

2015

Evaluating the Effectiveness of Take Action: Making Goals Happen Curriculum

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EVALUATING THE EFFECTIVENESS OF TAKE ACTION:
MAKING GOALS HAPPEN CURRICULUM

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Submitted in Partial Fulfillment of the Requirements

For the Degree of Doctor of Philosophy in

Special Education

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2015

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ACKNOWLEDGEMENTS

I would like to express my deepest gratitude to my family and friends who have supported me throughout my career and in completing the doctoral program. I trust that their observation of this process has reinforced the value of dedication, endurance, and perseverance. Thank you to my husband Mark who encouraged me each and every day to be the best that I could be.

This process would not have been possible without the guidance and knowledge provided by my advisor, Dr. Kathleen Marshall, and committee members Dr. Bethany Bell, Dr. Erik Drasgow, Dr. Anthony Plotner, and Dr. Kent Murray. I appreciate all that you have done to help me reach my goal.

ABSTRACT

As the accountability movement emerged with the passage of No Child Left Behind and the amendments of the Individual with Disabilities Education Act, there was a growing concern regarding how to best provide transition services for youth with disabilities. As Cobb, Lehmann, Newman-Gonchar, and Alwell (2008) have stated, a research base has emerged concerning the role of self-determination and other moderators that impact postschool outcomes.

The purpose of this study was to identify if *Choicemaker: Take Action: Making Goals Happen* curriculum is effective in increasing global self-determination among middle school students with disabilities. Multiple Regression analysis was used with a sample of 220 students with disabilities from two middle schools located in a suburban area of the southeastern part of the United States. One school served as the intervention group ($N = 109$) to pilot the implementation of the curriculum for 8 weeks while the other was selected as the control group ($N = 111$). Self-determination scores, as measured with the ARC Self-Determination Scale (SDS) and AIR Self-Determination Scale (AIR), were compared before and after the curriculum implementation. In addition, multiple regression procedures were used to examine how disability, gender, age, group assignment, least restrictive placement (LRE) and the interaction between disability and gender (disability x gender) and disability and LRE (disability x LRE) predict differences between pre and post SDS and AIR scores for the intervention group only.

The results did not support the main hypothesis that the curriculum intervention significantly increased global self-determination skill scores across all constructs. However, the study showed promising practice in increasing the beginning stages of self-awareness (self-realization) and proved to be a flexible curriculum to generalize to students with mild disabilities with the exception of students with autism. Furthermore, the study provided evidence that a new era of curriculum and assessment development is needed.

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CHAPTER 1

INTRODUCTION

In 1975, the Education for All Handicapped Children Act (PL 94-142) mandated a free appropriate public education in the least restrictive environment for all children with disabilities. Since 1975, there have been numerous amendments to this act including the Individuals with Disabilities Education Act (IDEA, 1990), which served to reauthorize the original act. IDEA became a focal point for the delivery of transition services as an integral part of educating the whole child with emphasis on student involvement requirements. The IDEA (1990) defines transition services as:

A coordinated set of activities for a student, designed within an outcome oriented process, which promotes movement from school to postschool activities, including postsecondary education, vocational training, integrated employment, including supported employment, continuing adult education, adult services, independent living or community participation.

The coordinated set of activities shall be based upon the individual student's needs taking into account the student's preferences and interests and shall include instruction, community experiences, employment development, and other postschool adult living objectives, and when appropriate the acquisition of daily living skills and functional vocational evaluation. (p. 19)

The transition service provision of IDEA was a direct response to research that indicated poor outcomes for youth with disabilities (Agran, Blanchard, & Wehmeyer, 2000; Wehmeyer & Schwarz, 1998). In 1993, the Office of Special Education Programs sponsored the National Longitudinal Transition Study (NLTS), which provided data regarding postsecondary outcomes for youth with disabilities through a representative national sample. The results from NLTS validated the impetus of IDEA for continued emphasis on improving transition outcomes and the need to identify evidence-based practices that teach students how to be self-sufficient. The Council for Exceptional Children Division of Career Development and Transition issued a position paper (Field, Martin, Miller, Ward & Wehmeyer, 1998) stating that “self-determination is important to enable students to be more successful in education and transition to adult life and holds great potential to transform the way in which educational services are planned and delivered for students with and without disabilities” (p. 125). The President’s Commission on Excellence in Special Education (2002) also reinforced the importance of promoting self-determination to achieve improved results for students with disabilities. Lastly, the recent educational reform movement to adopt national state standards solidified the importance of self-determination, emphasizing a need for students to be career and college-ready when they exit secondary school (No Child Left Behind Act, 2002).

According to Wehman (1996), transition planning should incorporate four major components: student empowerment that enriches self-determination, student evaluation, student identification of postschool goals, and student selection of educational experiences. As transition planning and services evolved, the concept of self-

determination emerged as an important element for both special and general education students. Within the professional literature, there are multiple interpretations of self-determination, which can cause confusion when attempting to operationally define the term. Self-determination is described in the literature as both an intervention and an outcome (Martin et al., 2003; Wehmeyer, 1996; Wehmeyer, et al., 2010). Deci and Ryan (1985) and Aberly (1994) employed a psychological perspective by defining self-determination as the capacity to make choices and the effects of those choices on one's actions. Powers (1996) conceptualized self-determination as a function of mastery motivation and self-efficacy expectations, while Mithaug (1996) viewed self-determination as a derivative of an individual's engagement in self-regulated problem solving.

One of the most popular functional conceptual frameworks, which treats self-determination as a multifaceted construct, was developed by Wehmeyer (1996), who defined self-determination as the ability to “act as the primary causal agent to make decisions regarding one's quality of life without undue interference or influence from other people” (p. 3). Self-determination is viewed as an adult outcome developed through lifelong learning and characterized by a person's behavior (Wehmeyer & Schwartz, 1998). A causal agent is someone who makes or causes things to happen in his or her life, acting with intent to shape his or her future and destiny (Wehmeyer, 1999). Wehmeyer (1999) further stated that self-determination reflects intentional choices and decisions.

Wehmeyer and Schwartz (1998) suggested that in order for an event or act to be self-determined, it must include, to some degree, four essential characteristics: the individual acts autonomously, behavior(s) are self-regulated, the individual initiates the

act in a psychologically empowering manner, and the individual acts in a self-realizing manner (p. 5). Behavioral autonomy and self-regulation represent a set of abilities while psychological empowerment and self-realization represent a set of attitudes. Wehmeyer (1996) maintained that these four essential characteristics that define self-determined behavior are rooted in the development of core interrelated component elements that include choice-making, decision-making, problem solving, goal setting and attainment, self-management, self-advocacy, leadership, internal locus of control, positive attributions of efficacy and outcome expectancy, self-awareness, and self-knowledge. Wehmeyer (1996) stated that these component elements are integral to the emergence of the four essential characteristics and while they cannot be used to define self-determination, the acquisition of each element is necessary. Wehmeyer (2006) further suggested that the primary role of educators is to equip students with the skills to become causal agents in their own lives through the development of these component elements. Algozzine, Browder, Karvonen, Test, and Wood (2001) stated that in order to create self-determined citizens there must be a two-way paradigm shift that involves encouraging individuals with disabilities to be self-determined, and teaching individuals without disabilities to honor the choices and decisions of their peers.

Algozzine et al. (2001) conducted a meta-analysis on 51 studies that provided intervention to teach one or more elements of self-determination and concluded that most studies focused on teaching choice-making to individuals with intellectual disabilities or teaching self-advocacy skills to students with learning and intellectual disabilities. Few studies contained the core elements of goal setting, self-regulation, self-evaluation, and problem solving. A narrative metasynthesis was published by the National Secondary

Transition Technical Center (Cobb, Lehmann, Newman-Gonchar, & Alwell, 2008) on seven narrative and systematic reviews of interventions and assessments on self-determination for individuals with disabilities. The research concluded that self-determination is multifaceted and complex. More importantly, the research concluded that positive outcomes are enhanced when a self-determination intervention includes multiple core elements, particularly when it is paired with academic and behavioral interventions. Too often, self-determination is represented as an isolated skill and not as a framework for teaching the academic, social, and transitional skills necessary to address postsecondary outcomes in the areas of employment, education/training, and independent living skills. Cobb et al. (2008) stated that the next generation of self-determination research and development should reflect a more comprehensive approach comprised of outcomes that contain the four essential characteristics identified by Wehmeyer including autonomy, self-regulation, psychological empowerment, and self-realization.

Statement of the Problem

According to Schalock, Bonham, and Verdugo (2008), the concept of quality of life emerged in the field of intellectual and developmental disabilities during the 1980s and 1990s as a sensitizing notion guiding what an individual valued and desired. At its inception, the quality of life concept was developed to guide social change, to challenge individuals to think differently about individuals with intellectual disabilities, and to reform policy and practices to improve outcomes for individuals with disabilities.

Although transition has been a focal point for both general and special education students through federal mandates, employment, independent living, and community inclusion outcomes continue to be inadequate for students with disabilities. The NLTS provided a

national picture of postschool experiences of youth with disabilities. The NLTS-2 (Wagner, Newman, Levine, & Garze, 2006) followed as a 10-year study addressing outcomes for youth with disabilities through a national representative sample of more than 11,000 youth aged 13-16 who received special education services in Grade 7 or above. According to the report, 28% of youth with disabilities left school without a diploma. A large percentage of out-of-school youth classified with learning disabilities or emotional disabilities are 18-19 year old males (Wagner et al., 2006). The NLTS-2 reported that more than a third of students with disabilities exited school by dropping out and only 24% of students with learning disabilities completed high school. The national picture is mirrored at the local level in the state of South Carolina. According to the *2011-12 South Carolina Annual Local Education Agency Performance Report* (South Carolina Department of Education, 2012), the dropout rate for students with disabilities has increased to 4.4% in 2011-12 from 2.4% in 2009. Furthermore, the graduation rate for students with disabilities dropped to 38.4% in 2011-12 from 42.9% in 2009-10.

Programs and practices designed to prevent dropout by addressing student engagement have been implemented in schools across the country for over a decade as a response to the NLTS-2 findings. The National Dropout Prevention Center for Students with Disabilities identified two important categories of educational risk factors: academic performance and educational engagement (Zhang, 2004; Zimmerman, 2001). Students who struggle and fall behind academically are more likely to drop out. Failing grades, low test scores, lack of credits, failing English and mathematics, and being retained one or more times are highly linked to dropout rates. Furthermore, research suggests that students who become disengaged from school have discipline problems, high

absenteeism and truancy, poor class behavior, a lack of participation in extracurricular activities, and poor relationships with teachers and peers (Balfanz, Herzog, & MacIver, 2007).

The President's Commission on Excellence in Special Education released a report entitled *A New Era: Revitalizing Special Education for Children and Their Families* (2002). The report stated that students with disabilities drop out of high school at twice the rate of their nondisabled peers and enrollment rates in higher education are 50% lower for students with disabilities. Montecel (2005) suggested that students tend to stay in school if they believe there is someone who cares about them and is involved with their school activities. She further stated that in most cases students experience no connection between secondary and postsecondary outcomes. According to the National Center of Secondary Education and Transition, Christenson (2002) stated:

Conceptually, school completion encompasses more than preventing dropout. It is characterized by a strength-based orientation (vs. a deficit orientation), a comprehensive interface of systems (vs. a narrowly defined intervention), implementation over time (vs. implementation at a single period of time), and creating a person-environment fit (vs. a programmatic one size fits all orientation). School completion is orientated toward a longitudinal focus; whereby interventions aim to promote a good outcome, not simply prevent a bad outcome for students and society. (p. 472)

The National Dropout Prevention Center endorses strategies that promote student engagement, such as self-determination, and specifically teaches self-regulatory skills as a means to engage students in the learning process (Zhang, 2004; Zimmerman, 2001).

Self-regulation techniques are a way to actively engage students in instruction. According to Zimmerman (2001), students should view learning as an activity they do for themselves rather than viewing learning as something that happens to them. Teaching self-determination skills provides a vehicle for engaging students in the educational process. Martin et al. (2003) suggested that self-regulation is responsible for self-determined learning. Zimmerman (2001) stated that student engagement through self-regulatory techniques is the key to prevent dropout and is the foundation for school completion and increased postschool outcomes.

Wehmeyer (1999) affirmed that the educational outcome of self-determination requires not only a purposeful instructional program but also the coordination of learning experiences across the span of a student's educational career. Furthermore, research suggests that self-determination skills should be taught as seriously and systematically as other academic skills such as reading, writing, and mathematics (Agran, 1997; Agran et al., 2000). In the 1990s, the development of self-determination curricula became a major funding initiative sponsored by the United States Department of Education, Office of Special Education Programs to promote the delivery of transition services. As a result, supposed evidence-based interventions and curricula emerged that specifically addressed participation in the Individual Education Process (IEP), such as *Self-Advocacy Strategy for Education and Transition Planning* (Van Reusen & Boss, 1990), *Take Charge for the Future* (Powers et al., 1996), and *Next STEP: Student Transition and Educational Planning* (Halpern, Herr, Doren, & Wolf, 2000). Yet, much of the research on these interventions was questionable due to methodological concerns. There continued to be a

need to identify a comprehensive curriculum that taught students goal-attainment as a follow-up to mere participation in the transition meeting.

One such curriculum developed by Martin and Huber Marshall (1999), called *Choicemaker Self-Determination*, includes a comprehensive curriculum, an assessment tool, and instructional models. *Take Action: Making Goals Happen* is one of the instructional modules from Choicemaker that specifically teaches goal-attainment skills through student engagement. *Take Action* utilizes a direct instruction approach in each lesson. The curriculum consists of eight lessons that typically take 8-10 hours of direct instruction. During the lessons, students are taught the four steps of the *Take Action* process: plan, act, evaluate, and adjust. Students learn to break long-term goals into short-term steps that can be accomplished in a week. *Take Action* is a theoretical framework that employs a shift from teacher-directed instruction to a student-directed teaching model. The framework specifically teaches students to become causal agents of their own lives while fostering more complex problem-solving skills through a strategic approach that can be used with any goal. It uses a multifaceted approach to address goal setting, self-regulation, self-evaluation, and problem solving. More importantly, research (e.g., German et al., 2000) has demonstrated that *Take Action* can be taught in a brief amount of time and easily infused into existing curricula.

According to Wehmeyer (1995), self-determination scales were designed specifically for students to evaluate their own beliefs about themselves and their level of self-determination. They were also designed to assist in the identification of individual strengths and weaknesses and to teach students to self-assess progress on self-determination skills over time. Wehmeyer (1995) maintained that the critical aspect of

the self-determination construct is the individual's perception; therefore, the use of a self-reported measure is the most appropriate assessment for measuring levels of self-determination. Arc's Self-Determination Scale (SDS; Wehmeyer, 1995) was designed not only to provide students a voice but also to provide researchers a tool to evaluate instructional strategies and curricula in the area of self-determination. SDS is a 72 item self-report measure based on Wehmeyer's functional theory of self-determination. The scale provides four subscales representing the four essential characteristics: autonomy, self-regulation, psychological empowerment, and self-realization (Wehmeyer, 1996). Within a sample of 500 adolescents with cognitive disabilities, adequate reliability and validity was reported (Wehmeyer, 1996).

Although there are several assessments of self-determination within the field, many focus on the degree to which a student has mastered information specific to self-determination curricula, or examines environmental characteristics that support the exercise of self-determination (Shogren et al., 2008). There are only two instruments that measure student-rated global self-determination skills within an operational context, SDS and the American Institutes for Research Self-Determination Scale (AIR; Wolman et al., 1994). These scales were developed based on two different theoretical perspectives. As previously mentioned, SDS assesses the four essential characteristics that define self-determination as conceived by Wehmeyer (1996). AIR, grounded in the self-determination theory of Mithaug (1996), consists of 30 questions that assess student capacity and opportunity for self-determination. Capacity and opportunity subscale scores are calculated and merge into a total self-determination score. The capacity subscale consists of questions regarding student's knowledge, ability, and perception of self-

determination. The opportunity subscale consists of questions regarding the opportunities students have to engage in self-determined behaviors at home and school. AIR was normed with 450 students with and without disabilities in California and New York and demonstrated adequate reliability and validity in the measurement of self-determination. For the purpose of this study, it is most appropriate to utilize assessment tools that align to the theoretical framework of the curriculum adopted by the district. Because both SDS and AIR are the only assessment tools designed to assess the global context elements of self-determination, they were chosen as the sole assessment tools for this study. Both scales have been used in several research studies for students with disabilities (e.g., Agran, 1997; German et al., 2000; Sands, Spencer, Gliner, & Swain, 1999; Zhang, 1998).

In sum, despite the federal mandates to address transition skills and postschool outcomes and the development of such curricula to address the service delivery, there continues to be a gap between outcomes of youth with disabilities and those of their non-disabled peers. There has been little noticeable progress in the last decade on increased graduation rates and decreased dropout rates for students with disabilities. There appears to be a research-to-practice gap within the field due to lack of implementation of research-based interventions and strategies within a comprehensive framework that engage students in the learning process across domains. Furthermore, there are limited studies examining factors that impact student attainment of self-determination skills and student engagement as a dropout prevention strategy for students with disabilities. Although Balfanz et al. (2007) state that dropout prevention interventions should begin in middle school, there is limited research available addressing this group of students.

Purpose of the Study

The purpose of this study is to determine whether the *Choicemaker: Take Action: Making Goals Happen* (Martin, Huber and Marshall, 1999) curriculum is an effective intervention for increasing self-determination skills in middle school students with disabilities. It was proposed that students with disabilities who received intervention to promote self-determination would show significant differences in global self-determination skills. As such, this study addressed the following research questions:

- 1) Is the *Choicemaker: Take Action: Making Goals Happen* curriculum effective in increasing global self-determination skills of middle school students with disabilities as measured by Arc's Self-Determination Scale?
 - a) Are gender, disability type, least restrictive placement, and age related to the changes in global self-determination skills in middle school students with disabilities who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum?
 - b) Among middle school students who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum, does the relationship between disability type and changes in global self-determination skills vary by gender?
 - c) Among middle school students who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum, does the relationship between disability type and changes in global self-determination skills vary by least restrictive placement?

- 2) Is the *Choicemaker: Take Action: Making Goals Happen* curriculum effective in increasing autonomy subscale self-determination skills of middle school students with disabilities as measured by Arc's Self-Determination Scale?
- a) Are gender, disability type, least restrictive placement, and age related to the changes in autonomy self-determination skills in middle school students with disabilities who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum?
 - b) Among middle schools student who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum, does the relationship between disability type and changes in autonomy subscale self-determination skills vary by gender?
 - c) Among middle school students who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum, does the relationship between disability type and changes in autonomy subscale self-determination skills vary by least restrictive placement?
- 3) Is the *Choicemaker: Take Action: Making Goals Happen* curriculum effective in increasing self-regulation subscale self-determination skills of middle school students with disabilities as measured by Arc's Self-Determination Scale?
- a) Are gender, disability type, least restrictive placement, and age related to the changes in self-regulation subscale self-determination skills in middle school students with disabilities who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum?

- b) Among middle school students who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum, does the relationship between disability type and changes in self-regulation subscale self-determination skills vary by gender?
 - c) Among middle school students who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum, does the relationship between disability type and changes in self-regulation subscale self-determination skills vary by least restrictive placement?
- 4) Is the *Choicemaker: Take Action: Making Goals Happen* curriculum effective in increasing psychological empowerment subscale self-determination skills of middle school students with disabilities as measured by Arc's Self-Determination Scale?
 - a) Are gender, disability type, least restrictive placement, and age related to the changes in psychological empowerment subscale self-determination skills in middle school students with disabilities who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum?
 - b) Among middle school students who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum, does the relationship between disability type and changes in psychological empowerment subscale self-determination skills vary by gender?
 - c) Among middle school students who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum, does the relationship

between disability type and changes in psychological empowerment
subscale self-determination skills vary by least restrictive placement?

5) Is the *Choicemaker: Take Action: Making Goals Happen* curriculum effective in increasing self-realization subscale self-determination skills of middle school students with disabilities as measured by Arc's Self-Determination Scale?

a) Are gender, disability type, least restrictive placement, and age related to the changes in self-realization subscale self-determination skills in middle school students with disabilities who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum?

b) Among middle school students who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum, does the relationship between disability type and changes in self-realization subscale self-determination skills vary by gender?

c) Among middle school students who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum, does the relationship between disability type and changes in self-realization subscale self-determination skills vary by least restrictive placement?

6) Is the *Choicemaker: Take Action: Making Goals Happen* curriculum effective in increasing total self-determination skills of middle school students with disabilities as measured by AIR Self-Determination Scale?

a) Are gender, disability type, least restrictive placement, and age related to the changes in total self-determination skills in middle school

students with disabilities who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum?

b) Among middle school students who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum, does the relationship between disability type and changes in total self-determination skills vary by gender?

c) Among middle school students who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum, does the relationship between disability type and changes in total self-determination skills vary by least restrictive placement?

7) Is the *Choicemaker: Take Action: Making Goals Happen* curriculum effective in increasing capacity subscale self-determination skills of middle school students with disabilities as measured by AIR Self-Determination Scale?

a) Are gender, disability type, least restrictive placement, and age related to the changes in capacity subscale self-determination skills in middle school students with disabilities who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum?

b) Among middle school students who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum, does the relationship between disability type and changes in capacity subscale self-determination skills vary by gender?

c) Among middle school students who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum, does the relationship

between disability type and changes in capacity subscale self-determination skills vary by least restrictive placement?

8) Is the *Choicemaker: Take Action: Making Goals Happen* curriculum effective in increasing opportunity subscale self-determination skills of middle school students with disabilities as measured by AIR Self-Determination Scale?

a) Are gender, disability type, least restrictive placement, and age related to the changes in opportunity subscale self-determination skills in middle school students with disabilities who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum?

b) Among middle school students who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum, does the relationship between disability type and changes in opportunity subscale self-determination skills vary by gender?

c) Among middle school students who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum, does the relationship between disability type and changes in opportunity subscale self-determination skills vary by least restrictive placement?

The study examined 220 students in two middle schools located in a suburban area in the southeastern part of the United States. One school was selected to serve as the intervention group ($N = 109$) to pilot the implementation of *Take Action* during the spring semester of the 2013-14 school year for a total of eight weeks, while the other was selected as the control group ($N = 111$). Students represented the following disability categories: autism, mild intellectual disability, learning disability, and other health

impaired. Student LRE placements include resource and self-contained classes. To determine the effects of the intervention, students were assessed on self-reported self-determination skills through the administration of SDS and AIR before and after the pilot implementation.

In order to answer the research questions, an experimental design was used to assess whether the *Take Action* curriculum is an effective intervention for increasing self-determination skills in middle school students with disabilities. Results were analyzed by using multiple regression procedures. According to O'Rourke, Hatcher, and Stepanski (2005), multiple regression is well-suited for studying the relationship between naturally occurring predictor and criterion variables, therefore making multiple regression an important tool in the social sciences. Specifically, it is a flexible procedure that can be used to determine whether or not the relationship between the dependent variable and predictor variables is statistically significant, how much variance in the criterion is accounted for by the predictors, and which predictor variable are relatively important predictors of the dependent variable.

Definition of Terms

ARC's Self-Determination Scale (SDS): A student self-report measure of self-determination designed for use by adolescents with disabilities. The scale was constructed based on a definitional framework of self-determination as an educational outcome (Wehmeyer et al., 2000).

Autism: A developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally evident before age three that adversely affects a child's educational performance. Other characteristics often associated with autism are engagement in repetitive activities and stereotyped movements, resistance to

environmental change or change in daily routines, and unusual responses to sensory experiences (IDEA, 2004).

Choicemaker Curriculum: A comprehensive curriculum that teaches the acquisition of self-determination skills. Students learn to identify goals, participate in IEP meetings, and self-regulate goal attainment (Martin & Huber Marshall, 1995).

Individual Education Program (IEP): A legal document outlining a plan based on the student's academic and functional strengths and needs. The plan specifically addresses specially designed instruction in terms of accommodations and modifications, goals, objectives, and supplementary aids and services (IDEA, 2004).

Intellectual Disability: Significantly subaverage general intellectual functioning, existing concurrently with deficits in adaptive behavior and manifested during the developmental period, that adversely affects a child's educational performance (IDEA, 2004).

Learning Disability: A disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which disorder may manifest itself in the ability to listen, think, speak, read, write, spell, or do mathematical calculations (IDEA, 2004).

