.40	12.30	*Group 2*	16.3	21.7 **	58.39
(control)					*(treatment)*			
	(5.57)	(6.16)	(4.19)	(4.47)		(6.43)	(5.29)	(12.27)

[a] GAS scores > 50 show more than expected progress on goal completion.

Pre-post differences significant at * $p = 0.00$. ** $p = 0.01$

Group 2 received the intervention, mean scores were 19.16 for Group 1, and 21.7 for Group 2, $F(1,20) = 13.05$, $p = .002$.

All GAS scores for intervention Groups 1 and 2 were above the mean score of 50, which indicated that the students met their goals at a better than expected level (note that GAS scores were only calculated for each Intervention Group, not when the groups were serving in a control capacity). The GAS scores for the Problem-Solving Group yielded a mean of 52.82, *SD* = 14.83; the Study Planning Group (Group 2) GAS mean score was 58.39, *SD* = 12.27.

DISCUSSION

The results of this study contribute to the knowledge base with regard to access to the general curriculum and self-determination in several ways. First, students with mental retardation receiving intervention on skills to promote self-determination (problem-solving, study planning) significantly improved their knowledge and skills in these areas. As students hone and refine these skills, they should be able to apply them to school activities that will enable them to succeed on other content areas in the general curriculum. Second, students were able to achieve educationally relevant goals tied to district-level standards at expected or greater than expected levels. This supports the hypothesis that instruction to promote self-determination can serve as an "entry point" to the general curriculum for students with disabilities. The SDLMI, the instructional model used in this study, could easily be applied schoolwide to teach all students how to self-regulate problem-solving and increase engagement with the curriculum (Mithaug, Mithaug, Agran, Martin & Wehmeyer, 2003). This would ensure the participation of students with intellectual disabilities in the general curriculum.

There are several limitations that warrant consideration. First, we were not able to gather data with regard to the generalization of instruction. The SDLMI is designed for teachers to use over time to enable students to self-regulate the instructional goal setting, action planning, and evaluation process. It is important to conduct longitudinal research to examine impact over the long term. Second, we can only hypothesize that an increase in skills in areas such as problem-solving and study planning will result in greater student capacity on other general education content areas. Future research should provide more specific indicators on the effect these skills have on the capacity for students with intellectual disabilities to succeed in the general curriculum.

Most teachers agreed that raising expectations for students with disabilities will result in improved school performance.

IMPLICATIONS FOR PRACTICE

This study illustrates the potential that instruction to promote student self-determination has to benefit students in multiple ways. First, the acquisition of skills such as problem-solving, decision making, and goal setting are important if students with intellectual and other disabilities are to succeed postgraduation. Second, the acquisition of component elements of self-determined behavior, such as problem-solving skills, enhances overall self-determination, which, in turn, has been linked to more positive adult outcomes (Wehmeyer & Palmer, 2003; Wehmeyer & Schwartz, 1997). Third, because standards in many districts include an instructional emphasis on component elements of self-determination, instruction to promote self-determination serves as an entry point to the general curriculum for students with mental retardation. Fourth, all students benefit from instruction on skills such as problem-solving or goal setting. Strategies to promote these skills can be implemented schoolwide. Thus opportunities for inclusion are increased and the need to single out students with disabilities for specialized instruction is reduced. Finally, skills to promote self-determination are important curriculum augmentations that provide students with skills to succeed in curricular content areas.

CONCLUSION

In their survey of educators working with students with intellectual disabilities, Agran et al. (2002) found that most teachers agreed that raising expectations for students with disabilities will result in improved school performance. They were less certain, however, that this could be achieved by the current standards-based approach because many state and local standards do not include the functional content domains that are important in the education of students with intellectual and developmental disabilities. Although there is a need for the field to address the legitimate concern that standards-based reform narrows the general curriculum to exclude content important to students with more severe disabilities, this study illustrates how students with intellectual and developmental disabilities can achieve progress in the general curriculum by promoting self-determination. State and district content and student achievement standards across multiple states include standards that are intended to ensure that students acquire goal-setting, problem-solving, decision-making, self-advocacy, and self-management skills. There are now multiple instructional materials, methods, and strategies that have been introduced to teach students with disabilities these component elements of self-determined behavior.

Promoting self-determination results in a beneficial outcome for students with intellectual and developmental disabilities, and also provides a means to achieve inclusion in the general curriculum. By teaching students to set goals, solve problems, and self-regulate the learning process, teachers enable students to perform more effectively in other curriculum domain areas. These component elements of self-determination (goal setting, problem-solving) represent instructional areas that benefit all students, as evidenced by their presence in the general curriculum and, as such, become a means to provide classroomwide instruction that is of value to all students.

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