Other Health Impaired (OHI): Having limited strength, vitality, or alertness, including a heightened alertness to environmental stimuli, that results in limited alertness with respect to the educational environment that is due to chronic or acute health problems (IDEA, 2004).

Self-Determination: The attitude and abilities required to act as the primary causal agent in one's life and to make choices regarding one's actions free from undue external influences or interferences (Wehmeyer, Field, Doren, & Mason, 2004).

Special Education: Instruction that is individualized for a student with a disability identified under IDEA.

Transition: A coordinated set of activities for a student, designed within an results-oriented process, that promotes movement from school to postschool activities, including postsecondary education, vocational training, integrated employment, including supported employment, continuing adult education, adult services, independent living, or community participation based on individual student's needs taking into account interest and preferences (IDEA, 2004).

CHAPTER 2

LITERATURE REVIEW

This literature review explores recent research in the area of self-determination for individuals with disabilities. The literature review first presents a legal and historical background of self-determination through the evolution of transition services, and then provides an analysis of theoretical foundations of self-determination. Lastly, the literature review examines research that addresses the relationship among self-determination, goal attainment, and tools that measure goal attainment for middle school students with mild disabilities.

Legal and Historical Perspectives

According to Test, Aspel, and Everson (2006), the self-determination movement is one of the most important initiatives in the field of special education. Self-determination is often viewed as a culmination of the normalization and deinstitutionalization movement from the early 1970s, which gained momentum through specific legislative initiatives addressing the delivery of transition services (Landmark, Ju, & Zhang, 2010). Martin and Williams-Diehm (2013) stated that although various definitions of self-determination exist, the field agrees that self-determination encompasses a student's understanding of his or her interests, strengths, and weaknesses, and the use of this information to establish and attain personal goals. Morningstar, Bassett, Kochhar-Bryant, Cashman, and Wehmeyer (2012) asserted the provision of transition services in the American educational landscape has resulted in four generations

of reform: (a) linking postschool outcomes, (b) focus on transition provisions, (c) accountability, and (d) transition as an embedded concept. These four generations or stages of reform reflect the corresponding emergence of the importance of self-determination. They reflect the growing role of self-determination in the way transition services are conceptualized from both policy and practice perspectives.

The first generation of transition policy, linking postschool outcomes, was defined by the emergence of vocational education programs for both general and special education students. It was marked by the passage of the 1963 Vocational Education Act (1963) and the Carl D. Perkins Vocational Education Act (1984), which gave states funding to develop vocational education programs that targeted certain populations, including students with disabilities. During the same year, the Office of Special Education and Rehabilitation Services introduced the concept of transition as a bridge between school and employment, and provided state and local funding to build model programs. In 1989, the National Center on Disabilities published its first study on public education titled *The Education of Students with Disabilities: Where Do We Stand?* This study reported that upon leaving high school, students with disabilities and their families often have difficulty accessing adult services and/or postsecondary education and training programs. The report concluded that students with disabilities are more likely to be employed following high school if they participated in a comprehensive vocational training program as a primary component of their secondary programming (Morningstar et al., 2012).

In an effort to improve programming, the idea of instruction on self-management strategies to increase postsecondary outcomes and generalize learned skills emerged from

public concern about poor postsecondary outcomes for students with disabilities (Williams-Diehm, Palmer, Lee, & Schroer, 2010). This instructional movement developed the same year that business and self-management literature introduced the Adaptability Instruction Model to teach self-management strategies for students entering the work force (Mithaug, Martin, & Argan, 1987). The Adaptability Instruction Model was an effort on behalf of industry to address specific employability skill deficits for students leaving secondary schools and entering employment settings. The model included teaching students with disabilities goal setting and adjustment processes to adapt to changing demands in the workplace (Mithaug, Martin, & Argan, 1987). This marked the first formal movement for instruction in the area of self-determination initiated in both the education and workforce setting.

According to Morningstar et al. (2012), the second generation of transition reform was defined by a focus on mandated transition services. The need for transition services became increasingly evident in both education and work environments and was reflected in related legislation. The major mark of this generation was the passage of the amendments to the IDEA (1990). IDEA defined transition services and incorporated specific requirements to include transition services in the IEP, such as linkages to outside agencies and state and local monitoring systems for identifying postsecondary outcomes. IDEA mandated that transition services become an integral part of the IEP for all students aged 14-21 years. General education reform paralleled this movement with the passage of the School-to-Work Opportunities Act (1994), which required integrated school-based learning within a real-world context for all students. This was the first time career readiness mandates were initiated for all students at the secondary level.

Beginning in 1991, the Office of Special Education and Rehabilitation Services identified the transition from school to work as one of the major federal priorities of special education programs across the nation and initiated a discretionary state grant system to overhaul and expand transition services for youth with disabilities. Statewide system change projects focused on six common elements: (a) individualized education/transition planning, (b) assessment, (c) student empowerment, (d) parent and family involvement, (e) curriculum and instruction change, and (f) school-community coordination (Morningstar et al., 2012).

According to Wehman (1996), self-determination emerged from studies that highlighted the potential importance of self-determination in achieving transition outcomes. Wehmeyer and Schwartz (1997) conducted a study measuring the self-determination status of 80 students with intellectual and learning disabilities during their final year of secondary school and again one year after secondary school. The study concluded that 80% of students in the high self-determination group worked for pay one year after graduation, whereas only 43% of students in the low self-determination group did likewise. Of those students employed, students in the high self-determination group earned significantly more pay per hour ($M = \$4.26$) than their peers in the low self-determination group ($M = \$1.93$). Wehmeyer and Palmer (2003) conducted a second follow-up study in which they examined the adult status of 94 individuals with intellectual disabilities, one and three years post-graduation, which replicated the initial results. Additionally, Wehmeyer and Schwartz (1998) conducted a study on promoting self-determination for students with disabilities and concluded there is a positive relationship between people with higher levels of self-determination and a better quality

of life. Grossi and Heyward (1998) concluded that teaching students with developmental disabilities goal setting, self-monitoring, and self-evaluation strategies increased work productivity. Wehmeyer (1999) stated that promoting self-determination as an outcome requires a purposeful instructional program. This generation marked the first mandated movement for the provision of transition services and the conceptualization of what a purposeful instructional transition program would look like for students with disabilities.

The third generation of reform, accountability, emerged with the passage of the No Child Left Behind Act (NCLB), which reflected the standards-based reform movement according to Morningstar et al. (2012). NCLB mandated that all students make adequate yearly progress and included provisions to hold schools accountable for such measures. NCLB focused on improving academic achievement for all students and created a systemic monitoring system. The amendments of IDEA followed suit to ensure that students with disabilities would participate fully in the general education curriculum and be included in state testing systems. In the *21st Annual Report to the U.S. Congress on the Implementation of IDEA* (2000), the Office of Special Education Programs reported:

The requirements of the law with the strongest links to improved educational results for students with disabilities include those addressing the provision of transition services to enable students with disabilities to move effectively from school to post-school independence and achievement. (Section IV, p. 44)

As the accountability movement emerged, there was growing concern about how to best provide transition services that resulted in improved postsecondary outcomes.

Different researchers looked at ways to validate transition practices. Strategies previously assumed to be effective now were required to be evidence-based. Kohler (1993) conducted a study to identify evidence-based practices, resulting in a taxonomy for transition programming (Kohler, 1996). In this taxonomy, five sets of school-related services delivered in the secondary setting were identified as effective procedures for transitioning students with disabilities to the postsecondary setting. These strategies included student-focused planning, student development, interagency and interdisciplinary planning, family involvement, and program structure. There continued to be a growing base of research linking self-management and self-regulation skills to the attainment of positive adult outcomes (Agran & Wehmeyer, 2005; Gilberts, Agran, Hughes, & Wehmeyer, 2001). Wehmeyer, Fields, Doren, Jones, and Mason (2004) investigated how promoting self-determination, specifically goal setting and attainment, problem-solving, self-regulation, and self-management, enhances access to the general curriculum. They concluded that students with learning disabilities who are taught a strategic approach to address content and activities can effectively set learning goals and then use problem-solving and self-regulation skills to tackle those goals. Although this generation was marked by IDEA's access mandates, ensuring that all students with disabilities were included in the accountability system, it was also marked by the identification of evidence-based practices in an attempt to improve postsecondary outcomes for students through transitions services.

The fourth and current transition reform movement focuses on validating effective transition interventions that support policy to achieve greater transition effectiveness, as measured by better outcomes for students with disabilities (Morningstar et al., 2012).

This movement is rooted in the *President's Commission on Excellence in Special Education Report* (2001) and a follow-up report called *A New Era: Revitalizing Special Education for Children and Their Families* (2002), which reported the following facts about students with disabilities:

- 1) Students with disabilities drop out of high school at twice the rate of their peers.
- 2) Enrollment rates in higher education are 50% lower for students with disabilities.
- 3) Three million of the 6 million children identified with disabilities have learning disabilities.
- 4) Of students identified with learning disabilities, 80% were identified because they were not taught to read with a systematic and structured reading program.

Shortly after this publication, IDEA was reauthorized in 2004, solidifying the focus on outcomes. The 2004 amendments changed the requirement for implementation of transition plans from 14 years of age to 16 years of age (or younger, if the IEP team determines it is appropriate). IDEA (2004) also targeted data-driven results by changing the language in the law from an outcome-oriented process to a results-oriented process (Sec. 602[43][1]). This change in emphasis in the wording of the law renewed the movement's focus on improving postsecondary results in an attempt to counter almost 30 years of failed outcomes. Although IDEA focuses on the needs of individual students and NCLB focuses on school accountability, both laws share the goal of improving academic achievement through high expectations and high quality programs.

According to Schalock, Bonham, and Verdugo (2008), the concept of quality of life emerged in the field of intellectual and developmental disabilities during the 1980s and 1990s as a sensitizing notion guiding what an individual valued and desired. At its inception, the quality of life concept was developed to guide social change, to challenge individuals to think differently about individuals with intellectual disabilities, and to reform policy and practices to improve outcomes for individuals with disabilities.

According to O'Boyle (1997), there is no single definition for quality of life; however there are key characteristics across definitions that include general feelings of wellbeing, feelings of positive social involvement, and opportunities to achieve personal potential (Turnbull et al., 2003). Schalock (1996) identified eight domains: emotional wellbeing, interpersonal relations, material wellbeing, personal development, physical wellbeing, self-determination, social inclusion, and rights. Over the past decade, a literature base has developed related to self-determination as an element of student's quality of life.

Lachapelle et al. (2005) conducted a study to evaluate the relationship between self-determination and quality of life of 182 individuals with intellectual disabilities living in Canada, the United States, Belgium, and France. Quality of life was measured with the Quality of Life Questionnaire, while SDS measured self-determination. The discriminant function analysis indicated that each of the essential characteristics of self-determined behavior (autonomy, self-regulation, psychological empowerment, and self-realization) predicted membership in the high quality of life group and overall self-determination contributes to enhanced quality of life.

Although IDEA statutory language does not use specifically the words "quality of life," it is referenced throughout the 1990 reauthorizations transition language of utilizing

an outcome-oriented approach. According to Wehmeyer and Schalock (2008), the transition service mandates are based on the assumption that by achieving such outcomes student will attain a better quality of life.

Schalock, Bonham, and Verdugo (2008) stated that during the past decade quality of life has expanded to include a conceptual framework for assessing personal outcomes, a social construct to guide programming and strategies, and a criterion for assessing the effectiveness of programs and strategies. The four goals of IDEA (equality of opportunity, full participation, independent living, and economic self-sufficiency) correlate with the eight quality of life domains identified by Schalock (2008).

While there were significant changes within special education to endorse evidence-based transition practices, general education reform was developing at the same time to address overall concerns with the national dropout rate as evidenced in the publications *Breaking Ranks: Changing an American Institution* (National Association of Secondary School Principals [NASSP], 1997) and *Breaking Ranks II* (NASSP, 2004). According to Morningstar et al. (2012), NASSP recommendations aligned with the IDEA focus on shared responsibility, youth empowerment, and academic and functional performance. Specifically, the recommendations in these reports support strategies that could be used to embed transition into the bigger picture of secondary reform, such as using real-life applications to link education to future outcomes (Morningstar et al., 2012). Recently, the National Governors Association in conjunction with the Council of Chief State School Officers established the movement for continuity across state standards, now known as the Common Core State Standards (Morningstar et al., 2012).

In 2004, the American Youth Policy Forum reported key elements for quality high schools for all students. The report reflected numerous evidence-based practices including the promotion of self-determination and student involvement in educational planning (Morningstar et al., 2012). Wehmeyer, Fields, Doren, Jones, and Mason (2004) suggested that the standards-based reform movement provided a unique opportunity to integrate instruction, promoting self-determination into broader educational practices. NASSP (2004) suggested that most secondary reform initiatives emphasize strong student advocacy and choice-making as hallmarks of changing the school culture. Eisenman and Chamberlin (2001) concluded through their research on the role of self-determination on school completion that individuals with higher levels of self-determination can access resources for autonomous action and employ self-regulation to accomplish their goals. A growing base of research linking increased academic achievement for students with disabilities and teaching a self-regulated, problem-solving process for goal attainment substantiates these findings (e.g., Agran, Blanchard, & Wehmeyer, 2000; Palmer, Wehmeyer, Gipson, & Agran, 2004; Wehmeyer, Palmer, Agran, Mithaug, & Martin, 2000).

With documented poor postschool outcomes for students exiting secondary transition programs (National Longitudinal Transition Study-2, 2007) and rising dropout rates for students with disabilities, researchers continued to investigate the relationship between improved postsecondary outcomes and components of high school transition programs (Test, Mazzoti, Fowler, Kortering, & Kohler, 2009). Self-determination serves as an entry point to access better outcomes by teaching students to learn how to learn to impact better outcomes (Palmer et al., 2004; Solberg, Howard, Gresham, & Carter,

2012). Wehmeyer and Palmer (2003) state that self-determination contributes to the educational goals of increasing self-sufficiency, autonomy, and valued outcomes such as employment, education, and independent living. Teaching self-determination has been correlated to an enhanced quality of life (Wehmeyer & Schwartz, 1997), increased educational planning and decision-making (Pierson, Carter, Lane, & Glasser, 2008), and improved academic performance (Konrad, Fowler, Test, Wood, 2007). Solberg, Howard, Gresham, and Carter (2012) stated that because grade point average can influence graduation rates and entry to postsecondary education, it is important that educators understand the association between self-determination and postsecondary outcomes.

Morningstar et al. (2010) examined the relationship between student perceptions of the quality of their high school transition programs in relation to self-determination and postsecondary skills and their level of self-determination in postsecondary education settings. The study included a sample of 76 college students with disabilities from nine universities located in five states representing the Midwest, West, Southwest, and Northwest regions of the United States. All students reported having an IEP in high school and ranged in age from 19-29 with a mean age of 22. Participants included individuals with learning disabilities (65%), emotional disabilities (8%), physical disabilities (6%), visual impairments (5%), and other health impairments (5%) as the most prevalent groups. The study examined Pearson Correlation Coefficients for variables related to high school programs (i.e., student involvement, self-determination skill development, and postsecondary preparation) across the domain variables of family involvement and school involvement as well as the variables focused on postsecondary self-determination (i.e., hope, psychological empowerment, and locus of control). The

study revealed that the overall index of high school transition programs moderately correlated ($p < .01$) with perceived levels of hope (.38), psychological empowerment (.34), and perceived locus of control (.30). According to Morningstar et al. (2010) the results confirmed previous qualitative research (Doren, Lindstrom, Zane, & Johnson, 2007) reporting that students with disabilities in postsecondary environments attribute their success to learning and practicing self-determined skills in quality secondary transition programs.

Weidenthal and Kochhar-Bryant (2007) identified barriers impeding student participation in the transition process. One of those barriers included limited or no self-determination training. During the study, eight middle school teachers indicated that the transition services addressed in the IEP process did not pertain to them and are addressed when students enter the high school level. However, research on poor outcomes underscores the need for an early support system and long-range planning which would include middle school students. Test et al. (2004) concludes that self-determination skill development during the early adolescent years has a positive impact on secondary years. Furthermore, enhanced self-determination is associated with postschool outcomes.

Stang, Carter, Lane, and Pierson (2009) conducted a study of 563 elementary and 328 middle school teachers to analyze their views on promoting students' self-determination skills within their classrooms. Twenty-nine elementary and 12 middle schools within six districts in a western state participated in the study. Teachers were asked to rate the extent to which they valued and provided instruction in each of seven self-determination instructional domains: (a) choice-making, (b) decision-making, (c) goal setting and attainment, (d) problem solving, (e) self-advocacy and leadership, (f)

self-awareness and self-knowledge, and (g) self-management and self-regulation. Based on a 2 x 2 analysis of variance (Anova), the results indicated that more than half of educators rated problem solving, self-management and self-regulation, decision-making, goal setting and attainment, and self-awareness and self-knowledge as very important relative to other instruction priorities within the classroom. In addition, results also indicated that the teachers at least sometimes taught each of the seven self-determination skills. Problem solving and self-management and self-regulation were the only domains that more than half of the teachers reported often teaching while self-advocacy and leadership, and self-awareness and self-knowledge were the least frequently taught self-determination skills. In sum, high ratings of the self-determination domain relevant to importance do not necessarily translate to teaching practices within the classroom.

Although teachers may report that they value self-determination, there is limited exploration of a curriculum priority in the earlier elementary and middle school grades (Carter et al, 2002; Wehmeyer et al., 2000). Stang et al. (2009) stated that future research should explore how instructional materials and practices can be adapted effectively for younger children to reflect their capacities and interests. Algozine et al. (2001) concluded that less than one fifth of the interventions reviewed in the meta-analysis focused on elementary and middle school students with disabilities. Algozine et al. (2001) stated that future research should systematically replicate and extend downward effective strategies currently being used at the high school level.

Solberg et al. (2012) contended that students with disabilities must be involved in learning environments designed to provide experiences needed to promote the development of self-determination skills. Wehmeyer and Schalock (2001) stated that

although there has been limited causal research supporting a significant relationship between teaching self-determination and positive adult outcomes, evidence supports the positive impact of component elements of self-determined behavior on educational achievement and adult outcomes, suggesting self-determination is an important focus for educators.

Within the past 10 years, the field of special education transition has shifted from mandating transition services and the identification of best practices in transition to identifying evidence-based practices. Literature reviews conducted by Algozzine, Browder, Karvonen, Test, and Wood (2001); Cobb and Alwell (2009); Test, Mazzoti, Fowler, Kortering, and Kohler (2009); and Test et al. (2009) are important to the field of special education transition and specifically to the concept of self-determination because these were the first comprehensive reviews of empirical evidence-based transition practices (Landmark et al., 2010).

Transition services have evolved from the normalization movement and are now endorsed by federal mandates, largely as a result of poor reported postsecondary outcomes for students with disabilities. Although federally funded projects were developed to identify best practices, those practices did not meet the rigorous standards of evidence-based practices. Cobb, Lehmann, Newman-Gonchar, and Alwell (2008) stated that a research base is being built on the components of self-determination and other moderators that impact postschool outcomes. Consequently, there continues to be a need for further evaluation of the efficacy of special education and transition in relation to self-determination.

Just as the field of transition developed over time, the theoretical foundations of the self-determination developed in a similar manner. Vansteenkiste, Niemiec, and Soenens (2010) stated that the development of self-determination was similar to the construction of a puzzle. For more than 40 years, numerous practitioners added new pieces to the puzzle to inform their practice and define the field. Prior to 1990, the term *self-determination* was rooted in the disciplines of philosophy, political science, and psychology, and was viewed, at times, as both an intervention and an outcome. Following is a brief summary of how the behavioral sciences affected the evolution of self-determination from a theoretical construct into a more practical definition.

Conceptual Frameworks of Self-Determination

Theoretical Foundations

Self-determination began with Robert Sears' attempt to transform the concept of stimulus response into a more comprehensive explanation of human behavior through Social Learning Theory (Grusec, 1992; Sears, 1951). According to Rosenstock, Strecher, and Becker (1988), Social Learning Theory, renamed Social Cognitive Theory, stated that behavior is determined by expectancies and incentives. The theory evolved from studies of motivation (White, 1959) and contributed generalized concepts of self-efficacy, locus of control, extrinsic and intrinsic motivation, and influences of autonomy to explanations of behavior (Rosenstock et al., 1988). Specifically, Social Cognitive Theory states that in order for behavior to be regulated by consequences, the individual must understand the relationship between the behavior and consequence as well as have an understanding of one's own competence to perform the behavior. This is termed *self-efficacy* (Rosenstock et al., 1988). Social Cognitive Theory began with influences from

behavioral theory and added concepts of cognitive and informational processing theories (Grusec, 1992). According to Grusec (1992), Sears and Bandura attempted to develop an understanding of how children internalize the values and behaviors of the culture in which they were raised.

Deci and Ryan (1985) added to the field by approaching self-determination from a psychological perspective, called the Self-Determination Theory, and defined self-determination as the “capacity to choose and to have those choices be the determinants of one’s actions” (p. 38). Ryan and Deci (2000) identified three needs (competence, relatedness, and autonomy) that lead to social development and personal wellbeing and that are the foundation for developing self-determination. Furthermore, Deci and Ryan built upon White’s motivation theory by emphasizing intrinsic motivation, or simply doing an activity for the satisfaction of the activity itself. Deci and Ryan (1985) stated that all individuals are born with some level of intrinsic motivation, but the motivation must be maintained through supportive conditions. They asserted that self-determination is not achieved because an individual possesses certain qualities, but rather because others in that individual’s life helped to support and cultivate self-efficacy tendencies. According to Deci and Ryan (1985), social-contextual events that create feelings of competence, such as positive immediate feedback, can enhance intrinsic motivation. Research suggests that positive performance feedback enhances intrinsic motivation while negative feedback diminishes it (Deci, 1975), and that these effects are mediated by perceived competence (Vallerand & Reid, 1984).

According to Ryan and Deci (2000), research has shown that competence will not enhance intrinsic motivation without a sense of autonomy. Likewise, Gagne and Deci

(2005) stated that external support for autonomous behavior is the most important social-contextual factor for predicating autonomous behavior. Research suggests that student autonomous behavior and improved performance is strongly correlated to teacher support (Black & Deci, 2000; Flink, Boggiano, & Barrett, 1990; Gagne & Deci, 2005; Ryan & Connell, 1989).

According to Bremer, Kachgal, and Schoeller (2003), Self-Determination Theory is based on the assumption that people have the innate tendency to grow, master challenges in their environment, and integrate those experiences into self-concepts. Self-Determination Theory also addresses the importance of extrinsic motivation, defined as doing an activity in order to attain some outcome. Extrinsic motivation represents a continuum of dispositions ranging from passive compliance to personal commitment. At the heart of the model is the fundamental need for competence and autonomy. Gagne and Deci (2005) also stated that autonomous extrinsic motivation is more predictive than intrinsic motivation for behaviors that are not interesting to the individual, require discipline, and require targeted effort. In summary, both Social Cognitive Theory and Self-Determination Theory were important to the field because they provided a foundation on which the functional educational self-determination definition was based, specifically the concepts of autonomy and personal control (Ryan & Deci, 2000).

Theory into Practice

Within the educational field, it became clear that many of the current models had no grounding in the earlier foundational definitions of self-determination (Wehmeyer, 1999). During the decades marking the evolution of transition services, self-determination was loosely referenced from a civil rights perspective and not from the

concept of personal control supported by Deci and Ryan (1985). According to Wehman (2006), self-determination has been defined as a basic human right, a response class, or a functional property of a response class. Wehman (2006) suggested that self-determination, as an educational construct, should be defined based on the function or purpose of the behavior. He further contended that people are self-determined based on the purpose or function of their actions.

Wehmeyer (1996) defined self-determination as “acting as the primary causal agent in one’s life and making choices and decisions regarding one’s quality of life free from undue external influences or inferences” (p. 24). He further stated that self-determined behaviors or actions can be identified by four basic characteristics: (a) the person acted autonomously, (b) the behaviors or actions were self-regulated, (c) the individual initiated and responded to the event(s) in a psychologically empowering manner, and (d) the individual acted in a self-realizing manner. These four essential characteristics depict the function of the behavior, and define whether it is self-determined or not. Wehmeyer (1999) further concluded that self-determination is a dispositional characteristic, which involves the organization of cognitive, psychological, and physiological elements in such a manner that the individual’s behavior will be similar in different situations.

The concept of causal agency, evident in both Wehman’s (2006) and Wehmeyer’s (1999) definitions, is crucial to the functional model and implies that the individual makes or causes things to happen in his or her life to meet an end goal. It utilizes the concept of human agency—the key component of the original description by Sears, which stated that people can exercise intentional influence over their actions. Wehmeyer

(1999) suggested that individuals who are self-determined are the causal agent in their lives by acting with intent to shape their future. Furthermore, self-determination transpires over a lifetime beginning in the early elementary years.

Individuals who are self-determined autonomously self-regulate their behavior, and are psychologically empowered and self-realizing (Wehmeyer, 1999). Although many variables may affect the degree to which each characteristic is developed, all four essential characteristics must be present for the behavior or action to be considered self-determined. Wehmeyer (1996) conducted a study that involved structured interviews with more than 400 adults with cognitive disabilities to examine the contribution of the four essential characteristics of self-determination. The study concluded that each of the four characteristics were predictive of self-determination, with behavioral autonomy and self-regulation being the most compelling predictors.

Wehmeyer (1999) described the first characteristic, behavioral autonomy, as an outcome of the process of individualization that encompasses an individual acting according to his or her preferences, interests, and abilities free of undue external interference. It is, in essence, deciding what you want to do without the influence of others. Whitman (1990) defined the second characteristic, self-regulation, as a response system that enables an individual to evaluate his or her environment and responses for coping, to make decisions on how to act, to evaluate the outcomes of those actions, and to revise the plan if necessary. Self-regulated behaviors include self-monitoring, self-instruction, self-evaluation, goal setting, problem solving, decision-making, and observational learning strategies (Wehmeyer, 1999). Although many people have the skills to act in a self-determined manner, the framework also incorporates understanding

and perception of the performance of those behaviors, the third characteristic of self-determined behavior. Psychological empowerment is referred in the psychological literature as multidimensional and is characterized by contributions from the cognitive (self-efficacy), personality (locus of control), and motivational domains (Zimmerman, 1990). Self-realization, the final characteristic, originated from Gestalt psychology and refers to an intrinsic purpose of life. Wehmeyer (1999) stated that the essence of self-realization is comprehensive and accurate knowledge in terms of personal strengths and weaknesses and the ability to capitalize on this knowledge. In addition, self-realization is developed through experiences and interpretations of one's environment and is influenced by evaluations of others, as well as reinforcement and acknowledgement of one's behavior (Wehmeyer, 1999).

Wehman (2006) stated that self-determined behavior emerges through the development of a number of interrelated component elements which include: choice-making skills; decision-making skills; problem-solving skills; goal-setting and attainment skills; independence, risk-taking, and safety skills; self-observation, evaluation, and reinforcement skills; self-instruction skills; self-advocacy and leadership skills; internal locus of control; positive attributions of efficacy and outcome expectancy; self-awareness; and self-knowledge. Wehmeyer (1996) emphasized that the list of component elements was not intended to be exhaustive. It was developed for educators to use when selecting instructional strategies and teaching supports. The components reflect a developmental progression, which can be acquired through instructional units of teaching and is foundational to the overall development of self-determination (Wehmeyer, 1999).

Self-Determination and Students with Disabilities

Much of the research on the importance of self-determination to adult outcomes of individuals with disabilities is correlational in nature. Test et al. (2009) conducted a meta-analysis to systematically review secondary transition correlational literature to identify in-school predictors of improved postschool outcomes for students with disabilities. A total of 22 articles met the criteria for the literature review including three exploratory and 19 a priori studies with a mean sample size for the review of 1203.6 and the median of 535. Twenty-three percent of the studies included sample populations, comprised of all disability categories ($N = 5$) and 77% ($N = 17$) included only some disability groups. As a result of the systematic review, Test et al. (2009) identified 16 categories correlated with improved postsecondary outcomes. The predictors included individual skills (e.g., self-advocacy/self-determination, self-care, social skills, career awareness), school factors (e.g., exit exam requirements/high school diploma status, inclusion in general education, occupational courses), family factors (e.g., parental involvement), and community factors (e.g., paid work experience, interagency collaboration, vocational education, community experiences, and work study). Although there has been extensive research on the importance of teaching self-determination (Wehmeyer & Schwartz, 1997; Pierson et al., 2008; Solberg et al., 2012), other research suggests students with a high incidence of disabilities continue to demonstrate limited self-determination skills, particularly those defined as self-regulatory or self-management skills.

Pierson et al. (2008) conducted a study with high school students with emotional/behavioral disabilities and learning disabilities, and concluded that special

educators rated these students as demonstrating limited skills of self-determination, diminished ability to engage in self-determined behavior, and overall lack of self-efficacy. Weiss, Hutchins, and Meece (2012) conducted a study with 11th- and 12th-grade students who were surveyed about their postsecondary plans and how they were going to attain them. The study included both students with disabilities and those without. The students with disabilities were comprised of 63% with learning disabilities, 6% with emotional disabilities, 15% with multiple disabilities, and 16% as other identified categories. The findings indicated that 78.5% of students with disabilities and 90.7% of their nondisabled peers plan to continue with postsecondary education. Only 4.5% of students with disabilities, however, were enrolled in college preparatory programs. Additionally, 25.5% of student with disabilities could not identify their academic program. The results of the study concluded that although students with disabilities have postsecondary goals, many do not have a plan to obtain those goals.

Weiss et al. (2012) concluded that it is evident that students with disabilities, especially learning disabilities, must develop a sense of control over their decisions, and educational plans should be linked to activities to obtain the identified outcome. Likewise, Solberg et al. (2012) stated that there is limited research specific to individual student factors (i.e., age, gender, and disability category) and self-determined behavior as well as little research about how self-determination may be shaped by the quality of the learning experiences students have in secondary school. This information could be important to educators to inform design and delivery of comprehensive transition programs (Solberg et al., 2012).

According to Wehmeyer and Garner (2003) there is an assumption among many people that individuals with intellectual disabilities cannot become self-determined, which in turn limits opportunities for instruction to promote self-determination skills. Agran, Blanchard, and Wehmeyer (2000) conducted a study with 19 students with disabilities at the secondary level to examine the effects of teaching a problem-solving model. Of the 19 students, 13 students were classified as having an intellectual disability. The study included teaching the Self-Determined Learning Model of Instruction (Mithaug, Wehmeyer, Agran, Martin, & Palmer, 1998) as an intervention utilizing the Goal Attainment Scale to measure overall increases in goal attainment. At the conclusion of the study, 21% of the scores equaled 50, indicating that students attained a satisfactory level of achievement, while 68% of the scores were higher than 50, indicating students exceeded expectations of the teacher. In addition, Sheppard and Unsworth (2011) conducted a single-group, quasi-experimental (pre-post) study with 250 students, ages 5-18, with mild, moderate, and profound intellectual and/or physical disabilities. The study examined the effectiveness of a short-term (8-10 week) educational residential program to improve skills in everyday activities and the effect on participant self-determination utilizing AIR (Wolman et al., 1994). Participant ratings for the subscales of capacity and opportunity were combined into an overall self-determination score, revealing significantly increased levels of self-determination from baseline to postprogram and baseline to follow-up, with small (.26) and moderate (.47) effect sizes. These studies provide evidence that self-directed strategies can be effective for students with cognitive disabilities as well as for students with learning or behavioral disabilities

In sum, Martin et al. (2013) stated that students need direct instruction in setting goals, and goal setting must be a part of the curriculum for all students. Weiss et al. (2012) also suggested that students with high incidence disabilities must be provided opportunities to be involved in the development and initiation of their educational plan as it relates to their postsecondary goals. Agran et al. (2000) and Sheppard and Unsworth (2011) further concluded that individuals with intellectual disabilities should be provided with the same opportunities to develop skills in self-determination as their peers. Research provides compelling evidence that regardless of IQ, individuals with intellectual disabilities can benefit from self-determination instruction. Educators cannot assume that students have the strategies or the skill to self-regulate and solve problems. Given the challenges facing students with disabilities, it is important to identify skills, factors, and processes that can promote positive adjustments for these students (Pinckney, Murray, & Lind, 2012). Teaching self-determination, specifically goal setting and attainment through self-regulated problem solving, is one of the skills identified by Test et al. (2009) as highly correlated with improved postsecondary education, employment, and independent living. Specifically, students who demonstrated goal setting and problem solving were more likely to be engaged in postsecondary education (Halpern, 1994), and students that demonstrated higher self-determinations skills were more likely to be engaged in postsecondary employment (Wehmeyer & Schwartz, 1997).

Self-Determination Interventions

Researchers have concluded that self-determination is a multifaceted construct based on psychological traits (locus of control) and behavioral skills (Cobb, Lehmann, Newman-Gonchar, & Alwell, 2008). Wehman (2006) stated that this multifaceted

construct requires a multifaceted approach to instruction. This approach should include multiple parallel activities focused on teaching skills related to the component elements of self-determination identified by Wehmeyer (1999), and active student involvement should be a part of the educational planning process. Although several researchers now agree on this common definition for self-determination within the educational environment, there is still limited evidence supporting evidence-based practices for teaching the component elements of self-determination.

Algozzine, Browder, Karvonen, Test, and Wood (2001) conducted a review of self-determination intervention studies to identify which groups of individuals with disabilities have been taught self-determination and what levels of outcomes have been achieved through the implementation of a range of evidence-based interventions and curricula. Of the 450 articles reviewed, 51 studies specific to evaluating the effects of an intervention/strategy or curricula on self-determination were identified. It should also be noted that all 51 studies were published from 1978 to 2000, prior to the identification of any evidence-based practices in transition. The review analyzed eight components of self-determination within each curriculum, which included: (a) choice-/decision-making, (b) goal setting/attainment, (c) problem solving, (d) self-evaluation, (e) self-advocacy, (f) inclusion of student-directed individualized education programs, (g) relationships with others, and (h) self-awareness. The participant demographics within the 51 studies included a total of 992 participants ranging in ages from 14-21 years of age with 49% over 21 years of age. Within the review, single subject studies tended to focus on teaching self-determination skills in isolation with students with more severe disabilities, while group studies focused more on teaching multiple skills through a comprehensive

approach to students with mild disabilities. Most importantly, Algozzine et al. (2001) stated that although more than 60 self-determination curricula had emerged at the time of the review, only 12 studies existed that evaluated these materials. Only two studies (Aune, 1991; German, Martin, Marshall, & Sale, 2000) addressed goal-attainment skills, yet again reinforcing the limited amount of evidence-based practices within the field and the need for more research on existing curricula being used within the field.

As a result of the review, Algozzine and his colleagues concluded that self-advocacy and choice-making components of self-determination were the skills most often taught. Self-advocacy was typically taught to students with learning disabilities via participation in IEP meetings, and choice making was typically taught to students with intellectual disabilities. The least studied component of self-determination was self-efficacy, described as goal setting and goal attainment. Algozzine et al. (2001) stated that one shortcoming in the self-determination literature is that most studies focused on improving one or two self-determination skills. They further concluded that there are limited examples in the research of how to help students make progress in a comprehensive self-determination curriculum.

Through the instruction of self-determination skills, students are provided the necessary skills to actively engage in the educational process by teaching them how to be causal agents. Wehmeyer and Shalock (2001) stated that programs and interventions aimed at increasing self-determination should promote the skills needed to set personal goals, solve problems, create action plans to achieve the goals, self-regulate, and self-manage daily actions. Furthermore, self-determination should be taught using student-directed learning strategies.

Several evidence-based interventions and curricula have been developed that address one or two of the key self-determination components. One such curriculum is the *Self-Advocacy Strategy for Education and Transition Planning* (Van Reusen & Boss, 1990), a seven-phase strategy that teaches students to enhance motivation and participation in the IEP process through a direct instruction approach. Students are taught how to implement the I PLAN steps while participating in transition planning meetings and giving teacher feedback based on performance. The curriculum was field tested with primary and secondary students with disabilities and resulted in increased motivation and participation (Van Reusen et al., 2002).

Take Charge for the Future (Powers et al., 1996) is a similar program that teaches student involvement in the transition meetings. Students are provided materials and coaching to identify goals and conduct their IEP meetings. The program incorporates natural supports through mentorship and peer-support activities as well as a parent component to teach what self-determination is. Powers, Turner, Matuszewski, Wilson, and Phillips (2001) conducted a control-group study with students with disabilities at the secondary level, and concluded that *Take Charge for the Future* had a significant positive impact on student involvement in the transition and IEP process. The study included 43 high school students with mild disabilities, utilizing an independent-group, repeated-measures design. The treatment group was taught the *Take Charge for the Future* curriculum throughout the course of a semester and provided an average of 31.3 coaching sessions, while the control group had no exposure to a self-determination curriculum. Significant interactions between group and time emerged for student involvement in educational planning activities ($F = 21.04$), transition awareness ($F = 6.32$), and

empowerment ($F = 15.56$). However, the results of the study must be interpreted with caution due to the lack of standardization with the dependent measures of the Educational Planning Assessment and the revised Empowerment Scale used within the study. The researchers noted that the psychometric properties of the Education Planning Assessment reflected preliminary validation but require further examination due to the small sample size used in the study as well as the internal consistency coefficients of the Empowerment Scale. In addition, reliable and valid results appear to be uncertain due to the fidelity of the implementation through varied number of coaching sessions across classroom assignments for the treatment group.

The *Next STEP: Student Transition and Educational Planning* (Halpern, Herr, Doren, & Wolf, 2000) is a transition-planning program for transition-aged students with or without disabilities. The program utilizes both video and print materials to engage students in transition planning, self-evaluation of needs, identification of transition goals, conducting transition-planning meetings, and implementation of transition plans. Zhang (2001) examined the effectiveness of *Next STEP* with high school students with disabilities, and concluded that the implementation significantly impacted student levels of self-determination. The study included 71 ninth graders with learning disabilities representing 73% males and 27% females, with 56% of the sample African American and 44% Caucasian. All students attended a minimal amount of time in a resource room. The dependent measure included SDS along with a researcher-developed Demographic Information Sheet, which consisted of four questions about student gender, race, age, and placement. Students in the treatment group received instruction for a semester on the curriculum. Pretest and posttest results yielded an F value of between group means of 5.6

($p < .05$). Variables such as school, socioeconomic level, and ethnic composition were not controlled for within the study.

All three curricula addressed preparing students to take an active part in the IEP process, while one of the three taught students how to self-regulate their progress on specific IEP goals. More importantly, only one of the three studies provided a valid dependent measure such as SDS, while none provided specific information on fidelity of implementation outside basic timelines. There continues to be a need for the identification of evidence-based transition curriculum that teaches students with disabilities how to act autonomously without undue dependence on adult support, in essence engaging students in the totality of their educational program by increasing opportunities for self-directed learning.

Goal Attainment Curriculum

Wehmeyer, Agran, and Hughes (2000) stated that although teachers value student involvement, they often fall short in implementing practices that promote long-term outcomes for self-determination. They fail to go beyond involvement in the IEP meeting to address active involvement in attempting to attain the IEP goals. According to Williams-Diehm, Palmer, Lee, and Schroer (2010), goal setting is a natural component of successful adult life. Goal setting and goal attainment are foundational skills within self-determination. Field et al. (1998) suggested that students with disabilities need opportunities to learn and practice strategies for attaining annual transition goals.

There are only two instructional models that directly relate to teaching goal-attainment skills, the Self-Determined Learning Model of Instruction (SDLMI; Wehmeyer et al., 2000) and *Choicemaker Self-Determination Transition Curriculum*

(Martin & Huber Marshall, 1995). The SDLMI is a curriculum to teach the component elements of self-determination, including the process of self-regulation, problem solving, and self-directed learning for both general and special education students. The model consists of a three-phase instructional program to engage students in self-directed learning through a problem-solving process. Each phase represents a specific problem to be solved by the student. Students solve the problem by posing and then answering a series of four questions. Each question is linked to a set of teacher objectives. The four questions lead students through the problem-solving process. Students must (a) identify the problem, (b) identify potential solutions to the problem, (c) identify barriers to solving the problem, and (d) identify consequences of each solution. The three phases include (a) setting a goal, (b) taking action, and (c) adjusting the goal or plan. The SDLMI guides students through mastery of the component elements of self-determination, but is more importantly a model intended for teachers to guide and direct instruction on self-determination (Wehmeyer et al., 2012). SDLMI was field tested with a total of 40 students from Texas and Wisconsin. All students were students with a disability in one of the categories of intellectual disabilities ($N = 13$), learning disability ($N = 17$), or emotional behavioral disorder ($N = 10$). Students ranged in age from 14-18 years old. Analysis of variance indicated no significant differences on the GAS scores between students grouped by disability or type of goal ($M = 49.13$; $SD = 14.063$). Paired t tests examined pre- and postintervention differences on self-determination and perceptions of control, and indicated significant differences on both SDS ($p = .046$) and the Norwicki-Strickland Locus of Control Scale ($p = .029$).

SDLMI asserts that the model uses instructional strategies and educational supports that are student-directed, however, there are circumstances in which teacher-directed strategies are used to help students make decisions. For example, students considering what plan of action to implement to achieve a self-selected goal may receive direct instruction from the teacher in an effective strategy to formulate the plan. Therefore, the model does not fully support students acting with and reflecting autonomy. Wehman (2006) stated that teaching self-directed learning strategies such as self-instruction, self-monitoring, self-evaluation, and self-reinforcement enable students to modify and regulate their own behavior, so that students are taught to initiate and develop their own action plans. Wehmeyer et al. (2000) further contended that SDLMI is not a curriculum and should not be viewed as such because it is a framework rather than a comprehensive curriculum.

The *Choicemaker Self-Determination Transition Curriculum* by Martin and Huber Marshall (1999) specifically addresses goal-attainment skills by directly teaching student-directed learning strategies. The curriculum is comprehensive and multi-faceted, consisting of three sections: (a) “Choosing Goals,” (b) “Expressing Goals,” and (c) “Taking Action: Making Goals Happen.” Each section contains specified teaching goals and objectives addressing six transition areas to include the identification of student interests, student skills and limits, student goals, student-led meetings, student reporting, and student action plans. The program includes a criterion-referenced self-determination transition assessment tool that matches each section of the curriculum. The Choosing Goals lessons enable students to learn skills needed to articulate interests, preferences,

and goals across one or more self-selected transition areas. The self-directed IEP lessons enable students to learn leadership and advocacy skills to manage their IEP meetings.

Most important and unique to this program is the *Take Action* section. *Take Action* enables students to learn how to break their long-term goals into short-term goals that can be obtained within a week. Students develop a six-component plan to attain their goals. After acting on their goals, students then evaluate their action and either adjust their plan or make a new plan to attain the next short-term goal. The six components include determining: (a) a standard for goal performance, (b) a means to get performance feedback, (c) identified motivators to accomplish the goal, (d) strategies to obtain the goal, (e) supports needed, and (f) schedules. The Plan Organizer is used to prompt students to answer specific questions to develop each component of the plan.

Three studies have examined the efficacy of *Choicemaker* and demonstrated positive effects on student self-determination skills, goal setting, leadership, and student involvement in transition planning as measured by SDS, Choicemaker Curriculum Assessment, Self-Directed Behavior Scale, observational checklist, student interviews, and preference inventory (Allen, Smith, Test, Flowers, & Wood, 2001; Cross, Cooke, Wood, & Test, 1999; Snyder, 2002; Snyder & Shapiro, 1997). There is limited research on *Take Action* outside of the following three studies.

German, Martin, Marshall, and Sale (2000) utilized *Take Action* (Martin & Huber Marshall, 1995) to teach six high school students with intellectual disabilities goal-setting and attainment skills via a model-lead-test approach. Students were selected based on their attendance record. Participants attended a special education class for 90 minutes, three times a week. The researchers used a multiple-baseline design over the course of 12

weeks during the spring semester with baseline lasting for one to three weeks, intervention for three weeks, and maintenance for one to six weeks. The teacher developed 30 goal cards reflecting IEP goals which students selected daily to work on. *Take Action* lessons were then taught for four 90-minute sessions to impart the goal attainment process. Students practiced for six additional days with teacher prompts and feedback. Across two students at a time, intervention was withdrawn with the exception of verbal praise. The paraprofessional determined procedural reliability four times during each intervention phase, yielding 100% agreement along with a point-by-point dependent measure agreement check on 20% of the data points across all phases with 99% interrater agreement. The study concluded that all students were able to attain their daily transition goals and then maintain the skills after instruction concluded. German et al. (2000) stated that if replication proves that *Take Action* can be taught in a brief amount of time, it could be infused easily into existing curricula.

Williams-Diehm et al. (2010) conducted a study to determine whether *Take Action* could teach essential goal skills to students with mild to moderate disabilities including specific learning disabilities, autism, emotional/behavioral disabilities, and one student with an intellectual disability. The study included 9th-, 10th-, and 11th-grade students with disabilities selected from two high schools. The researchers used an Adapted Alternating Baseline design (repeated lesson pretest/posttest delivery) with an embedded ABC design to examine goal attainment knowledge gain, demonstration of goal-attainment skills, and goal attainment across time on IEP goals. Students at Central High School were taught the *Take Action* curriculum for 45 minutes once a week for seven weeks. Students at Will Rogers High School were taught *Take Action* for one hour

after school one day each week. Dependent measures included percent quiz correct, percent goals attained, percent action taken, and percent of no evaluation adjustments, percent of plan written correctly, and percent of adjustments adopted in next plan.

Prior to the beginning of the study, the two teachers received 1.5 hours of individual training on how to teach *Take Action* and administer the pre- and posttests. During the goal attainment instructional phase, teachers administered the pretest instructed on the lesson following the script included in the *Take Action* teacher's manual, and then asked students to complete the posttest. Students who scored below 70% on the posttest were given follow-up targeted instruction. Three weeks after the goal attainment instruction ended, students began this phase by meeting with their teacher for weekly check-ins to facilitate the use of the *Take Action* organizer and provide feedback and support. After successfully accomplishing one goal, the process was repeated week after week until the end of the semester. Teachers completed an instructional checklist at the end of each lesson during the goal attainment instruction phase and reported 100% instructional fidelity at both high schools. Researchers used an independent fidelity observation in 12 of the 18 sessions at both schools using the same checklist, yielding 98% instructional fidelity. An exact agreement to calculate the component-by-component interobserver agreement on written products of the six dependent measures ranged from 93% to 100%. All dependent measures yielded 100%, with the exception of percent of no evaluation adjustment (93%) and percent of plan written correctly (95%). The results of the study suggest that high school students with mild to moderate disabilities lack basic goal attainment knowledge and *Take Action* lessons can be used to increase student knowledge. Students set on average four to five goals and attained an average of three.

Williams-Diehm et al. (2010) stated that knowledge of goal-attainment skills is not enough; students need the opportunity to practice the skills and obtain specific feedback on performance.

Few studies exist on self-determination components like goal setting and attainment specific to a comprehensive curriculum design. Algozzine et al. (2001) concluded that there is a need for replicated research on how students make progress in a comprehensive self-determination curriculum such as *Take Action* to address global increases in self-determination. German et al. (2000) provided evidence that teaching goal-attainment skills can increase overall levels of self-determination, and specifically recommended that research is needed to further validate the *Take Action* process to include researching the effects on student level variable such as disability type.

Finally, Wehmeyer, Palmer, Shogren, Williams-Diehm, and Soukup (2010) conducted a multi-intervention study to determine whether there was a causal relationship between an intervention designed to teach self-determination and increase student self-determination scores as measured by SDS and AIR. The researchers implemented a randomized trial placebo control group design to determine whether interventions designed to promote self-determination led to improvements in self-reported self-determination scores of students with disabilities over the course of three years. The researchers also wanted to explore the impact of student level variables (disability label and gender) that have been identified in previous research to determine the effect of self-determination status. The study included 371 high school students receiving special education services under the categorical areas of intellectual disability (28%) or learning disability (72%). Participants came from 50 school districts across five states in the

Midwest ranging from 14-20 years in age. Of these participants, 43% were female and 57% were male, with the majority being Caucasian (54%). One hundred and eighty special education teachers from 80 high school campuses volunteered for the study. Each campus was randomly assigned to an intervention or control group. Training was then provided based on the group for which the campus was randomly assigned. The control group received training on how to actively involve parents in the educational process.

The classes in the intervention group received a menu of research-based interventions, including *Choicemaker Curriculum* (Martin & Huber Marshall, 1995), *Self-Advocacy Strategy* (Van Reusen, Boss, Schumaker, & Deschler, 2002), *Steps to Self-Determination* (Hoffman & Field, 2005), *Whose Future Is It Anyway?* (Wehmeyer et al., 2004), SDLMI (Wehmeyer et al., 2000), and the *Next STEP Curriculum* (Halpern, Herr, Doren, & Wolf, 2000). Teachers selected the intervention based on their preferences and the needs of their students and received training on the respective interventions along with support on how to infuse student-directed learning into instruction. To ensure contextual fidelity, the same group of trainers provided all interventions, compliance fidelity was monitored through ongoing support and communication to teachers, and competence fidelity was evaluated by reviewing worksheets and written materials completed by the students. The teachers were also trained to administer SDS, AIR, and criterion-referenced measures from *Whose Future Is It Anyway?*, *Next STEP Survey*, and *Self-Directed IEP*.

The researchers used multilevel growth curve modeling to examine differences in self-determination scores on the self-determination scales across intervention and control group participants. The results indicated that there was a significant overall increase in

AIR scale student scores over time, $F(1, 446) = 32.10, p < .0001$), a significant intervention group by time interaction, $F(1, 446) = 6.70, p < .01$), and there were differences in initial status and slope between groups with the intervention group showing more positive increases over time. When gender and disability group were added to the model, no additional significant effects were noted. The multilevel model also noted significant overall increased in SDS scores over time ($F[1, 448] = 51.73, p < .0001$), but a nonsignificant intervention group effect ($F[1, 448] = 1.05, p < .31$), and group by time interaction, ($F[1, 448] = 0.21, p < .65$). These results indicate no significant difference between the intervention or control groups as well as a consistent increase in SDS scores over time regardless of group assignment. However, when adding disability and gender, a significant interaction was evident between males and females with learning disabilities ($F[1, 448] = 4.90, p < .03$). In addition, a marginal significant effect by disability, gender, and intervention group was found ($F[2, 442] = 2.96, p < .05$). This effect was driven by differences in the slope of males and females with intellectual disabilities with no significant differences in slope for males and females with a learning disability based on gender or intervention. The study did not differentiate among the implemented interventions or curricula. Although prior researchers (Wehmeyer & Garner, 2003; Shogren et al., 2007) concluded gender and level of intellectual capacity mediated student self-determination status, further research is needed on identifying environmental and student factors that serve as mediating and moderating variables on self-determination.

Williams-Diehm et al. (2010) showed differential responses between gender and disability, which substantiated Wehmeyer et al.'s (2010) findings that concluded that further research is needed to explore gender differences in self-determination and their

relationship with a disability label, as well as to explore the effects of disability and self-determination interventions such as *Take Action*. Finally, Wehmeyer et al. (2010) concluded that there exists a need to add to the growing research base of evidence-based transition practices in the area of self-determination specific to a comprehensive instructional approach and curriculum. As evidenced by earlier studies, researchers continue to use a multitude of assessment tools from observations, goals attained, curriculum-based measures, and standardized measures. The next section will specifically outline the two most common standardized measures that assess self-determination.

Tools for Assessing Self-Determination

Shogren et al. (2008) asserted that in order to advance in the field, there must be an availability of theoretically-based measures of self-determination. While there are numerous methods of assessing self-determination skills, many focus on evaluating the mastery level of a specific skill in isolation or in a specific curriculum. As previously mentioned, there are only two assessment tools developed to assess the global context of self-determination within a validated theoretical framework, SDS (Wehmeyer & Kelchner, 1995) and AIR (Wolman et al., 1994). Although both assessments have been researched and validated to measure the relationship between self-determination and designated outcomes, SDS and AIR are developed on different philosophical frameworks and definitions of self-determination.

AIR is based on Mithaug's (2003) theory that self-determination is contingent on a student's knowledge, ability, and perception (capacity), as well as opportunities to apply knowledge and abilities. AIR is available in student (AIR-S), educator (AIR-E), and parent (AIR-P) versions. AIR consists of 30 questions that assess student capacity

and opportunity for self-determination. Capacity and Opportunity subscale scores are calculated and merge into a total self-determination score. The Capacity subscale consists of questions regarding student's knowledge, ability, and perception of self-determination. The Opportunity subscale consists of questions regarding the opportunities students have to engage in self-determined behaviors at home and school. AIR was normed with 450 students with and without disabilities in California and New York and demonstrated adequate reliability and validity in the measurement of self-determination. Correlations between AIR-S and AIR-E were not reported, however, students with disabilities tended to rate their capacity for self-determination, as measured by the Capacity subscale, higher than their special education teachers, while the reverse pattern was reported on the school Opportunity subscale. Cronbach's α for AIR-E was .95 and .92 for AIR-S.

SDS (Wehmeyer & Kelchner, 1995), which is aligned to Wehmeyer's functional theory of self-determination, is a 72-item self-report scale that provides data on each of the four essential characteristics as well as an overall self-determination score. According to Wehmeyer and Kelchner (1995) the first section measures student autonomy, which includes a student's self-rating on independence and the degree to which he/she acts on the basis of personal belief. Section 2 measures student self-regulation, which is comprised of interpersonal problem solving, goal setting, and task performance. Section 3 measures psychological empowerment relating to dimensions of perceived control, and Section 4 measures student self-realization. Subscale scores as well as a total self-determination score can be calculated. Higher scores indicate higher levels of self-determination. SDS was normed with 500 students with and without cognitive disabilities

in rural, urban, and suburban school districts in five states, and reported adequate reliability and validity with a Cronbach's α of .89.

Shogren et al. (2008) conducted a study to examine the relationship between AIR and SDS in relation to the two theoretical perspectives and the construct of self-determination, in order to provide guidance for the use of these two assessments in future practice. The study included 407 high school special education students from rural, urban, and suburban school districts across six states (Texas, Kansas, Missouri, Nebraska, Oklahoma, and Arkansas) identified under the categorical areas of intellectual disability (42%), specific learning disability (29%), other health impairment (13%), emotional disability (9%), and autism (9%). Participants ranged in age from 14.8 to 21.8 years of age, with females constituting 39% and males 61% of the sample. Although Caucasian participants made up 66% of the sample, Hispanic, African American, Native American, and Asian ethnicities were also represented. Shogren et al. (2008) used structural equation modeling to examine the relationship between SDS, AIR-E, and AIR-S versions. AIR-E consists of 30 questions that assess student capacity and opportunity for self-determination. Capacity subscales consist of questions regarding student knowledge, ability, and perception of self-determination behavior, while the Opportunity subscale consists of questions regarding opportunities students have to engage in self-determined behavior. AIR-S consists of 18 questions reflecting the same Capacity and Opportunity subscales as the educator version. The model was used specifically to examine the relationship between the observed and latent variables.

Shogren et al. (2008) identified eight latent constructs based upon the subdomains of SDS and AIR: Autonomy (AUT), Self-Regulation (SREG), Psychological

Empowerment (PSYE), Self-Realization (SREA), AIR-E Capacity, AIRE-E Opportunity, AIR-S Capacity, and AIR-S Opportunity. They also examined the relationships among subdomains before creating higher order self-determination constructs, which represent overall self-determination for each of the assessments. Correlations among the latent constructs suggested a strong relationship between the PYSE and SREA subscales ($r = .79$), as well as a moderate relationship between the SREG and PSYE ($r = .68$) and SREA subscales ($r = .53$). The AUT subscale tended to have weak relationships with all other subscales on SDS ($r = .31$: SREG, $r = .39$: PSYE, $r = .27$: SREA). On AIR-S, the Capacity and Opportunity subscales were strongly correlated ($r = .73$), however on AIR-E, the Capacity and Opportunity subscales were weakly correlated ($r = .34$). Furthermore, there were weak correlations between the Capacity and Opportunity subscales on the student and educator versions of AIR, suggesting that there is a weak relationship between students and educator ratings of students' capacity and opportunity for self-determination. According to Shogren et al. (2008), this suggests that educators do not tend to view student capacity and opportunities as being related while students do. Students tended to rate their capacity for self-determination higher than their teachers did. The researchers suggest that educators are providing objective ratings on both subscales while student ratings are influenced by the strong relationship they see between their capacity and opportunity for self-determination. Shogren et al. (2008) stated that if teachers view self-determination as important, they may provide opportunities for self-determination regardless of their perception of each individual's capacity. Alternatively, teachers may believe that opportunities to practice self-determination have little impact

on a student's capacity to be self-determined, which could be a result of assumptions based on disability labels.

When examining the relationship between SDS, AIR-E, and AIR-S for educators, the Capacity subscale had the strongest relationship with SREG ($r = .53$), while for students the strongest correlation was between Capacity and AUT ($r = .51$). The Opportunity subscale for educators revealed low correlations with all subscales of SDS, while for students higher correlations were evident between the Opportunity subscale and AUT, PSYE, and SREA subscales of SDS. While testing the model fit for the three higher order constructs, representing self-determination as assessed by each of the scales (SDS, AIR-E, AIR-S), AIR-E was dropped from the model due to the negative latent variance for the Capacity subscale resulting in problems with model specification. Shogren et al. (2008) stated that efforts to constrain this parameter to be nonnegative led to other latent variable estimates becoming negative as well as leading to difficulties in model convergence. Given the weak relationship between the Capacity and Opportunity subscales for AIR-E, the data did not support creating a higher order self-determination construct for AIR-E. The model was then fit for higher order self-determination constructs for both SDS and AIR-S. The data indicated that there was a moderate relationship between the higher order self-determination constructs for the AIR-S and SDS ($r = .50$). Due to the moderate correlation, the creation of a third order self-determination construct was not supported suggesting the independence of the functional theory of self-determination and self-determined learning theory (Shogren et al., 2008).

Shogren et al. (2008) contended that the AIR and the SDS measure different aspects of self-determination. Therefore, one must consider the theoretical perspective

that is guiding the instructional implementation when choosing the most appropriate assessment. For the purpose of this study, SDS was selected because it aligned to assessing the four essential characteristics that describe the function of the behaviors and actions that define self-determination within the functional model. The researcher wishes to assess levels of autonomy, self-regulation, psychological empowerment, and self-realization of students as well as utilize AIR to assess students' self-rating of opportunity and capacity.

Summary

A focus on the instruction of self-management strategies to increase postsecondary outcomes and generalize learned skills emerged from public concerns about poor postsecondary outcomes for students with disabilities (Williams-Diehm, Palmer, Lee, & Schroer, 2010). Historically, there were four generations of reform that included central ideas of career readiness mandates, self-determination as an outcome, and access to the general curriculum. Over time, transition became embedded into the bigger picture of secondary reform with an emphasis on engaging students in the educational process to be career and college ready.

The concept of self-determination originally stemmed from the disciplines of philosophy, political science, and psychology (e.g., Bandura, YEAR; Deci & Ryan, 1985; Sears, 1951). As the field expanded, Wehmeyer (1999) was instrumental in defining self-determination as an educational construct and identifying components of self-determination as a developmental progression of skill sets, goal setting, and attainment. Currently, an extensive literature base supports a correlational relationship between increased self-determination skills and enhanced quality of life, educational planning and

decision making, and improved academic performance (Konrad, Fowler, Walker, Test, & Wood, 2007; Pierson et al., 2008; Wehmeyer & Schwartz, 1997). Doren et al. (2007) concluded, through a qualitative study interviewing students with disabilities who exited secondary school, that those who were most successful had clear goals and worked actively to attain those goals. Morningstar et al. (2010) also concluded that students with disabilities in postsecondary environments attribute their success to learning and practicing self-determined behavior.

Numerous studies document that students with high incidence disabilities lack the basic skills of self-determination (e.g., Pierson et al., 2008; Weiss et al., 2012). It is assumed that these students have the ability to set goals, however, in reality many lack the strategies to identify realistic goals and the ability to self-regulate their behaviors to obtain the identified goals specific in the area of self-efficacy (Algozzine et al., 2001). Although there is extensive research in the area of self-advocacy specific to participation in IEP meetings with this population, there is limited research on teaching goal attainment through student-directed learning strategies. The literature suggests that students with disabilities need opportunities to learn and practice strategies for attaining annual goals.

The purpose of this review was to identify a theoretical base for the identification of an evidence-based practice for teaching self-determination skills specific to goal attainment, as well as the identification of an assessment tool that measures global indicators of self-determination that link to improved outcomes for students with disabilities. The literature review discussed evidence-based interventions examined by Algozzine et al. (2001), and found that there are only two instructional models that

directly relate to teaching goal-attainment skills. Of the two, only *Take Action: Making Goals Happen* used a student-directed strategy to teach goal setting and attainment. To date, only three studies have examined *Take Action*'s effectiveness. Most recently, Williams-Diehm et al. (2010) provided evidence that teaching *Take Action* to students with mild to moderate disabilities, including students with learning, emotional, and intellectual disabilities, can significantly increase goal-attainment skills. Furthermore, there are only two standardized assessment tools that assess the global context of self-determination: SDS and AIR. As such, these were the primary modes of assessment chosen for this study.

Based on the literature review, it is clear that a need for additional research exists on the impact of teaching self-determination skills to secondary students and, more specifically, middle schools students with high incidence disabilities. Further research is also needed to examine the relationship between increased global measures of self-determination and the impact of environmental and students factors such as gender and disability. In order to address this need, this study investigates the efficacy of teaching goal-setting and attainment skills to middle school students with high incidence disabilities, and its impact on global measures of self-determination.

CHAPTER 3

METHODOLOGY

Despite the substantial literature on self-determination, few studies have established a correlational relationship between interventions to promote self-determination and an increase in self-determination for students with disabilities. The purpose of this study is to determine whether the *Choicemaker: Take Action: Making Goals Happen* curriculum would be effective in improving self-determination skills in middle school students with disabilities. It is proposed that students with disabilities who received intervention to promote self-determination will show significant differences in global self-determination skills. As previously discussed, this study was designed to address the following research questions:

- 1) Is the *Choicemaker: Take Action: Making Goals Happen* curriculum effective in increasing global self-determination skills of middle school students with disabilities as measured by Arc's Self-Determination Scale?
 - a) Are gender, disability type, least restrictive placement, and age related to the changes in global self-determination skills in middle school students with disabilities who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum?
 - b) Among middle school students who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum, does the relationship

between disability type and changes in global self-determination skills vary by gender?

- c) Among middle school students who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum, does the relationship between disability type and changes in global self-determination skills vary by least restrictive placement?

2) Is the *Choicemaker: Take Action: Making Goals Happen* curriculum effective in increasing autonomy subscale self-determination skills of middle school students with disabilities as measured by Arc's Self-Determination Scale?

- a) Are gender, disability type, least restrictive placement, and age related to the changes in autonomy self-determination skills in middle school students with disabilities who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum?
- b) Among middle schools student who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum, does the relationship between disability type and changes in autonomy subscale self-determination skills vary by gender?
- c) Among middle school students who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum, does the relationship between disability type and changes in autonomy subscale self-determination skills vary by least restrictive placement?

- 3) Is the *Choicemaker: Take Action: Making Goals Happen* curriculum effective in increasing self-regulation subscale self-determination skills of middle school students with disabilities as measured by Arc's Self-Determination Scale?
- a) Are gender, disability type, least restrictive placement, and age related to the changes in self-regulation subscale self-determination skills in middle school students with disabilities who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum?
 - b) Among middle school students who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum, does the relationship between disability type and changes in self-regulation subscale self-determination skills vary by gender?
 - c) Among middle school students who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum, does the relationship between disability type and changes in self-regulation subscale self-determination skills vary by least restrictive placement?
- 4) Is the *Choicemaker: Take Action: Making Goals Happen* curriculum effective in increasing psychological empowerment subscale self-determination skills of middle school students with disabilities as measured by Arc's Self-Determination Scale?
- a) Are gender, disability type, least restrictive placement, and age related to the changes in psychological empowerment subscale self-determination skills in middle school students with disabilities who

receive the *Choicemaker: Take Action: Making Goals Happen* curriculum?

b) Among middle school students who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum, does the relationship between disability type and changes in psychological empowerment subscale self-determination skills vary by gender?

c) Among middle school students who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum, does the relationship between disability type and changes in psychological empowerment subscale self-determination skills vary by least restrictive placement?

5) Is the *Choicemaker: Take Action: Making Goals Happen* curriculum effective in increasing self-realization subscale self-determination skills of middle school students with disabilities as measured by Arc's Self-Determination Scale?

a) Are gender, disability type, least restrictive placement, and age related to the changes in self-realization subscale self-determination skills in middle school students with disabilities who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum?

b) Among middle school students who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum, does the relationship between disability type and changes in self-realization subscale self-determination skills vary by gender?

- c) Among middle school students who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum, does the relationship between disability type and changes in self-realization subscale self-determination skills vary by least restrictive placement?
- 6) Is the *Choicemaker: Take Action: Making Goals Happen* curriculum effective in increasing total self-determination skills of middle school students with disabilities as measured by AIR Self-Determination Scale?
 - a) Are gender, disability type, least restrictive placement, and age related to the changes in total self-determination skills in middle school students with disabilities who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum?
 - b) Among middle school students who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum, does the relationship between disability type and changes in total self-determination skills vary by gender?
 - c) Among middle school students who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum, does the relationship between disability type and changes in total self-determination skills vary by least restrictive placement?
- 7) Is the *Choicemaker: Take Action: Making Goals Happen* curriculum effective in increasing capacity subscale self-determination skills of middle school students with disabilities as measured by AIR Self-Determination Scale?

- a) Are gender, disability type, least restrictive placement, and age related to the changes in capacity subscale self-determination skills in middle school students with disabilities who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum?
 - b) Among middle school students who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum, does the relationship between disability type and changes in capacity subscale self-determination skills vary by gender?
 - c) Among middle school students who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum, does the relationship between disability type and changes in capacity subscale self-determination skills vary by least restrictive placement?
- 8) Is the *Choicemaker: Take Action: Making Goals Happen* curriculum effective in increasing opportunity subscale self-determination skills of middle school students with disabilities as measured by AIR Self-Determination Scale?
- a) Are gender, disability type, least restrictive placement, and age related to the changes in opportunity subscale self-determination skills in middle school students with disabilities who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum?
 - b) Among middle school students who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum, does the relationship between disability type and changes in opportunity subscale self-determination skills vary by gender?

- c) Among middle school students who receive the *Choicemaker: Take Action: Making Goals Happen* curriculum, does the relationship between disability type and changes in opportunity subscale self-determination skills vary by least restrictive placement?

Population and Sample

The population for this study consisted of 220 students from two middle schools located in a suburban area in the southeastern part of the United States. One school was selected as the intervention group with 109 students, while the other was selected as the control group with 111 students. Purposeful sampling was used to identify the schools within the population that met specific criteria. The criteria selection included a school that:

- 1) Implemented the district's transition initiatives of self-directed IEP meetings;
- 2) Included both resource, cross-categorical, and mild intellectual disability special education classes; and
- 3) Exhibited willingness to participate in the study.

The rationale for the first criterion is that all students have been exposed to a base knowledge of concepts of self-determination and self-advocacy. Teachers have been trained on how to incorporate transition initiatives into the general curriculum. The second criterion ensures that the school selected represented a cross-section of students with mild cognitive and other disabilities in varied least-restrictive placements. The third criterion suggests that the school's willingness to participate is critical to ensuring fidelity of implementation and administrative support. As such, the study included a total of 220 special education students, both male and female, identified with one of the following

classifications: learning disability, mild intellectual disability, other health impaired, or autism. Students who met the special education classification criteria for each special education category outlined by the State Department of Education were selected from Grades 6, 7, and 8.

The researcher made several assumptions in conducting the study. First, the researcher assumed that the student had been identified and described accurately when given a classification by the school district's special education team. All students within the study have a classification as listed above and poor self-determination skills. The researcher also assumed that the students within the study had not received previous self-determination training on goal setting and attainment, and were willing participants in the self-determination intervention. A demographic description of participating students is presented in Table 3.1.

A power analysis was conducted to examine how many participants would be needed under multiple regression analysis to achieve a power of .80. Using formulas specified by Cohen (1988), the *F* power macro was calculated. Factoring in that seven indicators would be used in the model, the minimum total number of participants without the consideration of grouping was calculated and estimated to be 103 participants.

The initial student list included students who met the qualifications for participation in the study. The special education coordinator had legal access to the coded list of potential study participants.

Table 3.1

Demographic Description of Participating Students

| | <u>Intervention Group (N=109)</u> | | <u>Control Group (N=111)</u> | |
|-------------------|-----------------------------------|------|------------------------------|------|
| | N | % | N | % |
| Gender | | | | |
| Female | 33 | 30% | 40 | 37% |
| Male | 76 | 70% | 70 | 63% |
| Disability | | | | |
| LD | 53 | 48% | 64 | 58% |
| OHI | 27 | 25% | 30 | 27% |
| AUT | 8 | 8% | 6 | 6% |
| ID | 21 | 19% | 11 | 9% |
| Age | | | | |
| 11 years | 10 | 9% | 3 | 3% |
| 12 years | 27 | 24% | 32 | 29% |
| 13 years | 37 | 35% | 32 | 29% |
| 14 years | 29 | 27% | 36 | 32% |
| 15 years | 7 | 6% | 5 | 5% |
| 16 years | 1 | .03% | 1 | .01% |
| LRE | | | | |
| Resource | 57 | 52% | 84 | 74% |
| Self-Contained | 52 | 48% | 29 | 26% |

Note. Demographic category in bold. N = Number of students; LD = Learning Disability; OHI = Other Health Impaired; AUT = Autism; ID = Intellectual Disability.

All students in the study resided within the designated county, which is the fourth largest county in South Carolina. It covers approximately 1,229 square miles. Of the population, 69% are Caucasian, 27% are African American, and 4% Hispanic. The county is very diverse and consists of 66% urban area and 34% rural. The designated district has approximately 32,000 students, 1,900 teachers, and 42 schools (BCSD, 2014). The county currently serves over 4,300 students with disabilities, which is approximately

12.5% of the population. Of all teachers within the county, 59.3% hold advanced degrees, and the return rate of teachers is 89.2%.

The identified intervention group was selected from a middle school that obtained an absolute rating of average, a growth rating of average, and a federal accountability rating of C for the 2013 school year. The overall enrollment for the school is 1,085. Over 50% of the teachers hold advanced degrees. Students with disabilities comprise 14.6% of the population. The control group was selected from a neighboring middle school that is comparative in profile. According to the school's annual report card, it obtained an absolute rating of average, a growth rating of average, and a federal accountability rating of B in 2013. The school's total enrollment is 1,033. Over 50% of the teachers have advanced degrees. Students with disabilities comprise 17.4% of its students. Certified and highly qualified special education teachers served students with disabilities at both middle schools, with the exception of one teacher in the control group. Teachers within the intervention and control group represented a wide range of experience, from novice to veteran with advanced degrees as shown in Table 3.2. Teachers were selected because they were assigned as special education teachers to the designated schools. In addition, all special education classes within the school participated, and as such, there was no selection or elimination process. The sample population represented within the intervention and control groups within this study is representative of the overall population within the area.

Table 3.2

Descriptive Information on Teachers

| Characteristic | Intervention Group | Control Group |
|--------------------------|--------------------|---------------|
| Total number | 7 | 7 |
| Special Ed. Certified | 7 | 6 |
| Highly Qualified | 7 | 6 |
| Master's Degree | 5 | 6 |
| Number of Teaching Years | | |
| 1-5 years | 3 | 3 |
| 6-10 | 0 | 2 |
| 10-20 | 1 | 0 |
| 20+ | 3 | 2 |

Intervention

The *Take Action* curriculum (Martin & Huber Marshall, 1995) was embedded in the school curriculum during the 2013-14 school year upon the implementation of the study. *Take Action* teaches students how to make a plan to attain their goals. Students learned to break their long-term goals into short-term goals, develop a six-component plan to attain their goal, and, after acting on their goals, evaluate their action and either adjust their plan or made a new plan to attain the next short-term goal. The six components to developing a plan include: standard (what the student will be satisfied with doing in one week), motivation (why the student wants to meet this standard and attain the goal), strategy (method used to accomplish the goal), schedule (specific time to work on the goal), support (list of people or things the student needs to attain the goal), and feedback (any information the student receives about progress toward the short-term goal). To assist in developing the six-component plan, the curriculum includes a Plan Organizer that prompts students to answer specific questions in order to develop an

appropriate plan to meet the identified short-term goal. Prompt questions include the identification of a standard, motivation, strategy, schedule, support, and feedback. Prior to beginning the study, the seven special education teachers assigned to the intervention group received 1.5 hours of training by the special education coordinator on how to teach the *Take Action* lessons and schedule instruction. They were also given additional supports through a webinar resource located on the district website that could be viewed at any time. To teach goal attainment, teachers followed the script included in the *Take Action* teacher manual. Teachers were provided PowerPoint presentation files to guide the lessons, and classroom materials needed to teach the content.

For *Take Action* Lessons 1 through 6, students were taught the basic elements of the strategy. During Lesson 7, students applied what they learned to attain a goal by using the Plan Organizer to develop a plan, and then by using the Evaluate and Adjust Organizer to report progress on goal attainment. The lessons were provided daily for 45 minutes within the special education classroom. Following Lesson 7, the Organizer Phase included a weekly check-in where students met with their teacher. Students selected a goal from their current IEP and used the Plan Organizer to break the goal into weekly short-term goals that would lead to attaining the IEP goal. Students completed the weekly Plan Organizer and met with the teacher during their check-in (10-15 minutes) for feedback and support. The students then had one week to act on the plan. At the end of the week, the teacher met individually with each student to complete the Evaluate and Adjustment Organizer. The teacher asked the student whether he or she acted on each component, and the student evaluated the action they took. Next, the teacher inquired whether the plan components had been effective. If the student reported that their action

had not worked, the teacher asked the student what he or she would change, thereby adjusting the plan and continuing the process to work until the goal was attained. Once the goal was attained, the student used the Plan Organizer to develop the next plan. The process repeated itself week after week for a total of eight weeks, teaching students how to evaluate and self-regulate progress toward goals.

Dependent Variables

As previously discussed, SDS is designed for students with and without disabilities. It has no identified age limit, and is a self-assessment measuring global indicators of self-determination (Wehmeyer, 1995). The scale has two major purposes: (a) to provide a research tool to examine the correlation between self-determination and factors that promote or hinder this outcome, and (b) to provide students with disabilities and educators a tool that aids them in identifying students' strengths and limitations in the areas of self-determination (Beach Center, 2013). This self-determination measure has a four-point Likert scale. It is comprised of 72 items categorized under four different section headings. Each of these sections examines a different essential characteristic of self-determination, which yields a total self-determination score and subdomain scores (autonomy, self-regulation, psychological empowerment, and self-realization) in each of the four characteristics of self-determination (Wehmeyer, 1995).

SDS was normed through the responses of students in 500 urban, suburban, and rural districts in Alabama, Connecticut, Colorado, Texas, and Virginia. The age distribution for the group was 14-22 years. Students in this sample were both regular education students and special education students. Students from culturally and ethnically diverse backgrounds were recruited as participants (Wehmeyer, 1995). To evaluate

criterion-related validity, students involved in the field test of SDS completed three conceptually-related measures: locus of control, academic achievement attributions, and a self-efficacy scale, which was measured by the adult version of the Nowicki-Strickland Internal-External Scale (NS-IE). The NS-IE tests the degree to which students see their lives influenced by internal or external forces. As far as academic success, the Intellectual Achievement Responsibility Questionnaire deals with internality, or the degree to which students take responsibility for success or failure as related to internal and external forces. The Self-Efficacy Scale has 23 self-reporting items for individual degrees of competence. The instrument's internal stability has been measured at .86. Higher scores reflect more positive self-efficacy. The majority of the relationships are moderate to strong (.25 to .5). Internal consistency reliability was calculated using Cronbach's α for the entire scale, with the exception of the self-regulation subscale due to the open-ended answer format of this section. Coefficient α for the scale as a whole was .90. Subscale coefficient α 's were autonomy domain (.90), psychological empowerment domain (.73), and self-realization domain (.62).

As previously discussed, AIR (Wolman et al., 1994) is an assessment tool designed to measure students' capacity for the opportunity to engage in self-determined behavior. The tool provides rating scales from multiple perspectives (i.e., teachers, students, and parents). For the purpose of this study, students completed the student version of the scale. The Capacity subscale assesses the extent to which students connect beliefs about what they need, want, and can do with their expectations, choices, and actions. The 18 items that comprise the Capacity subscale address students' ability to perform self-determined behaviors, such as setting goals, making choices, and following

up with actions to meet their goals. Several items address students' perception of the efficacy of self-determined behaviors to include motivation and the willingness to take risks. Students are asked to rate each item on a five-point Likert scale ranging from one (never) to five (always) to indicate how frequently the student engages in the behavior. The Opportunity section includes two subscales to assess the opportunities that the student has to engage in self-determined behavior. Six items address opportunities at school, and an additional six items address opportunities at home. Students indicate how frequently they have opportunities to engage in each behavior using the same Likert scale as the Capacity subsection.

AIR has strong reliability and validity according to Mithaug (2003). It was field tested with students 2-25 years old. Of students field-tested, 28% ranged from 12-15 years old. The overall population of the field test included 39% females and 61% males. The ethnic distribution was 33% African American, 22% Caucasian, 39% Hispanic, 3% Asian, and 3% other groups. Of the sample, 72% were economically disadvantaged, and 82% were enrolled in special education. Of those enrolled in special education, 79% had mild to moderate disabilities. Reliability tests included an alternative-item correlation and a split-half test for internal consistency. The results ranged from .91 to .98 for the alternative item correlation, and .95 for the split half test. The validity of the scale was assessed by examining relationships between constructs and item scores of the tool. The results indicated that there was a strong positive correlation (.68 to .82) for the capacity construct, positive correlations (.59 to .66) for Items 19-24, and negative correlations (.65 to -.68) for Items 25-30 on the home-school construct. In addition, there was a modest positive correlation (.40 to .54) for the opportunity construct. However, the results also

indicated a weak positive correlation (.22 to .29) for knowledge items, a weak negative correlation (-.25 to -.34) for ability items and (-.39) for perception items under the knowledge-ability-perception construct.

SDS and the AIR are a good fit for this study because they target adolescents with disabilities. SDS is a measure that assesses global areas of self-determination supported by the theoretical model that is the foundation of the intervention. The scale is designed to enhance student self-determination skills by evaluating student beliefs about themselves and their ability to work collaboratively with teachers and school staff to identify progress in employing self-determination skills. In addition, AIR assesses a student's capacity and opportunity to demonstrate self-determination within the school and home environment. Both tools have proven to be a valid and reliable self-assessment for students with disabilities. Dependent variables and predictors are summarized in Table 3.3.

Social Validity Measures

A social validity measure, obtained from teachers, provided researchers with valuable information on the practicality of the instruction. At the conclusion of Week 8, teachers completed the Social Validity Measure (Appendix A) to assess usability of the problem-solving strategy using a Likert scale. Teachers answered seven questions that indicated whether they received adequate training, understood how to facilitate a student conference, enjoyed teaching *Take Action*, found it easy to implement, found it interfered with academic instruction or routines, and found it took up too much time.

Table 3.3

Dependent Variables and Predictors Used for Data Analysis

| Variable Type | Characteristic | Measure |
|----------------------------|------------------------------------|---|
| Dependent Variables | Self-Determination | SDS pre-post test scores: Total Autonomy Self-Regulation Psychological Empowerment Self-Realization AIR pre-post test scores: Total Capacity Opportunity |
| Predictors | | |
| Personal Variables | Age Gender Disability LRE | Reported by district Reported by district Reported by district Reported by district |
| Instructional Variables | <i>Take Action</i> | Group Assignment (control/intervention) |

Note. LRE = Least Restrictive Environment

Data Collection Procedures

To obtain permission to conduct this study, the researcher first obtained approval from the University of South Carolina Institutional Review Board. Following approval, the researcher met with the Chief Academic Officer of the school district to discuss the proposed study. The Chief Academic Officer provided permission to conduct the proposal, which is required by local Board of Education policy. This permission requires that all information obtained remain completely anonymous and not be identified by individual or school.

The special education coordinator for the middle schools was designated as the primary trainer on the intervention, as well as the direct assessor on SDS and AIR due to both her prior training on the intervention and assessment tool and her prior background in transition. The special education coordinator met with the researcher to review protocols. Prior to the implementation of the intervention, the special education coordinator administered the student versions of SDS and AIR to the intervention and control group participants as a preassessment. The assessment was administered in a whole group setting within a 45-minute session over the course of two days. Oral administration was provided to the group to mitigate below-level reading abilities. The special education coordinator collected the completed assessments for scoring and turned them over to the researcher. The researcher logged assessment results on a secured (i.e., password-protected) data file, and secured the paper copies in a sealed envelope within a locked cabinet to protect the confidentiality and validity of the study.

Teachers were provided with a 90-minute training on how to implement the *Take Action* curriculum by the special education coordinator. A fidelity check was conducted with each individual teacher on a mock lesson to ensure fidelity of training prior to implementation. Once the teachers demonstrated 100%, they then engaged in the *Take Action* curriculum intervention for eight weeks. The special education coordinator administered a postassessment of SDS and AIR to students at the conclusion of the study by following the same protocol for administration, scoring, and storage of data as the preassessment.

Procedural Reliability of Treatment

Procedural integrity of treatment fidelity describes the degree to which the condition is executed as intended (Gresham, MacMillan, Bee-Frankenberger, & Bocian, 2000). Experimenters use procedural integrity checklists to evaluate compliance following the

experimental procedures (Tincani, 2004). The *Take Action Fidelity Checklist* (Appendix B) was used to ensure the teacher's adherence to the steps outlined in the *Take Action* curriculum. The special education coordinator assisted the researcher with data collection to evaluate procedural fidelity in an effort to reduce reactivity, since she was the natural district staff member assigned to the designated classes. Utilizing interobserver reliability, the special education coordinator collected data until she demonstrated agreement with the researcher's data responses, and until observer agreement and reliability of observations were established at 100%. Agreement data was calculated by the following formula:
$$\frac{\text{agreements}}{(\text{agreements} + \text{disagreements})} \times 100 = \% \text{ of agreements}$$
 Once 100% agreement was established, the coordinator conducted fidelity of implementation observations across 20% of random sessions utilizing the above checklist. All sessions were recorded on an iPad.

Research Design

This experimental design assessed whether the *Take Action* curriculum is an effective intervention for increasing self-determination skills in middle school students with disabilities. It also determined whether the students' disability classification, gender, age, group assignment, and LRE are predictive of increased acquisition of self-determination skills. The results were analyzed using multiple regression procedures. According to O'Rourke, Hatcher, and Stepanski (2005), multiple regression is well suited for studying the relationship between naturally occurring predictors and dependent variables, making multiple regression an important tool in the social sciences. A function of the multiple regression analysis is to search for predictor variables that help to explain significant variation in the response variable. Multiple regression can be used to determine whether or not the relationship between the dependent (criterion) variable and independent (predictor) variables is statistically significant, how much variance in the

criterion is accounted for by the predictors, and which predictor variables are relatively important predictors of the dependent variable. Multiple regression is often referred to as the Least Squares Model. In the Least Squares Model, the best fitting line for the observed data is calculated by minimizing the sum of the squares of the vertical deviations from each data point to the line.

Accordingly, multiple regression procedures were used to examine how disability group (disability), gender group (gender), age, group assignment (group), LRE placement (LRE), and the interaction between disability group and gender group (disability x gender), disability group and least restrictive placement (disability x LRE) predict the difference between pre- and posttest scores on SDS and AIR. Dummy variables were included to control for the clustering at the classroom/teacher level. *F* values were examined to determine the significance of the overall model. If the model was significant, then univariate analysis was conducted to ascertain the unique contribution of each of the five variables, controlling for the remaining variables. The formula for this model was as follows:

$$Y_{SDS/Air-diff} = \beta_0 + \beta_{disability} + \beta_{gender} + \beta_{age} + \beta_{LRE} + \beta_{disability \times gender} + \beta_{disability \times LRE} + \beta_{group} + e$$

The construction of the above model was based on the hypothesis that students with milder disabilities in least restrictive placements will evidence greater capacity for self-determination after being exposed to intervention, and thus provide increased measures of self-determination on SDS and AIR.

Data Analysis

Results utilizing SAS v9.3 were analyzed using multiple regression. An alpha value of .05 was used to determine whether the probability was statistically significant.

An obtained probability of less than .05 would be a significant result. A series of additional descriptive statistics were conducted on the continuous measures included within this study, which are summarized in Table 3.4. These additional descriptives consisted of measures of kurtosis, skewness, and the Shapiro-Wilk test conducted for all outcomes, as well as the sole continuous predictor, which consisted of respondent age. As shown, kurtosis was slightly high for the SDS Autonomy Difference measure, while kurtosis and skewness were low and not suggestive of non-normality. With regard to all measures, the Shapiro-Wilk test indicated significant non-normality. However, this test is very commonly found to achieve statistical significance with larger samples, and these results were not a concern when viewed in the context of the reasonable measures of skewness and kurtosis found.

Table 3.4

Continuous Measures: Skewness, Kurtosis, and the Shapiro-Wilk Test

| Measure | Kurtosis | Skewness | Shapiro-Wilk | |
|---------------------------------|----------|----------|--------------|----------|
| | | | <i>W</i> | <i>p</i> |
| AIR Total Difference | 1.859 | .213 | .979 | .0021 |
| AIR Capacity Difference | 1.295 | .061 | .979 | .0020 |
| AIR Opportunity Difference | 1.184 | .240 | .988 | .0539 |
| SDS Total Difference | 1.325 | .220 | .983 | .0106 |
| SDS Autonomy Difference | 3.057 | .206 | .955 | <.0001 |
| SDS Self-Regulation Difference | .450 | -.221 | .984 | .0129 |
| SDS Psychological Difference | 1.654 | .203 | .963 | <.0001 |
| SDS Self-Realization Difference | .114 | .197 | .982 | .0071 |
| Age | -.420 | .076 | .914 | <.0001 |

Preliminary analysis included frequency distributions and crosstabulations for the data. To check for group differences, a chi-square was conducted to determine any statistically significant difference on variables between intervention and control group. The chi-square test results indicated a significant association between treatment group and LRE. In addition, means, standard deviations associated with pre, post, and difference for SDS and AIR scores were analyzed.

Using multiple regression to answer the research questions (RQ 1, 2, 3, 4, 5, 6, 7, 8), the difference of SDS and AIR pre- and postscores were regressed on the linear combination of group assignment (control or intervention) controlling for LRE. Next, to answer the remaining subset of questions (a, b, c), SDS and AIR scores for the intervention group only were regressed on the linear combination of main effects (Model a; disability, age, gender, while controlling for LRE) and main effects with interaction (Model b; disability x gender). Considering the main effect and interaction (Model c; disability x LRE), SAS indicated that the interaction term of intellectual disability and LRE was a linear combination of the intellectual disability variable, therefore Model c was eliminated from the analysis. Parameter estimates and uniqueness indices were reviewed to assess the relative importance of the variables in the prediction of increased self-determination scores. The uniqueness index for a given predictor (disability, gender, age, while controlling for LRE) is the percentage of variance in the difference between pre- and postscores accounted for by the predictor, beyond the variance accounted for by the other predictor variables.

Finally, outliers were identified using Cook's D, normality was identified using Shapiro-Wilk, and an examination of multicollinearity and tolerance values were noted.

Additionally, in order to test for the presence of homoscedasticity, a series of additional scatterplots were constructed, one for each linear regression analysis. These scatterplots focused upon the association between the residuals and predicted values associated with each of these regressions. These scatterplots failed to indicate the presence of homoscedasticity.

Summary

This study will contribute to the existing literature base on evidence-based transition practices specific to self-determination and the importance of engaging students with mild disabilities in the education process, thereby teaching and fostering self-determined learning. If involvement in curriculum that teaches goal-attainment skills through self-regulatory learning strategies is a way to stimulate students with disabilities to increase self-determination skills, then this research will add to the existing database of effective evidence-based transition practices in relation to dropout prevention and transition. Teaching students with disabilities goal-attainment skills through self-regulatory strategies is a life skill that can have an impact on postsecondary outcomes and overall quality of life (Shogren et al., 2007).

CHAPTER 4

RESULTS

The purpose of the study was to determine if the *Take Action* curriculum would be effective in improving self-determination skills in middle school students with disabilities. It was proposed that students with disabilities who received intervention to promote self-determination would show significant differences in global self-determination skills. A multiple regression design compared the difference in intervention scores on SDS and AIR before and after participation in an eight-week *Take Action* curriculum program conducted by the student's special education teachers.

Descriptive Statistics

Initially, a set of descriptive statistics were conducted on the data in order to better describe this sample of respondents and the data analyzed for this study. Table 4.1 presents the sample sizes, percentages of response for each response category associated with the demographic, and related categorical measures included within this study as well as the χ^2 *p*-value results. With respect to respondent group, this sample was almost perfectly divided between intervention and control group respondents. The sample was primarily male (66%) in resource classes (63%) with a mean age of 13.05 years ($SD = 1.05$). Based on the *p*-value obtained from the chi-square, the association between the intervention group and gender, disability, and age cannot be assumed. However, the chi-square test results indicated a significant association between intervention group and LRE, therefore all inferential analyses will control for LRE.

Table 4.1

Demographic Description of Participating Students

| | <i>Intervention Group (N=109)</i> | | <i>Control Group (N=111)</i> | | |
|-------------------|-----------------------------------|------|------------------------------|------|----------|
| | N | % | N | % | <i>p</i> |
| Gender | | | | | .296 |
| Female | 33 | 30% | 40 | 37% | |
| Male | 76 | 70% | 70 | 63% | |
| Disability | | | | | .205 |
| LD | 53 | 48% | 64 | 58% | |
| OHI | 27 | 25% | 30 | 27% | |
| AUT | 8 | 8% | 6 | 6% | |
| ID | 21 | 19% | 11 | 9% | |
| Age | | | | | .344 |
| 11 years | 10 | 9% | 3 | 3% | |
| 12 years | 27 | 24% | 32 | 29% | |
| 13 years | 37 | 34% | 32 | 29% | |
| 14 years | 29 | 27% | 36 | 32% | |
| 15 years | 7 | 6% | 5 | 5% | |
| 16 years | 1 | .03% | 1 | .01% | |
| LRE | | | | | .0009 |
| Resource | 57 | 52% | 84 | 74% | |
| Self-Contained | 52 | 48% | 29 | 26% | |

Note. Demographic categories in bold. *P* value based on χ^2 . LD = Learning Disability; OHI = Other Health Impaired; AUT = Autism; ID = Intellectual Disability.

Table 4.2 summarizes the unadjusted means and standard deviations associated with the pre, post, and difference for the AIR Total, AIR Capacity, AIR Opportunity, SDS Total, SDS Autonomy, SDS Self-Regulation, SDS Psychological Empowerment, and SDS Self-Realization. The differences were calculated using the following formula: *Difference = Post (P) – Pre (P)*. With regard to the pre-SDS and post-SDS items, means were very similar. Standard deviations were moderate in relation to the means indicated in the majority of cases.

Table 4.2

SDS and AIR Means and Standard Deviations

| Measure | Pre | Post | Δ |
|-------------------------------|---------------|---------------|---------------|
| SDS Total | 86.52 (20.45) | 88.53 (21.02) | 2.00 (17.15) |
| SDS Autonomy | 54.83 (16.79) | 54.37 (16.70) | -0.46 (15.99) |
| SDS Self-Regulation | 8.41 (4.49) | 10.09 (4.87) | 1.68 (4.37) |
| SDS Psychological Empowerment | 12.76 (2.98) | 12.97 (2.91) | 0.20 (2.73) |
| SDS Self-Realization | 10.32 (2.36) | 10.58 (2.48) | 0.24 (2.59) |
| AIR Total | 86.59 (15.71) | 88.02 (16.40) | 1.43 (13.57) |
| AIR Capacity | 43.75 (8.13) | 44.45 (8.55) | 0.70 (7.68) |
| AIR Opportunity | 42.95 (9.06) | 43.46 (9.70) | 0.51 (8.23) |

Linear regression analysis were run to answer the research questions (RQ 1, 2, 3, 4, 5, 6, 7, 8), analyzing differences of scores between the intervention and control groups (see Table 4.3). Statistical significance was indicated with respect to SDS Autonomy and SDS Self-Realization. With regard to SDS Autonomy difference scores, individuals in the intervention group were found to have expected scores on the outcome 1.23 units lower as compared with individuals in the control group. Conversely, for SDS Self-Realization, individuals in the intervention group were found to have expected difference scores on the outcome 1.01 units higher as compared with individuals in the control group.

Next, a series of linear regressions were run on intervention group only models. SAS indicated that the interaction term of intellectual disability and LRE was a linear combination of the intellectual disability variable. An analysis of the data indicated that most of the students with an intellectual disability were placed in a self-contained setting.

Table 4.3

Summary of Multiple Regression Analysis: Intervention vs. Control

| Outcome | Parameter Estimate (SE) |
|-------------------------------|-------------------------|
| SDS Total | 2.36 (1.74) |
| SDS Autonomy | -1.23 (1.61)* |
| SDS Self-Regulation | 1.67 (0.44) |
| SDS Psychological Empowerment | 0.26 (0.28) |
| SDS Self-Realization | 1.01 (0.25) * |
| AIR Total | 3.44 (1.38) |
| AIR Capacity | 1.33 (0.78) |
| AIR Opportunity | 1.76 (0.83) |

* $p < .05$ Intervention group coded 1. Models were adjusted to control for LRE. Parameter estimates are unstandardized estimates.

Considering, the disability and LRE interaction model (Model c) was eliminated from the analysis of each research question (subquestion c). Table 4.4 summarizes the main effects model (Model a) and main effects with interaction of disability and gender (Model b). It also summarizes the results of the linear regression analysis conducted on the SDS Total (T) difference scores. The main effects model was not statistically significant ($F [10, 109] = 1.16, p = .3261$), which suggested that there were no statistically significant differences in SDS Total scores between disabilities, gender, or age. The main effects model with interaction of disability and gender was not statistically significant ($F [13, 109] = 1.14, p = .3301$). Additionally, the R^2 measures associated with these analysis indicated that 10.60% of the variance in the dependent variable was explained on the basis of all predictors included in Model a, and 13.46% in Model b.

Table 4.4

Summary of Multiple Regression Analysis of SDS Total Difference

| | Model a | Model b |
|--------------------------|----------------|----------------|
| Main Effects | | |
| Intercept | 9.70 (16.67) | 5.70 (17.01) |
| Disability: Autism | 5.16 (3.62) | 2.99 (8.06) |
| Disability: Intellectual | -6.96 (5.31) | -3.26 (5.85) |
| Disability: Other | 4.99 (4.22) | 6.67 (4.82) |
| Female | 3.30 (3.62) | 7.30 (4.98) |
| LRE: SC | 0.05 (4.26) | 0.76 (4.30) |
| Age 11 | -10.56 (17.29) | -7.88 (17.38) |
| Age 12 | -8.69 (16.86) | -6.25 (17.02) |
| Age 13 | -4.18 (16.78) | -1.47 (16.94) |
| Age 14 | 10.84 (16.80) | -8.36 (16.98) |
| Age 15 | -15.23 (17.96) | -13.30 (18.03) |
| Interactions | | |
| Autism* Female | | 5.08 (13.22) |
| Intellectual* Female | | -14.44 (9.33) |
| Other* Female | | -6.98 (9.01) |
| R^2 | 0.1060 | 0.1346 |
| Adjusted R^2 | 0.0147 | 0.0162 |

Note. Reference group for disability = LD; age = 16 years; male and resource coded 0.

* $p < .05$. Entries show parameter estimates with standard errors in parentheses.

The subsequent regression analysis, the results of which are summarized in Table 4.5, focused upon SDS Autonomy difference scores as the outcome measure of interest. In this model, no statistical significance was found with respect to the main effects Model a ($F [10, 109] = 1.26, p = .2625$), suggesting there were no statistical differences in autonomy scores between the four disability groups, males and females, and age while controlling for LRE. The main effect and interaction Model b was not significant ($F [13, 109] = 1.11, p = .3630$), indicating that there are not differences between disability, gender, and age while controlling for LRE. In addition, no statistical significance was

found with the interaction between disability and gender suggesting that autonomy scores did not change over time for the different groups (gender and disability group).

Additionally, the R^2 measures associated with these analyses indicated that 11.41% of the variance in the dependent variable was explained on the basis of all predictors included in Model a, and 13.15% in Model b.

Table 4.5

Regression Analysis: SDS Autonomy Difference

| | Model a | Model b |
|--------------------------|----------------|----------------|
| Main Effects | | |
| Intercept | 12.84 (14.78) | 11.40 (15.17) |
| Disability: Autism | 1.79 (5.55) | -2.14 (7.18) |
| Disability: Intellectual | -5.74 (4.71) | -4.20 (5.22) |
| Disability: Other | 5.54 (3.74) | 6.55 (4.39) |
| Female | 2.16 (3.20) | 3.60 (4.44) |
| LRE: SC | -0.59 (3.77) | -0.12(3.83) |
| Age 11 | -15.47 (15.32) | -13.92 (15.50) |
| Age 12 | -13.34 (14.94) | -12.64 (15.18) |
| Age 13 | -8.18 (14.87) | -7.28 (15.11) |
| Age 14 | -14.97 (14.89) | -14.23 (15.14) |
| Age 15 | -14.49 (15.91) | -13.92 (16.08) |
| Interactions | | |
| Autism* Female | | 9.86 (11.77) |
| Intellectual* Female | | -6.34 (8.32) |
| Other* Female | | -4.58 (8.04) |
| R^2 | 0.1141 | 0.1315 |
| Adjusted R^2 | 0.0237 | 0.0127 |

Note. Reference group for disability = LD; age = 16 years; male = 0; resource = 0.

* $p < .05$. Entries show parameter estimates with standard errors in parentheses.

The following regression analysis, the results of which are summarized in Table 4.6, focused upon SDS Self-Regulation difference scores as the outcome measure of interest. In this model, no statistical significance was found with respect to the main

effects Model a ($F [10, 109] = 0.20, p = .9961$), suggesting there were no statistical differences in self-regulation scores between the four disability groups, males and females, and age while controlling for LRE. The main effect and interaction Model b was not significant ($F [13, 109] = 0.42, p = .9581$), indicating that there are not differences between disability, gender, and age while controlling for LRE. In addition, no statistical significance was found with the interaction between disability and gender, suggesting that self-regulation scores did not change over time for the different groups (gender and disability group). Additionally, the R^2 measures associated with these analyses indicated that 1.98% of the variance in the dependent variable was explained on the basis of all predictors included in Model a, and 5.47% in Model b.

The following regression analysis, the results of which are summarized in Table 4.7, focused upon SDS Psychological Empowerment difference scores as the outcome measure of interest. In this model, no statistical significance was found with respect to the main effects Model a ($F [10, 109] = 1.19, p = .3068$), suggesting there were no statistical differences in psychological empowerment scores between the four disability groups, males and females, and age while controlling for LRE. The main effect and interaction Model b was not significant ($F [13, 109] = 1.18, p = .3095$), indicating that there are not differences between disability, gender, and age while controlling for LRE. In addition, no statistical significance was found with the interaction between disability and gender, suggesting that psychological empowerment scores did not change over time for the different groups (gender and disability group). Additionally, the R^2 measures associated with these analyses indicated that 10.83% of the variance in the dependent variable was explained on the basis of all predictors included in Model a, and 13.85% in Model b.

Table 4.6

Regression Analysis: SDS Self-Regulation Difference

| | Model a | Model b |
|--------------------------|--------------|--------------|
| Main Effects | | |
| Intercept | -1.48 (4.68) | -2.87 (4.77) |
| Disability: Autism | 0.01 (1.76) | 0.57 (2.26) |
| Disability: Intellectual | -0.95 (1.49) | 0.33 (1.64) |
| Disability: Other | -0.89 (1.87) | 0.24 (1.35) |
| Female | 0.48 (1.01) | 1.87 (1.40) |
| LRE: SC | 0.12 (1.19) | 0.31 (1.20) |
| Age 11 | 3.27 (4.85) | 3.88 (4.87) |
| Age 12 | 3.85 (4.71) | 4.77 (4.77) |
| Age 13 | 3.20 (4.71) | 4.18 (4.78) |
| Age 14 | 3.20 (4.72) | 4.11(4.76) |
| Age 15 | 4.48 (5.04) | 5.21 (5.05) |
| Interactions | | |
| Autism* Female | | -1.58 (3.71) |
| Intellectual* Female | | -4.90 (2.62) |
| Other* Female | | -1.20 (2.53) |
| R^2 | 0.0198 | 0.0547 |
| Adjusted R^2 | -0.0803 | -0.0747 |

Note. Reference group for disability = LD; age = 16 years; male = 0; resource = 0.

* $p < .05$. Entries show parameter estimates with standard errors in parentheses.

The next regression analysis, the results of which are summarized in Table 4.8, focused upon SDS Self-Realization difference scores as the outcome measure of interest. In this model, no statistical significance was found with respect to the main effects Model a ($F [10, 109] = 0.81, p = .6189$), suggesting there were no statistical differences in self-realization scores between the four disability groups, males and females, and age while controlling for LRE. The main effect and interaction Model b was not significant ($F [13, 109] = 0.63, p = .8270$), indicating that there are no differences between disability, gender, and age while controlling for LRE. In addition, no statistical significance was

Table 4.7

Regression Analysis: SDS Psychological Empowerment Difference

| | Model a | Model b |
|--------------------------|--------------|--------------|
| Main Effects | | |
| Intercept | -2.43 (2.45) | -3.21 (2.59) |
| Disability: Autism | 1.24 (0.96) | 2.36(1.23) |
| Disability: Intellectual | 0.64 (0.81) | 1.20 (0.89) |
| Disability: Other | -0.46 (0.64) | -0.26 (0.74) |
| Female | 0.43 (0.55) | 1.21 (1.23) |
| LRE: SC | 0.03 (0.65) | 0.04 (0.66) |
| Age 11 | 3.53 (2.64) | 3.74 (2.65) |
| Age 12 | 2.52 (2.57) | 3.09 (2.60) |
| Age 13 | 2.24 (2.56) | 2.80 (2.58) |
| Age 14 | 2.31(2.56) | 2.89 (2.59) |
| Age 15 | 0.54 (2.74) | 0.97 (2.75) |
| Interactions | | |
| Autism* Female | | -2.95 (2.01) |
| Intellectual* Female | | -1.96 (1.42) |
| Other* Female | | -0.64 (1.37) |
| R^2 | 0.1083 | 0.1385 |
| Adjusted R^2 | 0.0173 | 0.0206 |

Note. Reference group for disability = LD; age = 16 years; male = 0; resource = 0.

* $p < .05$. Entries show parameter estimates with standard errors in parentheses.

found with the interaction between disability and gender, suggesting that self-realization scores did not change over time for the different groups (gender and disability group).

Additionally, the R^2 measures associated with these analyses indicated that 7.64% of the variance in the dependent variable was explained on the basis of all predictors included in Model a, and 7.89% in Model b.

The following regression analysis, the results of which are summarized in Table 4.9, focused upon AIR Total difference scores as the outcome measure of interest. In this model, no statistical significance was found with respect to the main effects Model a

Table 4.8

Regression Analysis: SDS Self-Realization Difference

| | Model a | Model b |
|--------------------------|--------------|---------------|
| Main Effects | | |
| Intercept | 1.19 (2.63) | 1.22 (2.73) |
| Disability: Autism | 2.11 (0.99) | 1.91 (1.29) |
| Disability: Intellectual | -0.77 (0.84) | -0.69 (0.94) |
| Disability: Other | -0.09 (0.67) | -0.19 (0.77) |
| Female | -0.19 (0.57) | -0.22 (0.80) |
| LRE: SC | 0.25 (0.67) | 0.30 (0.69) |
| Age 11 | -1.99 (2.73) | -2.00 (2.79) |
| Age 12 | -1.95 (2.66) | -1.99 (2.72) |
| Age 13 | -1.60 (2.65) | -1.63 (2.72) |
| Age 14 | -1.62 (2.65) | -1.67 (2.72) |
| Age 15 | -2.74 (2.84) | -2.75 (2.89) |
| Interactions | | |
| Autism* Female | | 0.52 (2.12) |
| Intellectual* Female | | - 0.41 (1.50) |
| Other* Female | | 0.36 (1.44) |
| R^2 | 0.0764 | 0.0789 |
| Adjusted R^2 | -0.0178 | -0.0472 |

Note. Reference group for disability = LD; age = 16 years; male = 0; resource = 0.

* $p < .05$. Entries show parameter estimates with standard errors in parentheses.

($F [10, 109] = 0.74, p = .6898$), suggesting there were no statistical differences in total scores between the four disability groups, males and females, and age while controlling for LRE. The main effect and interaction Model b was not significant ($F [13, 109] = 0.71, p = .7494$), indicating that there are no differences between disability, gender, and age while controlling for LRE. In addition, no statistical significance was found with the interaction between disability and gender, suggesting that total scores did not change over time for the different groups (gender and disability group). Additionally, the R^2 measures

Table 4.9

Regression Analysis: AIR Total Difference

| | Model a | Model b |
|--------------------------|---------------|---------------|
| Main Effects | | |
| Intercept | -3.96 (14.28) | -5.34 (14.56) |
| Disability: Autism | -8.54 (5.33) | -6.80 (6.90) |
| Disability: Intellectual | -1.70 (4.52) | 0.39 (5.01) |
| Disability: Other | 0.76 (3.59) | -0.17 (4.12) |
| Female | 0.96 (3.08) | 2.34 (4.26) |
| LRE: SC | -0.75 (3.62) | -0.25 (3.68) |
| Age 11 | -0.47 (14.71) | -0.09(14.88) |
| Age 12 | 6.76 (14.34) | 7.67 (14.57) |
| Age 13 | 5.33 (14.27) | 6.35 (14.50) |
| Age 14 | 2.22 (14.29) | 2.94 (14.53) |
| Age 15 | 10.57 (15.27) | 11.49 (15.23) |
| Interactions | | |
| Autism* Female | | -4.52 (11.32) |
| Intellectual* Female | | -8.57 (7.99) |
| Other* Female | | 3.96 (7.71) |
| R^2 | 0.0698 | 0.0885 |
| Adjusted R2 | -0.0251 | -0.0362 |

Note. Reference group for disability = LD; age = 16 years; male = 0; resource = 0.

* $p < .05$. Entries show parameter estimates with standard errors in parentheses.

associated with these analyses indicated that 6.98% of the variance in the dependent variable was explained on the basis of all predictors included in Model a, and 8.85% in Model b.

The following regression analysis, the results of which are summarized in Table 4.10, focused upon AIR Capacity difference scores as the outcome measure of interest. In this model, no statistical significance was found with respect to the main effects Model a ($F [10, 109] = 1.34, p = .2200$). In this model statistical significance was indicated only with respect to the effect of autism. In this model, individuals diagnosed with autism, as compared with a specific learning disability, were found to have estimated difference

scores that were reduced by 6.83 units. The main effect and interaction Model b was not significant ($F [13, 109] = 1.24, p = .2646$), indicating that there are no differences between disability, gender, and age while controlling for LRE. In addition, no statistical significance was found with the interaction between disability and gender, suggesting that capacity scores did not change over time for the different groups (gender and disability group). Additionally, the R^2 measures associated with these analyses indicated that 12.03% of the variance in the dependent variable was explained on the basis of all predictors included in Model a, and 14.50% in Model b.

Table 4.10

Regression Analysis: AIR Capacity Difference

| | Model a | Model b |
|--------------------------|---------------|---------------|
| Main Effects | | |
| Intercept | -8.62 (7.94) | -10.23 (8.11) |
| Disability: Autism | -6.83* (2.98) | -5.13 (8.84) |
| Disability: Intellectual | -1.53 (2.53) | 0.15 (2.79) |
| Disability: Other | 1.21 (2.01) | 1.12 (2.30) |
| Female | 0.62 (1.72) | 2.23 (2.38) |
| LRE: SC | 0.07 (2.03) | 0.34 (2.05) |
| Age: 11 | 7.03 (8.23) | 7.40 (8.29) |
| Age: 12 | 10.74 (8.02) | 11.85 (8.11) |
| Age: 13 | 10.08 (7.98) | 11.24 (8.08) |
| Age: 14 | 6.77 (7.99) | 7.80 (8.10) |
| Age: 15 | 10.31 (8.55) | 11.25(8.60) |
| Interactions | | |
| Autism* Female | | -4.50 (6.31) |
| Intellectual* Female | | -6.53 (4.45) |
| Other* Female | | 0.62 (4.30) |
| R^2 | 0.1203 | 0.1450 |
| Adjusted R^2 | 0.0306 | 0.0280 |

Note. Reference group for disability = LD; age = 16 years; male = 0; resource = 0.

* $p < .05$. Entries show parameter estimates with standard errors in parentheses.

The following regression analysis, the results of which are summarized in Table 4.11, focused upon AIR Opportunity difference scores as the outcome measure of interest. In this model, no statistical significance was found with respect to the main effects Model a ($F [10, 109] = 0.44, p = .9227$), suggesting there were no statistical differences in opportunity scores between the four disability groups, males and females, and age while controlling for LRE. The main effect and interaction Model b was not significant ($F [13, 109] = 0.40, p = .9656$), indicating that there are no differences between disability, gender, and age while controlling for LRE. In addition, no statistical significance was found with the interaction between disability and gender, suggesting that opportunity scores did not change over time for the different groups (gender and disability group). Additionally, the R^2 measures associated with these analyses indicated that 4.31% of the variance in the dependent variable was explained on the basis of all predictors included in Model a, and 5.23% in Model b.

Lastly, Training Fidelity measures the quality of training to establish whether the trainees can implement the program as intended. At the conclusion of the 90-minute face-to-face training, each teacher implemented a mock lesson of the program under observation by the coordinator. All teachers obtained 100% with the exception of two. The two teachers were provided with an additional session of training for 90 minutes one-on-one with the coordinator. They then retaught the mock lesson and obtained 100%. The coordinator conducted fidelity of implementation to ensure teachers were following the program as intended. The coordinator was chosen to lessen potential of reactivity. The coordinator recorded sessions with her iPad on 20% of all lessons. Fidelity of

Table 4.11

Regression Analysis: AIR Opportunity Difference

| | Model a | Model b |
|--------------------------|--------------|--------------|
| Main Effects | | |
| Intercept | 5.12 (8.57) | 4.94 (8.85) |
| Disability: Autism | -2.99 (3.23) | -1.71 (4.19) |
| Disability: Intellectual | -0.29 (2.73) | 0.20 (3.04) |
| Disability: Other | -0.79 (2.17) | -1.40 (2.51) |
| Female | -0.12 (1.86) | 0.06(2.59) |
| LRE: SC | -0.69 (2.19) | -0.57 (2.24) |
| Age 11 | -7.04 (8.89) | -7.40 (9.04) |
| Age 12 | -4.75 (8.67) | -4.59 (8.85) |
| Age 13 | -4.96 (8.62) | -4.80 (8.81) |
| Age 14 | -4.80 (8.64) | -4.73 (8.83) |
| Age 15 | 0.03 (9.23) | 0.23 (9.38) |
| Interactions | | |
| Autism* Female | | -3.25 (6.88) |
| Intellectual* Female | | -2.05 (4.85) |
| Other* Female | | 2.59 (4.68) |
| R^2 | 0.0431 | 0.0523 |
| Adjusted R^2 | -0.0546 | -0.0774 |

Note. Reference group for disability = LD; age = 16 years; male = 0; resource = 0.

* $p < .05$. Entries show parameter estimates with standard errors in parentheses.

implementation ranged from 81% to 100% with a mean of 96%. Interobserver Agreement was collected across 20% of sessions. A second observer, the researcher, observed the recorded lessons and used the same treatment integrity form to observe the teachers' behavior. Interrater Reliability was established at 100% on Lesson 1 between the primary and secondary observer. On a component-by-component basis, comparisons were conducted between the second observer and primary observer's responses. Agreements were calculated by dividing the number of agreements per component by the number of agreements plus disagreements per component and multiplied by 100%. Mean agreement across observations was 97% (range 82% to 100%). In addition, Interrater Reliability was

also conducted across 20% of the dependent measures, pre- and posttest SDS and AIR. Agreements were calculated by dividing the number of agreements per component by the number of agreements plus disagreements per component and multiplied by 100%. Mean agreement across observations was 99% (range 96% to 100%).

In regard to social validity, average ratings across teachers ranged from 2 to 4. For the purpose of assessing overall support mean, ratings of 3.6, 4, 3, and 3.4 respectively were obtained, indicating that teachers understood how to facilitate student conferences but were undecided if they planned to use Take Action in the future. For fit and ease the mean score was 4, indicating that teachers found Take Action to be easily implemented in their classrooms. For the purpose of time and burden, mean ratings of 2.4 and 2 were obtained, indicating that teachers disagreed that Take Action did not interfere with academic instruction and did not take up too much time.

Summary

In order to test the null hypothesis, a series of linear multiple regressions were used. Based on the outcome of the linear regressions for intervention versus control group the researcher failed to reject the null hypothesis for the following research question subsections: SDS total (RQ 1), self-regulation (RQ 3), and psychological empowerment (RQ 4) skills; and AIR total (RQ 6), capacity (RQ 7) and opportunity (RQ 8) skills. There was not a significant difference in these self-determination difference scores between intervention and control groups. However, the null hypothesis was rejected for two research question subsections (SDS autonomy (RQ 2) and self-realization (RQ 5), indicating that there was a significant difference in the self-determination difference scores between intervention and control groups.

Next, a series of linear regressions were run on the intervention group only to test the null hypothesis. Based on the linear regression analysis, the researcher failed to reject the null hypothesis for subquestions a and b for the research questions. There was not a significant difference in the self-determination difference scores for the research question subsections (SDS total, autonomy, self-regulation, psychological empowerment, and self-realization; and AIR total, capacity and opportunity) between gender, disability type, and age while controlling for LRE as well as the interaction between disability and gender. However, for subquestion a of the research question subsection related to AIR capacity (RQ 7), statistical significance was indicated only with respect to students with autism, who had estimated lower difference scores (6.83) than students with a learning disability.

Chapter 5 will discuss the finding of this study and its limitations. In addition, Chapter 5 will explain how the findings can be used to impaction self-determination skills in an educational setting with middle school students, as well as implications for further research and practice.

CHAPTER 5

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

This study examined the effectiveness of the implementation of the *Take Action* curriculum on improving self-determination skills for middle school students with disabilities. It was proposed that students with disabilities who received the intervention to promote self-determination would show significant differences in global self-determination skills. The study analyzed group differences (intervention vs. control) on global self-determination scores as measure by SDS and AIR. Secondly, it assessed the potential impact of variables such as age, gender, disability classification while controlling for LRE on the acquisition of global self-determination skills for the intervention group only. The most recent literature on self-determination suggests that: (a) self-determination skills are encouraged primarily at the high school level, if encouraged at all (Weiss et al., 2012); (b) there is not enough research on evidence-based practices, curricula, or assessment tools specific to self-efficacy, goal setting, and goal attainment (Algozzine et al., 2001); and (c) there is not enough research on how gender and disability status might impact self-determination (Agran et al., 1999; Wehmeyer et al., 2000).

The current study adds to the field by expanding upon the current literature available concerning self-determination curricula, specifically the *Take Action* curriculum. To date, there have been only three studies published that explore the effectiveness of *Take Action* (German et al., 2000; and Wehmeyer et al., 2010; Williams-

Diehm et al., 2010). Two of the three studies are single subject studies. Both studies utilized goal completion as the dependent measure, and yielded positive effects of the curriculum for students with intellectual disabilities at the high school level. The third study (Wehmeyer et al., 2010) conducted a group study investigating the effect of several self-determination curricula for high school students with disabilities including *Take Action*. Although this study did not differentiate the results by curriculum, the study did use SDS and AIR as dependent measures. The current research therefore adds to the literature base by investigating the effects of *Take Action* on the SDS and AIR, utilizing an experimental group design.

According to Wehmeyer (1995), while SDS was designed for students to evaluate their own beliefs, it was also designed to provide researchers with a tool to evaluate instructional strategies and curricula in the area of self-determination. Importantly, the current study is the first study to exclusively target middle school students with disabilities on the effects of an intervention to increase global self-determination skills. Stang et al. (2009) stated that future research should explore how instructional materials and practices can be adapted effectively for younger children. This study is one of the first to establish targeted research within this area.

This study sought to determine whether the *Take Action* goal attainment instructional program improved global self-determination skills. The purpose of the study was not to identify if *Take Action* was an evidence-based practice (which has been already established) or to assess if students mastered the concepts of the strategy. Instead, this study sought to determine if *Take Action* is effective in improving global self-determination skills of students through the generalization of the skills mastered. The

goal was to be able to assess students' perceptions of behavioral change, as measured by SDS and AIR. The results indicated that students lacked goal-attainment knowledge and skills at the start of the study, and that *Take Action* did not increase students' global self-determination skills in a statistically meaningful manner. The results of the study indicate that knowledge alone concerning goal attainment is insufficient to improve global self-determination skills. Although the results did not support the hypothesis, they do reflect associations between some aspects of the curriculum and the global measure, as well as raise issues related to realistic expectations of school-based interventions.

In this study, the intervention resulted in improvement in one construct on one measure. The main positive significant finding within the study was in regard to SDS Self-Realization scores between intervention and control group. Students in the intervention group scored 1.01 units higher as compared to the control group. The SDS Self-Realization subscale asks student to self-rate how they feel about themselves. Statements include "I don't accept my limitations," "I know how to make up for my limitations," and "I am confident in my abilities." Wehmeyer (1999) stated that the essence of self-realization is comprehensive and accurate knowledge in terms of personal strengths and weaknesses, and the ability to capitalize on that knowledge. In addition, self-realization is developed through experiences and interpretations of one's environment and is influenced by evaluations of others, as well as reinforcement and acknowledgement of one's behavior (Wehmeyer, 1999). Conclusions of the data analysis indicated that scores increased with two statements: "I know what I do best" and "I am confident in my abilities."

Although SDS evaluates a global measure of self-determination, the questions within this particular section were highly correlated to the content of the curriculum intervention. For example, students identified their strengths and limitations weekly, and then developed weekly strategies to address these areas. Although minimal, this was an important finding as it indicates that the intervention is effective in increasing the beginning developmental stages of self-determination (i.e., self-awareness, the self-analysis of strengths and weaknesses). Wehmeyer (1995) states that an individual's actions must reflect, to some degree, each of the four functional characteristics (autonomy, psychological empowerment, self-regulation, and self-realization). In addition, Wehmeyer (1995) also noted that age, opportunity, capacity, and circumstances may impact the degree to which any of the essential characteristics are present, and that they may vary over time and across environments. The component elements of self-determination have a developmental sequence over the life of a child. Shogren et al. (2008) conducted a study examining the constructs of SDS and AIR, which indicated that self-realization yielded a strong correlation ($r = .79$) with psychological empowerment. However, statistical significance was not obtained for psychological empowerment, autonomy, self-regulation, or AIR capacity and opportunity. It could be hypothesized that, with time, these other areas would develop as interrelated components if provided with supportive environments.

Although SDS Self-Regulation did not achieve statistical significance for the intervention group, students exhibited growth in the overall main effects with Model a and the main effects with interaction Model b, based on an analysis of writing samples before and after intervention. The researcher noted the unpreparedness of students to

answer the open-ended questions for goal setting and task performance, which ask: “Where do you want to live after you graduate?” “Where do you want to work after you graduate?” and “What type of transportation do you plan to use after graduation?” During the pretest, students were not able to answer the questions. However, during the posttest it was noted that students could answer the questions, although their responses were sometimes unrealistic. For example, one student answered “I don’t know” during the pretest for the question, “where you want to work after graduation?” For the posttest, the same student answered the same question with “play football for Baltimore.” The researcher noted similar responses across students. *Take Action* provided direct instruction to students on identifying postsecondary goals. However, although work samples provided evidence of student growth, this growth did not result in increased global measures of self-determination assessed by SDS and AIR, leading the researcher to question if SDS and AIR were the best dependent measures to capture behavioral change at this level. It should be noted that all questions in this subscale are open constructed response questions. Student-level written expression skills could have impacted the quality of response since accommodations were not provided.

The only other significant difference in pre- and postintervention performance was the unexpected finding that students in the control group scored 1.23 units lower than the control group with respect to SDS Autonomy. Autonomy asks students to self-rate themselves on concepts such as routine personal care, family oriented functions, recreational and leisure time, community involvement and interaction, postschool directions, and personal expression. Score differences dropped for the intervention group in the area of Acting on the Basis of Preferences, Beliefs, Interests, and Abilities. The

Take Action intervention specifically teaches students a strategy to self-monitor goals. In the current study, the goals were outlined in the student's IEP. Because IEP goals were already predetermined, paired with the fact that most students did not even know what their postsecondary goal was, it is questionable if the intervention really taught students to act autonomously, or actually could teach autonomous action, given realistic circumstances. The researcher concluded that there did not appear to be a direct relationship between the intervention and the questions asked within this section of the SDS, nor were students able to generalize those concepts to a more global sense of self-determination. According to Shogren et al. (2008), the construct of autonomy has the weakest relationship to all other constructs (self-regulation, $r = .31$; psychological empowerment, $r = .39$; and self-realization, $r = .27$). The curriculum specifically addresses teaching students how to set a goal and then monitor progress toward that goal using plan, act, evaluate, and adjust strategies. Nowhere in the curriculum does it mention the concept of autonomy or choice-making. The focus is on accomplishing a goal once it is identified.

Self-determination is a complex construct that schools have struggled to operationalize and generalize into effective practices that promote real-world experiences. For an act to be self-determined, all four components (autonomy, psychological empowerment, self-regulation, and self-realization) must be present. Within the context of school, most environments are not structured to provide students the opportunity to initiate these constructs because so much is teacher-directed in controlled environments. In reality, are we truly providing opportunities for students to elicit self-determined behavior in the school setting? Is this an unrealistic expectation?

Would a more realistic expectation be to teach self-determined strategies, and then assess the mastery of those strategies paired with generalization to measure behavioral change? Most studies utilize criterion-referenced tests, observations, and rubrics to assess the effectiveness of the self-determined strategies specific to the isolated skill being taught. As such, the current study adds to existing research that states that involvement in the IEP process alone is not enough to promote self-determination (Algozzine et al., 2001; Kohler, 1993). Students in the study were exposed to the basic concept of self-determination by self-directing their IEP meetings. It was assumed that because students participated in their IEP meetings, questions reflective of postsecondary goals could be answered. However, the results of the assessments indicated that students initially lacked a basic knowledge or self-awareness, which increased over time when exposed to *Take Action*. Williams-Diehm et al. (2010) stated that translating skills, attitudes, and environmental opportunities into actual changes in the essential characteristics of self-determined behavior may be a more complicated process.

This study led the researcher to ask if it is realistic to expect that a curriculum such as *Take Action* can result in global self-determination change. It may be more appropriate to allow students to master the skills taught, practice the strategies over a long period of time in controlled settings, and then generalize the strategies across environments before evaluating global changes in self-determination. The curriculum specifically teaches mastery of self-directed learning strategies. Students were expected to be able to recall the steps to the strategy and apply it to a preselected goal. The curriculum did not provide an opportunity to generalize these skills to multiple settings. Although SDS and AIR are effective assessment tools, for the purpose of evaluating the

effectiveness of curricula, they are not appropriate. They would be more appropriate for longitudinal studies across a student's middle and high school career to measure the global context of self-determination, rather than basic skill acquisition.

Time within the intervention was another area of concern, which impacted the level of skill development. It was noted that prior studies on *Take Action* (German et al., 2000; Williams-Deihm et al., 2010) were implemented for a minimum of 12 weeks, whereas the current study implemented the intervention for eight weeks. Students had time to acquire the strategy and implement it with one goal from their IEP, typically a reading goal. In circumstances in which the strategy would be implemented throughout the year, the opportunity would exist for students to acquire a greater capacity with the model, and potentially to begin to consider utilizing the strategy across other domains such as community and personal care decisions. This would, in essence, provide opportunities for students to elicit autonomous behavior.

Wehmeyer (2006) defined self-determination, stating that self-determined behavior refers to volitional actions that enable one to act as the primary causal agent in one's life and to maintain or improve one's quality of life. Although Wehmeyer identifies the components necessary for an action to be considered self-determined, the literature does not define the sequential order that these elements develop in young adults. The social/emotional competencies from the Collaborative of Academic, Social, and Emotional Learning would contend that the first skillset in developing social/emotional learning is self-awareness. The students participating in the intervention did not increase skills in autonomy, psychological empowerment, and self-regulation. However, students did receive the fundamental training for self-determined actions, and with additional

training, time, practice, and supportive environments, the students' skills for goal attainment initially illustrated during the intervention would continue to grow. It is questionable if global self-determination skills would improve.

Influence of Demographic and Other Characteristics

Results of the multiple regression on intervention-only models indicated that the interaction of intellectual disability and LRE was a linear combination of the intellectual disability variable, due to the fact that most of the students within the study identified as having an intellectual disability were placed in a self-contained setting. Consequently, the disability and LRE interaction model (c) was eliminated from the analysis. Therefore, the research was unable to investigate the interaction effects of disability and special education setting, which could be an important variable to explore. The SDS Total, Autonomy, Self-Regulation, Psychological Empowerment, Self-Realization, and AIR Total, Capacity, and Opportunity models did not yield statistical significance. However, statistical significance was indicated for AIR Capacity scores with respect to the effect of autism. In this model, individuals with autism, as compared with individuals with a specific learning disability, were found to have estimated difference scores that were reduced by 6.83 units. These findings are consistent with prior research (Shogren et al., 2007; Wehmeyer et al., 2010; Wehmeyer & Garner, 2003) concluding that the level of intellectual capacity mediated student self-determination status. One would expect a difference between students with an intellectual disability as compared to a student with a learning disability. In addition, the majority of students with autism within the study exhibit below average IQ ranges. Within the AIR Capacity subscale, students are asked to self-rate on questions that specifically address the subcategories of "Things I Do" and

“How I Feel.” Things I Do sections ask the student to rate acknowledgement of their interests/talents as well as items specific to goal attainment such as setting goals, making a plan to achieve the goal, monitoring, and adjustment. How I Feel is much more abstract, asking students how they feel about their interests/talents and goal attainment items. Due to the abstractness of the questions, one would expect students with autism to score lower on this self-reported measure, as it is a developmental disability that significantly affects verbal and nonverbal communication, and social interaction. Other characteristics often associated with autism are engagement in repetitive activities and stereotyped movements, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences (IDEA, 2004).

AIR utilizes a five-point Likert scale indicating never, almost never, sometimes, almost always, and always. The statements are complex. For example, one statement asks, “I know what I need, what I like, and what I am good at.” This merges three individual ideas into one. A question structured in this way could be very difficult for most middle school students to know how to answer, due to its complexity. It thus presents a level of cognitive difficulty. The context in which questions are asked can be extremely difficult for a student with autism. For most students, SDS and AIR responses fluctuated across questions, while there appeared to be a pattern with how students with autism answered the questions. For example, analysis of answer keys indicated that students with autism tended to record responses in either the always or never category. Very few indicated the other three possible responses (almost never, sometimes, almost always). The researcher questioned if students did not understand concepts such as

almost and sometimes, or if students had difficulty with vertical orientation scanning left to right due to patterned responses.

Agran et al. (1999) and Wehmeyer et al. (2000) state that there is not enough research on how gender and disability status might impact self-determination. Although the current research findings support differences in students with autism, there was no evidence to support the finding of differences with gender, concluding that the curriculum can be effectively used with students with mild disabilities across genders and settings. It should also be noted that the R^2 measures associated with these analyses ranged from approximately 5-14% of the variance in the dependent variable. This was explained on the basis of all predictors in the model. This indicates that there are other predictors that were not included in these models that need to be considered for future research that impact self-determination.

Take Action provides a framework to teach students a process to facilitate attainment of their IEPs as well as other educational, employment, or community goals. The curriculum is economical in both expenditure and time commitment, making it a feasible curriculum for teachers. The lessons easily infused into existing coursework or programs, and taught self-determination concepts such as self-awareness, self-advocacy, self-efficacy, decision-making, independent performance, self-evaluation, and adjustment. Fidelity of implementation occurred when teachers used the instructional strategies and delivered the content of the curriculum in the same way it was intended. The current study adds to the literature base as it supports the effect of *Take Action* as a potential evidence-based curriculum for goal attainment only with limited impact on global self-determination while employing a high level of fidelity of implementation

across the study. Different from the other three studies on *Take Action*, this study ensured fidelity of teacher training before the implementation of the program. Teachers participated in a 90-minute face-to-face training and then were observed conducting a mock lesson scored on a fidelity rubric. Teachers were required to meet 100% mastery of the rubric before starting the implementation. During-intervention implementation measures to reduce reactivity included recording 20% of daily lessons including check-ins on an iPad by the school Special education Coordinator. The overall research yielded a mean of 96% of fidelity of implementation. Only one of the three prior studies (Williams-Diehm et al., 2010) addresses fidelity of implementation, and none address fidelity of training components within their studies. To conclude, the study was implemented with a high level of fidelity resulting in a quality implementation.

Social validity refers to the social importance and acceptability of an intervention or outcome. While social validity is an important element in the social sciences, it was not addressed in the previous studies on *Take Action*. Carter et al. (2002) and Wehmeyer et al. (2000) state that teachers report that they value self-determination; however there is limited exploration of a curriculum priority in the middle school grades. The current study utilized a social validity survey for teachers to evaluate issues about the applied value of the intervention. The results of the current study indicated that although teachers indicated that the curriculum was easy to implement, they also indicated that it interfered with academic instruction. One could hypothesize that this lack of curriculum priority could be impeding student's ability to develop self-determination skills at the middle school level. It is evident that more training is needed with middle school teachers on how to infuse transition into the curriculum.

As a result of the social validity results, further teacher training is needed to clarify how a curriculum such as *Take Action* could be embedded into the general curriculum. If educators implemented such a curriculum in the elementary years, it could provide the potential for more positive outcomes for students. Moreover, it would also provide opportunities for vertical alignment of transition services emphasizing student directed learning practices. According to Zhang (2004), within the context of No Child Left Behind, all students need instruction to become self-determined in relation to standard component elements, enhanced capacity to interact with and engage in the curriculum, and as a valued societal outcome. Schools need to develop and implement school-wide interventions that are not just disability-focused and address all students.

According to Williams-Diehm et al. (2010), goal setting and goal attainment are foundational skills within self-determination and a natural component of successful adult life. Field et al. (1998) suggested that students with disabilities need opportunities to learn and practice strategies for attaining annual goals. The results of the current study are similar to the findings from German et al. (2000) and Williams-Diehm et al. (2010) that indicate that *Take Action* can be taught in a brief amount of time, can be infused into existing curriculum, and can be used to increase students' knowledge of self-determination.

In sum, the researcher found that there is little variability in personal variables (e.g., disability, age, gender) in predicting students' postintervention self-determination skills. Using *Take Action* as an intervention for middle school students with disabilities did indicate positive statistical significance for self-realization, yielding associations between the curriculum and the global measure, more research is needed to evaluate its

effectiveness with all students using other assessment measures. Consequently, the results did not support the overall hypothesis that *Take Action* increases overall global self-determination skills as defined by Wehmeyer (1999).

Educational Implications

Transition is mandated by IDEA, and general education initiatives continue to call for the infusion of career- and college-ready concepts into the standards. For teachers and students to better engage in transition initiatives, updated curricula and assessments are needed. As referenced earlier, *Take Action* is an operative tool to teach goal attainment. However, it is questionable if the curriculum improves global self-determination skills outside self-realization. SDS is an effective tool to assess global self-determination, but may not be appropriate to assess incremental behavioral changes in self-determination. The study sought to answer the question if *Take Action* had a statistically significant impact on improving global self-determination skills. Although the results did not support the hypothesis, they did generate another set of questions:

- 1) Is it realistic to attempt to correlate the effects of current transition curricula to global measures of self-determination?
- 2) What assessment tools should be used to evaluate self-determination and the effectiveness of existing curricula?
- 3) Does the school setting provide adequate opportunities to promote the global context of self-determination?

To be more effective with the contemporary learner, these tools could be updated, especially with regard to technology. For example, within the autonomy section, statements include, “I use the post office” and “I write letters and notes to my friends.”

Students noted that they knew where their local post office was, but they send letters via email, deliver items via the FedEx office, and buy stamps at the grocery store. Students also noted that they do not write notes but text. *Take Action* could be more engaging if the videos were updated and age appropriate. For example, the videos are on DVD only format and reflected students from the late 1990's. Infusing technology for both the curriculum and assessment tools could greatly enhance both products utilizing a blended learning approach. One could even develop an App (digital application) so students could track progress on weekly goals. This could also be developed as a secondary assessment tool to assess incremental progress within the program.

Currently, teachers view transition as a separate component and 'another thing to do,' which impacts fidelity of implementation for evidence-based transition practice. The standards and accountability movement have impacted teachers' focus on developing the whole child. We have lost a functional approach, which impacts students' ability to make connections to why they are learning what they are learning. It appeared that prior to this research project, postsecondary goals were not meaningful to students. Although they self-directed their IEP meeting, it was a one-time annual event. It did not engage students or teachers in the process of teaching self-determination throughout the school year. Teachers and special education administrators need training on how to infuse transition initiatives within the general curriculum. They also need training specific to assisting students on identification of postsecondary goals, and then backward chaining educational experiences to develop a road map to work toward that goal. Adjustments to expectations need to include training for teachers on the infusion of transition concepts into all curricular areas. Goal attainment skills should be taught in tandem with how to

self-direct an IEP meeting. Connecting these two pieces could produce better results for both student and teacher engagement in the process. Teaching teachers first how to use the strategy in their own lives enables them to understand better how to teach this to students. Teachers who demonstrate engagement through their instruction have better results.

Research Implications

Based on the outcomes of this study and the literature, suggestions for future research directions are as follows:

- 1) Student level factors that predict students' initial ratings of their capacity, opportunity, autonomy, self-regulation, psychological empowerment, and self-realization should continue to be examined.
- 2) A study such as this one should be conducted with general and special education students at the middle school level, embedding goal attainment skills into the general curriculum for an academic year using both in-program pre and post assessment, as well as a global measure such as SDS or AIR.
- 3) Further research should be conducted to examine the sustainability of the skills as students in the current study enter high school, in regards to a correlation between self-determination levels and academic performance.

Future research could strengthen the study by replicating in-program pre- and posttests on isolated skill mastery, as well as global measures such as SDS and AIR. This would allow progress monitoring to measure more incremental change focusing on a longer intervention period. Ensuring students have enough time to master the strategy and utilize it across multiple settings to truly have opportunities to act autonomously is critically

important. Lastly, research should be conducted on the embedded concepts of the self-directed IEP process and progress-monitoring annual goals throughout the life of the annual IEP (one year) utilizing goal attainment strategy. Currently, these concepts are taught in isolation, which could have impacted the results of this study.

It was intended that the research presented in this study could stimulate all teachers (elementary, middle, and high schools) to embed transition activities related to self-determination skills specific to goal setting and attainment, in an effort to actively engage students in the educational process. Mere involvement in attending IEP meetings, which typically is the focus of self-determination, is insufficient to facilitate goal attainment. Students need opportunities across settings (school, home, and community) to practice and receive feedback over multiple years to develop self-determination skills effectively. The research was also intended to evaluate existing practices to determine if they are impacting global self-determination skills.

Limitations

This study includes several limitations. First, schools exhibit inconsistencies in their special education labels, which result in a decreased potential to generalize from the finding in this study. The scope of the study intended to provide school personnel with new information regarding the improvement of self-determination skills in middle school students with disabilities. Second, self-determination can be defined and assessed in multiple ways depending on theoretical perspective and research focus. The determination to use only student self-rated assessments limits the interpretation of the results. The researcher chose to construct the models based on previous research that consistently suggests the most effective way to assess self-determination is through the

perspective of the student. However, other factors may also affect student self-determination and warrant exploration. In addition, although a social validity was used with teachers it was not collected from students to assess their view this process. Lastly, the generalizability of the findings is limited by the small sample size and by the limited number of participating schools.

Concluding Remarks

In this study, there was a significant difference in self-determination scores between intervention and control groups for SDS autonomy (RQ 2) and self-realization (RQ 5). No statistical difference was found with research question subsections: SDS total (RQ 1), self-regulation (RQ 3), and psychological empowerment (RQ 4) skills; and AIR total (RQ 6), capacity (RQ 7) and opportunity (RQ 8) skills. Based on the linear regression analysis for intervention group only, there was not a significant difference in the self-determination difference scores for the research question subsections (SDS total, autonomy, self-regulation (RQ 3), psychological empowerment, and self-realization; and AIR total, capacity and opportunity) between gender, disability type, and age while controlling for LRE as well as the interaction between disability and gender. However, for subquestion a of the research question subsection related to AIR capacity, statistical significance was indicated only with respect to students with autism, who had estimated lower difference scores (6.83) than students with a learning disability.

Wehmeyer (2000) indicated that promoting self-determination is a complex process that will require a variety of educational activities across a student's educational career. These activities must include active involvement in the educational planning and decision-making, targeted instruction in self-determination, and opportunities to make

choices. Educators need a variety of supports to enable students to succeed to include access to curricular and assessment materials that can be easily embedded into current practices. This study suggests that although *Choicemaker: Take Action* is an evidenced-base curriculum; it did not increase global self-determination skills across all constructs. Although it appeared to influence the beginning stages of career awareness, the study raised several questions for future consideration to include: (1) Is it realistic to attempt to correlate the effects of current transition curricula to global measures of self-determinations? (2) What assessment tools should be used to evaluate self-determination and the effectiveness of existing curriculum? and (3) Is the school setting set up to provide for opportunities to promote the global context of self-determination?

This study contributes to the existing literature reinforcing the need for a cultural shift in teaching practices to embed transition concepts within the standards. It also addresses the need to updated curricula and assessment tools within the area of self-determination. Lastly, future research should continue to explore other mediating variables that impact skill acquisition of self-determination.

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APPENDIX A – SOCIAL VALIDITY QUESTIONNAIRE

Teacher _____ Date _____

Directions: Please circle the number that reflects your level of agreement for each statement concerning *Take Action: Making Goals Happen*.

| Topic | Questions | Strongly Disagree | Disagree | Undecided | Agree | Strongly Agree |
|-----------------|---|-------------------|----------|-----------|-------|----------------|
| Overall Support | 1. I received adequate training on how to teach and implement <i>Take Action</i> . | 1 | 2 | 3 | 4 | 5 |
| | 2. I understood how to facilitate a student conference using <i>Take Action</i> . | 1 | 2 | 3 | 4 | 5 |
| | 3. I enjoyed teaching <i>Take Action</i> . | 1 | 2 | 3 | 4 | 5 |
| | 4. I plan to use <i>Take Action</i> in my classroom in the future. | 1 | 2 | 3 | 4 | 5 |
| Fit/Ease | 5. I found it easy to implement <i>Take Action</i> in my classroom. | 1 | 2 | 3 | 4 | 5 |
| Time/Burden | 6. Adding <i>Take Action</i> did not interfere with academic instruction or routines. | 1 | 2 | 3 | 4 | 5 |
| | 7. Using <i>Take Action</i> did not take up too much of my time. | 1 | 2 | 3 | 4 | 5 |

Comments:

APPENDIX B – FIDELITY CHECKS

Lesson 1: Introducing the Take Action Process

| Step # | Teacher Action/Script | Yes (+) | No (-) |
|--------|--|------------|-----------|
| | Introduction: Teacher presents the following information: | | |
| 1 | Today we are going to talk about a way to accomplish goals. | | |
| 2 | What are goals? | | |
| | Direct Instruction: Teacher asks students the following questions to demonstrate the need for the Take Action process to accomplish a goal: | | |
| 3 | How many of you have ever set a goal? | | |
| 4 | Ask students to share goals that they did not accomplish. | | |
| 5 | How did you feel when you did not accomplish your goal? | | |
| 6 | Why didn't you get the results you wanted? | | |
| 7 | Wouldn't it be nice if you could accomplish more of your goals? | | |
| 8 | Teacher introduces/reviews four steps called the <i>Take Action</i> process. | | |
| 9 | The first step is plan. | | |
| 10 | A plan describes what I'm going to do. | | |
| 11 | What's a plan? | | |
| 12 | The second step is act. | | |
| 13 | That's when I do what is on my plan. | | |
| 14 | What do I do for the second step? Act. | | |
| 15 | The third step is evaluate. | | |
| 16 | When I evaluate, I think about how my plan and actions worked. | | |
| 17 | What do I do when I evaluate? | | |
| 18 | The fourth step is adjust. | | |
| 19 | When I adjust, I look at what changes I need to make so my plan and action will work better. | | |
| 20 | What do I do when I adjust? | | |
| | Teacher conducts a group discussion using the following questions: | | |
| 21 | Now that we have looked at the steps of Take Action, think about the goals you said you had trouble accomplishing. | | |
| 22 | Did you make a plan? | | |
| 23 | What was your plan? | | |
| 24 | Did you act on your plan? | | |
| 25 | Did you make any adjustments? | | |

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| 26 | Teacher instructs students to complete independent activity. | | |
| | Teacher presents the following information. | | |
| 27 | Before we can start using the steps of the Take Action process, we need to look at goals. | | |
| 28 | Some goals take a long time to accomplish, these are called long-term goals. | | |
| 29 | What is a long-term goal? | | |
| 30 | You can have a better chance of accomplishing a goal if you break it into short-term goals. | | |
| 31 | Short-term goals give you a place to begin. | | |
| 32 | The definition of short-term goals has two important parts: | | |
| 33 | 1. Short-term goals are smaller goals that lead to your long-term goals. | | |
| 34 | 2. You can start working on short-term goals this week. | | |
| 35 | What are short-term goals? | | |
| 36 | When can you start working on short-term goals? | | |
| 37 | Guided Practice: Teacher provides a guided practice on Smartboard of how to break a goal to be physically fit into short-term steps. | | |
| 38 | Independent Practice: Teacher provides students with blank handout on breaking down long-term goals and states that the long-term goal is to get good grades in class. | | |
| 39 | Teacher asks students to choose a class in which they want to improve their grade. | | |
| 40 | Instruct student to write a long-term goal on their worksheets. | | |
| 41 | Ask students to write short-term goals for the long-term goal on their worksheets. | | |
| 42 | Ask students to look at their goals and answer the questions at the bottom of the page to critique their goals. | | |
| 43 | Teacher guides students if changes need to be made. | | |
| | Review: Teacher asks the following questions: | | |
| 44 | What is a long-term goal? | | |
| 45 | What is a short-term goal? | | |
| 46 | What are the four steps to the Take Action process? | | |
| 47 | Next lesson we will talk about the parts of the plan to accomplish a short-term goal. | | |
| | Totals: | | |
| | Percent (Totals/47 x 100= % score) | | |

Lesson 2: Introducing the Plan Parts

| Step # | Teacher Action/Script | Yes (+) | No (-) |
|--------|---|---------|--------|
| | Introduction: Teacher presents the following information: | | |
| 1 | What are long-term goals? | | |
| 2 | One example of a long-term goal we discussed yesterday was to be physically fit. Why is that a long-term goal? | | |
| 3 | What is a short-term goal? | | |
| 4 | What were some of the short-term goals for the long-term goal of being physically fit? | | |
| 5 | What is the name of the process you can use to accomplish goals? | | |
| 6 | List the four steps in the Take Action process. | | |
| 7 | Today we are going to learn how to make a plan for accomplishing a goal. | | |
| | Direct Instruction: Teacher presents the following information: | | |
| 8 | Teacher hands out Take Action Plan worksheet. | | |
| 9 | Define “standard”: the first part of the plan is the standard. The standard is what you will be satisfied with. | | |
| 10 | Displays visual of Short-Term Goal: Exercise Regularly. | | |
| 11 | Give an example of the standard for each person on the visual display (runner, weightlifter, walker). | | |
| 12 | Provide visual display of Take Action Plan. | | |
| 13 | For each part of the plan, turn the definition into a question you will ask yourself when making a plan. | | |
| 14 | For standard, ask yourself, “What will I be satisfied with?” | | |
| 15 | Ask students to write the question next to the work Standard on their worksheets. | | |
| 16 | The second part of the plan is motivation. Motivation is why you want to meet your standard and accomplish a goal. | | |
| 17 | Explain the different types of motivation: internal motivation and external motivation. | | |
| 18 | Place visual of people exercising on Smartboard. | | |
| 19 | Give students example for the motivation for these people to meet their goals and standards. | | |
| 20 | Introduce the question students will ask themselves for motivation: Why do I want to do this? | | |
| 21 | Ask students to write the question next to Motivation on their worksheets. | | |
| 22 | The next part of the plan is strategy. Strategy is the method you use to accomplish your goal and meet your standard. | | |
| 23 | Conduct a strategy activity- remembering a number. | | |
| 24 | Give students examples of strategies for regular exercisers. | | |

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| 25 | Ask students to generate strategies for runners, weightlifters, and walkers. | | |
| 26 | Define “schedule.” Schedule is when you will do your strategy or work on your goal. | | |
| 27 | What schedule might the body builder follow to meet his goals of exercising regularly? | | |
| 28 | Why is that his schedule? | | |
| 29 | Introduce going to the prom as a scheduling example? | | |
| 30 | What might you need to schedule to get ready for prom? | | |
| 31 | When would you need to do each task? | | |
| 32 | Why is this your schedule? | | |
| 33 | Instruct students to find the work schedule on the worksheet. | | |
| 34 | When you write your schedule, you ask yourself, “When will I do this?” | | |
| 34 | Ask students to write the question next to the Schedule on their worksheets. | | |
| | Review: Teacher provides the following: | | |
| 36 | Review the questions for each of the four parts. | | |
| 37 | What is the question you ask yourself when you write a standard? | | |
| 38 | What is the question you ask yourself when you write your motivation? | | |
| 39 | What is the question you ask yourself when you write your strategy? | | |
| 40 | What is the question you ask yourself when you write your schedule? | | |
| 41 | In the next lesson, you will learn the last two parts of the plan: support and feedback. | | |
| 42 | Collect student worksheets. | | |
| | Totals: | | |
| | Percent (Totals/42 x 100= % score) | | |

Lesson 3: Continuing the Plan Parts

| Step # | Teacher Action/Script | Yes (+) | No (-) |
|--------|--|---------|--------|
| | Introduction: Teacher presents the following information: | | |
| 1 | What are goals? | | |
| 2 | Why was Krista’s long-term goal to get her driver’s license? | | |
| 3 | What is a short-term goal? | | |
| 4 | What are some of the short-term goals for her long-term goal? | | |
| 5 | Teacher directs students to take out their Take Action Plan Parts worksheet? | | |
| 6 | Standards: What is the question you ask yourself when you decide on your standard? | | |
| 7 | Motivation: What is the question you ask yourself when you identify your motivation? | | |

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| 8 | Strategy: What is the question you ask yourself when you decide on your strategy? | | |
| 9 | Schedule: What is the question you ask yourself when you decide on your schedule? | | |
| | Direct Instruction: Teacher presents the following information: | | |
| 10 | Define “support.” | | |
| 11 | Support is help provided by other people or things. It is help that comes from outside of you. | | |
| 12 | Give an example of support using the runner. | | |
| 13 | The runner may need support of her alarm clock to wake her up early enough to run before work. Another support she could use is having a friend come by to run with her? Why are these supports? | | |
| 14 | What support might the weight lifter need? | | |
| 15 | Why are these supports? | | |
| 16 | Find the word support on our worksheet. | | |
| 17 | When you think about support you ask yourself, “What do I need?” | | |
| 18 | Write the question next to support on your worksheet. | | |
| 19 | What kind of support might you need in school? | | |
| 20 | Define “feedback.” Feedback is information you get on your performance. | | |
| 21 | Conduct Feedback Activity 1 and 2. | | |
| 15 | Ask students to talk about what happened. | | |
| 16 | Ask students to explain why that happened in terms of feedback. | | |
| 17 | Ask students what conclusions they can draw about feedback and a person’s performance. | | |
| 18 | Give students examples of how they could get feedback in different situations. | | |
| 19 | Introduce getting feedback from other people. You need to choose the right people to give you feedback so that it’s helpful feedback. | | |
| 20 | On the job your supervisor could give you information on your work performance. | | |
| 21 | Why wouldn’t you ask your mother how you are doing on the job? | | |
| 22 | For a research paper would you get feedback from friends who have never written a research paper? | | |
| 23 | Would you ask the teacher of the class for feedback on your research paper? | | |
| 23 | Introduce getting feedback by keeping records. | | |
| 24 | Another way to get feedback is to keep track of how you are progressing toward your goal. | | |
| 25 | If your short-term goal for improving grades is to turn in all your assignments, how could you keep track of that? | | |
| 26 | Introduce the question for feedback. | | |
| 27 | Find the word feedback on the worksheet. When you decide on your | | |

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| | feedback you ask yourself “How will I get information on my performance?” | | |
| 28 | Write the question next to Feedback on your worksheet. | | |
| | Review: Teacher presents the following information: | | |
| 29 | Present Kristal’s Take Action worksheet. | | |
| 30 | What was Kristal’s long-term goal? | | |
| 31 | What was Kristal’s short-term goal? | | |
| 32 | When Kristal made her plan to learn to drive, she first thought about her standard. What question did she ask herself to decide on her standard? | | |
| 33 | What was Kristal’s standard? | | |
| 34 | What question did she ask herself to decide on her motivation? | | |
| 35 | What was Kristal’s motivation? | | |
| 36 | What question did she ask herself to decide on her strategy? | | |
| 37 | What was Kristal’s strategy? | | |
| 36 | What question did she ask herself to decide on her schedule? | | |
| 37 | What was Kristal’s schedule? | | |
| 38 | What question did she ask herself to decide on her support? | | |
| 39 | What was Kristal’s support? | | |
| 40 | What question did she ask herself to decide on her feedback? | | |
| 41 | What was Kristal’s feedback? | | |
| 42 | Independent Practice: Teacher provides students with review worksheet. Ask students to complete it matching the questions to the parts of the plan. | | |
| 43 | In the next lesson you will critique some sample plans. | | |
| | Totals: | | |
| | Percent (Totals/43 x 100= % score) | | |

Lesson 4: Critiquing Example Plans

| Step # | Teacher Action/Script | Yes (+) | No (-) |
|--------|--|---------|--------|
| | Introduction: Teacher presents the following information: | | |
| 1 | Ask students to list the four Take Action steps for accomplishing a goal. | | |
| 2 | Ask students the difference between a long-term goal and short-term goal. | | |
| 3 | Hand out the Take Action Plan Puzzle worksheet and ask them to complete. | | |
| 4 | Review the answers and have students correct their worksheets. | | |
| | Direct Instruction/Guided Practice: Teacher presents the following information: | | |
| 5 | Present lesson: Before you write your own plan, we’re going to read and discuss plan developed by other students. First we will read the story about the person and then read their plan and decide on which parts of the plan | | |

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| | we think will work and which parts will not. | | |
| 6 | Visually present Physically Fit Breaking Down Long-Term Goals worksheet. | | |
| 7 | Ask students what the long and short-term goals were. | | |
| 8 | Using the example from the weightlifter, hand out copies of Buff's Take Action worksheet. | | |
| 9 | Ask a student to read Buff's story and another student to read Buff's plan. | | |
| 10 | Visually present Take Action Plan Critique Transparency. | | |
| 11 | Model, using the critique worksheet, how to evaluate the six parts of the plan. | | |
| 12 | Write student responses on the plan. | | |
| 13 | Critique standards: Ask the three questions about Buff's standard. | | |
| 14 | Ask students to justify their responses. | | |
| 15 | Critique motivation. Will this help him work on his goal this week? | | |
| 16 | Critique strategy. Does he have the skills to do the strategy? Has the strategy worked before? Do you think this strategy will work? | | |
| 17 | What would be more effective for each of those parts? | | |
| | Independent Practice: Teacher presents the following information: | | |
| 18 | Visually display transparency of Roland Coaster's Breaking Down Long-Term Goals worksheet. | | |
| 19 | Ask students to read the story. | | |
| 20 | Ask students what his long-term and short-term goals were. | | |
| 21 | Ask students to discuss which of the short-term goals Roland needs to do first. | | |
| 22 | Hand out Roland's Take Action and a Take Action Plan Critique worksheet for each student. | | |
| 23 | Ask different student to read each part of his plan. | | |
| 24 | Ask students to work in groups of two. | | |
| 25 | Give students an appropriate amount of time to answer the questions on the critique worksheet. | | |
| 26 | Circulate and check for understanding. | | |
| 27 | Ask students to come back to the large group and review their responses. | | |
| 28 | Students might critique the plan differently, ask students to justify their responses. | | |
| | Review: Teacher presents the following information: | | |
| 29 | In the next lesson, you will have a quiz over the definition of long-term and short-term goals, the Take Action steps, the parts of the plan, and the matching questions. | | |
| 30 | You will also learn to write a plan for a goal. | | |
| | Totals: | | |
| | Percent (Totals/30 x 100= % score) | | |

Lesson 5: Writing a Plan

| Step # | Teacher Action/Script | Yes (+) | No (-) |
|--------|---|---------|--------|
| | Quiz: Teacher presents the following information: | | |
| 1 | Hand out a Take Action Quiz to each student. | | |
| 2 | Ask students to read the instructions for each part, and then have them individually complete the quiz. Teacher may orally administer based on students ability levels. | | |
| 3 | When students have completed the quiz, collect and go over or have them correct their own. | | |
| | Review/Introduction: Teacher presents the following information: | | |
| 4 | Review Michelle's plan critique. | | |
| 5 | What parts of her plan do you think will be most effective and why? | | |
| 6 | What parts of her plan will be least effective and why? | | |
| 7 | What changes would you make and why? | | |
| 8 | Reteach concepts if necessary. | | |
| | Give students an overview of the lesson. | | |
| 10 | Today you will write a plan for a long-term plan. You will use the same goal this time. Get good grades. | | |
| 11 | You will write something for each part of the plan. In the future you will use this process to accomplish your goals without writing each part down. | | |
| 12 | Writing the parts down will help you learn the thinking process. We will be doing this several times so you can see what works for you. Many successful people may not write out their plan, but they have one. | | |
| 13 | Present the example of the football coach getting ready for a big game. | | |
| 14 | Discuss what might happen if the coach did not use parts of the plan. | | |
| 15 | Discuss with students other situations they can think of where people have a plan but may not necessarily write it down. | | |
| 16 | After you have written your plan, you will critique it with someone else in the class today. Next week you will review your progress toward your goal with a partner. | | |
| | Direct Instruction: Teacher presents the following information: | | |
| 17 | Visually display Breaking Down Long-Term Goals for getting good grades in class. | | |
| 18 | Hand out Breaking Down Long-Term Goals worksheet to students. | | |
| 19 | Ask students to share their short-term goals, reminding them that a short-term goal is one you can work on in the next week and leads to your long-term goal. | | |
| 20 | Ask students two questions about their short-term goals: Is the short-term goal a smaller goal that will lead to your long-term goal? Is the short-term goal one you can work on in the next week? | | |
| 21 | Ask students to sequence their short-term goals and pick the one they want | | |

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| | to work on first. | | |
| 22 | Hand out Take Action worksheet and Take Action Plan Critique worksheet to each student. | | |
| 23 | Have students write in their long-term and short-term goals. | | |
| 24 | Guide students through the plan parts. | | |
| 25 | Standard: What will I be satisfied with? | | |
| 26 | Ask two students to tell their standards. | | |
| 27 | If the student responses are not up to standard, ask the questions on the critique worksheet to guide to the appropriate standard. | | |
| 28 | Motivation: Why do I want to do this? | | |
| 29 | Strategy: What methods should I use? | | |
| 30 | Schedule: When will I do this? | | |
| 31 | Support: What help do I need? | | |
| 32 | Feedback: How will I get information on my performance? | | |
| | Independent Practice/ Wrap Up: Teacher presents the following information: | | |
| 33 | Set ground rules for students giving constructive criticism to each other. | | |
| 34 | Ask students to critique their plan with a partner, using the Take Action Plan Critique worksheet. | | |
| 35 | Ask students to present their critique of their partner's plan to the class. | | |
| 36 | For the next week you will act on your plan. After the week is over you will evaluate your plan and action, and make adjustments. In later weeks you will write a plan for a goal of your choice. The plan is just the starting point. Most people will need to make adjustments in their plan. It's not important that you write a plan that works the first time. What's more important is how well you evaluate it and the adjustments you make. | | |
| | Totals: | | |
| | Percent (Totals/36 x 100= % score) | | |

Lesson 6: Evaluating and Adjusting the Plan

| Step # | Teacher Action/Script | Yes (+) | No (-) |
|--------|--|---------|--------|
| | Review/Introduction: Teacher presents the following information: | | |
| 1 | Ask students what the four Take Action steps are for accomplishing goals. | | |
| 2 | Review the plan parts. Using the Take Action Puzzle, ask students to define each part. | | |
| 3 | The plan is only the beginning. Usually people need to evaluate their plans and the action they took and then make an adjustment of some kind. | | |
| 4 | We will look at Sean's evaluation and adjustment and then you will evaluate and adjust your plans. | | |

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| | Direct Instruction: Teacher presents the following information: | | |
| 5 | Hand out Sean's Take Action. | | |
| 6 | Ask students to read Sean's long-term and short-term goals. | | |
| 7 | Go over each part of Sean's plan by reading the response for Part 1: Plan, then Part 2: Action, and then Part 3: Evaluate. | | |
| 8 | What was Sean's standard? | | |
| | Did he meet his standard? | | |
| 10 | Was it the right standard? | | |
| 11 | Discuss the question, "What were the main reasons you got these results?" | | |
| 12 | Discuss the adjustment Sean made in Part 4: Adjust. | | |
| 13 | Hand out Michelle's plan with "What Happened" and a blank Take Action worksheet to every student. | | |
| 14 | Ask different students to read different parts of Michelle's plan. | | |
| 15 | Complete Part 2: Action and Part 3: Evaluate questions for the Standard column together. | | |
| 16 | Ask students to complete their worksheet. | | |
| 17 | Did Michelle meet her short-term goal? | | |
| 18 | Did she meet her standard? | | |
| 19 | Have students complete the other plan parts on their own. | | |
| 20 | Ask students to answer the questions, "What was the main reason you got these results?" | | |
| 21 | Discuss with students what parts of their plans worked, and stress to them the importance of using those parts in the future when they are working on similar goals. | | |
| 22 | Also discuss the parts that didn't work and how they could change them so they work better. | | |
| 23 | Ask students to adjust anything that didn't work. | | |
| 24 | Instruct students to consider which part of the plan will address the reasons they got their results, and write their changes in the boxes of Part 4: Adjust. | | |
| | Review: Teacher presents the following information: | | |
| 25 | Ask students to pair up and review their actions, evaluation, and adjustment. | | |
| 26 | Ask students in the pair to give feedback on the other person's evaluation and adjustment. | | |
| 27 | Ask each student to explain the other person's evaluation and adjustment to the class. | | |
| 28 | Restate, model the thinking involved, and ask questions as they report. | | |
| 39 | During the week you will continue to work on your plan with the adjustments. | | |
| 30 | Each week, we will take a few minutes to review your progress toward your goal. | | |
| 31 | Pay attention to the parts of your plan that work well for you. You may want to use them for other goals. | | |

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| 32 | Next week you will develop a plan for a goal of your choice (from IEP). | | |
| | Totals: | | |
| | Percent (Totals/32 x 100= % score) | | |

Lesson 7: Using the Take Action Process

| Step # | Teacher Action/Script | Yes (+) | No (-) |
|--------|---|---------|--------|
| | Review/Introduction: Teacher presents the following information: | | |
| 1 | Ask students what the four Take Action steps are for accomplishing goals. | | |
| 2 | Ask students to share what parts of their current plans are working and which are not. | | |
| 3 | Today we will write a plan for your goal you want to accomplish. You will critique it with a partner. In a week you are going to evaluate and adjust your plan. | | |
| 4 | What is a long-term goal? | | |
| 5 | Ask students to choose a long-term goal to work on. | | |
| 6 | Ask students to share their goals. | | |
| | Direct Instruction: Teacher presents the following information: | | |
| 7 | Hand out a Breaking Down Long-Term Goals worksheet. | | |
| 8 | Review the definition of short-term goals. | | |
| 9 | Ask students to break their long-term goals into short-term goals. | | |
| 10 | Have students ask themselves questions about short-term goals. Does it lead to your long-term goals? Is it something you can start working on this week? | | |
| 11 | Does your short-term goal need to be accomplished in any certain sequence? If yes, number them. | | |
| 12 | Have students share their short-term goals and sequences to check for feasibility. | | |
| 13 | Have students choose the short-term goal they want to work on first. | | |
| 14 | Hand out Take Action Worksheet to each student. | | |
| 15 | You are going to write a plan to accomplish the goal you have chosen. | | |
| 16 | In a week we will evaluate and adjust your plan. | | |
| 17 | Have students write their plan. | | |
| 18 | Ask students to work in pairs and review each other's plans using the Take Action Critique. | | |
| 19 | Circulate and check plans. | | |
| 20 | Remind students they are learning the process. | | |
| | One week later: Evaluate and Adjust Plan: Teacher presents the following information: | | |
| 21 | Hand out a Take Action worksheet. | | |

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| 22 | Ask students to evaluate and adjust their plans completing Steps 2-4. | | |
| 23 | In pairs or small groups ask students to review their evaluation and adjustments. | | |
| 24 | Ask for volunteers to share their results. | | |
| 25 | Instruct students to continue to work on their goals until they accomplish the goal. | | |
| 26 | Is someone accomplishes their goal, have them write a new one. | | |
| | Totals: | | |
| | Percent (Totals/26 x 100= % score) | | |

Individual Conference (Plan Organizer)

| Step # | Teacher Action/Script | Yes (+) | No (-) | N/A |
|--------|--|---------|--------|-----|
| | Review: Teacher presents the following information: | | | |
| 1 | Ask students to list the Take Action steps to accomplish a goal. | | | |
| 2 | Ask students to share which parts of their current plan are working and which are not. | | | |
| | Choose Goal: Teacher presents the following information: | | | |
| 3 | Today you will write a plan for a goal you want to accomplish. | | | |
| 4 | You will critique it with a partner. | | | |
| 5 | In a week you are going to evaluate and adjust your plan. | | | |
| 6 | What is a long-term goal? | | | |
| 7 | Choose a long-term goal from your IEP. | | | |
| 8 | Ask students to share their goals. | | | |
| 9 | Teacher hands out Breaking Down Long-Term Goals worksheet and asks students to break their long-term goal into short-term goals. | | | |
| 10 | Does it lead to your long-term goal? | | | |
| 11 | Is it something you can start working on this week? | | | |
| 12 | Do your short-term goals need to be accomplished in any certain sequence? | | | |
| 13 | Have students choose the short-term goal they want to work on first. | | | |
| | Develop Plan for Own Goal: Teacher presents the following information: | | | |
| 15 | Hand out a Take Action worksheet to each student. | | | |
| 15 | You are going to write a plan to accomplish the goal you have chosen. | | | |
| 16 | Think about the parts of your plan that worked for you before. | | | |
| 17 | See if any of those parts would work for this goal. | | | |

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| 18 | In a week you'll evaluate and adjust your plan and action. | | | |
| 19 | Have students write their plan. | | | |
| | Complete Plan: Teacher presents the following information: | | | |
| 20 | What questions do you ask yourself for standard? Write a standard for your goal. | | | |
| 21 | What questions do you ask yourself for motivation? Write a motivator for your goal. | | | |
| 22 | What questions do you ask yourself for strategy? Write a strategy for your goal. | | | |
| 23 | What questions do you ask yourself for schedule? Write a schedule for your goal. | | | |
| 24 | What questions do you ask yourself for support? Write a support statement for your goal? | | | |
| 25 | What questions do you ask yourself for feedback? Write a feedback statement for your goal. | | | |
| | Teacher presents the following information: | | | |
| 26 | Now you will implement your plan each day for the next week. | | | |
| 27 | You will continue to work on your goals until you accomplish them. | | | |
| 28 | Once a week you will meet with me to evaluate and adjust your plan, or write a new one. | | | |
| | Evaluate Plan: Teacher presents the following information: | | | |
| 29 | You will evaluate whether each part of your plan worked. | | | |
| 30 | Write the reason they did or did not work in each box under Part 3: Evaluate. | | | |
| 31 | Answer the question: What were the main reasons you got these results? | | | |
| 32 | Look at your reasons in the Evaluate box. Decide which of those are the main reasons you got the results you did. | | | |
| 33 | Write them in a separate space under the question. | | | |
| | Adjust Plan: Teacher presents the following information: | | | |
| 34 | Decide if you want to change your short-term goal. | | | |
| 35 | If you want to change it, write a new one on the line on page 3. | | | |
| 36 | You will need to adjust the parts of the plan that did not work. | | | |
| 37 | Write the changes in the boxes. | | | |
| 38 | Remember which parts of your plan did work so you can use them again. | | | |
| | Totals: | | | |
| | Percent (Totals/38 x 100= % score) | | | |

APPENDIX C – PARENT/GUARDIAN CONSENT FORM

Evaluating the Effectiveness of Take Action: Making Goals Happen Curriculum

Dear Parent/Guardian:

Your (son/daughter/child/adolescent youth) is invited to participate in a study of evaluating effective curriculum practices in relation to teaching self-determination skills to students at the middle school level. My name is Kelly Wulf and I am currently a doctoral candidate at The University of South Carolina, Department of Special Education Administration. This study is essential for evaluating evidence-based transition practices that have a direct and substantial impact on increasing post-secondary outcomes for students with disabilities. I am asking for permission to include your (son/daughter/child/adolescent youth) in this study because your child is currently enrolled in the designated middle school for which the curriculum pilot will be implemented.

If you allow your child to participate, your (son/daughter/child/adolescent youth) will be administered a pretest of the ARC Self-Determination Scale and then participate in eight weeks of curriculum implementation of Take Action: Making Goals Happen from designated school personnel. At the conclusion of the eight weeks, your (son/daughter/child/adolescent youth) will be administered a posttest of the ARC Self-Determination Scale. The knowledge gained from the study may be used to enhance the decision-making process of curriculum currently being used within the district.

Any information that is obtained in connection with this study and that can be identified with your son/daughter/adolescent youth) will remain confidential and will be disclosed only with your permission. His or her responses will not be linked to his or her name or your name in any written or verbal report of this research project.

Your decision to allow your (son/daughter/adolescent youth) to participate will not affect your or his or her present or future relationship with The University of South Carolina or Berkeley County School District. If you have any questions about the study, please ask me. If you have any questions later, call me at 843-810-7340. If you have any questions or concerns about your (son/daughter/child/adolescent youth)'s participation in this study, call Thomas Coggins, Director of the Office of Research Compliance, at (803) 777-7095. You may keep a copy of this consent form.

You are making a decision about allowing your (son/daughter/adolescent youth) to participate in this study. Your signature below indicates that you have read the information provided above and have decided to allow him or her to participate in the study. If you later decide that you wish to withdraw your permission for your (son/daughter/adolescent youth) to participate in the study, simply tell me. You may discontinue his or her participation at any time.

Printed Name of (son/daughter/adolescent youth)

Signature of Parent(s) or Legal Guardian

Date

Signature of Investigator

Date

APPENDIX D – STUDENT ASSENT FORM

Evaluating the Effectiveness of Take Action: Making Goals Happen Curriculum

Dear Student:

My name is Kelly Wulf and I am currently a student at the University of South Carolina. I am working on a study about how to teach goal-setting skills for students in middle school and would like your help. I am interested in learning more about a curriculum that will teach you strategies on how to set goals and then make a plan to obtain those goals. Your parent/guardian has already said it is okay for you to be in the study, but it is up to you.

If you want to be in the study, you will be asked to do the following:

- Take a pretest to assess your levels of goal setting. This is a self-report so there are no wrong or right answers. This will take 45 minutes. Your teacher will work with the coordinator to schedule a time for this.
- Participate for 8 days of lessons on how to select a goal and then break the goal into steps. The goal will be one you select from your Individual Education Plan (IEP).
- Thereafter, meet for 10 minutes once a week with your teacher to talk about how you are doing on your goal for the remaining weeks. The study will only last 8 weeks total.
- After the 8 weeks, take a posttest to assess what you have learned and how you feel about making goals and the strategies you learned.

Any information you share with us will be private. No one except the coordinator and I will know what your answers will be to the assessments. You do not have to help with this study. Being in the study isn't related to your regular class work and won't help or hurt your grades. You can also drop out of the study at any time, for any reason, and you won't be in any trouble and no one will be mad at you.

Please ask any questions you would like to.

Signing your name below means that you have read the information contained above about the study (or it has been read to you), that any questions you may have had have been answered, and you have decided to be in the study. You can still stop being in the study any time you want to.

Name: _____ Date: _____