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# Self-Determination and Positive Post School Outcomes for Transition Age Youth

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**Self-Determination and Positive Post School Outcomes for Transition Age Youth**

by

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## **Chapter 1: Introduction**

As part of the Individualized Education Plan (IEP) process, students with disabilities must undergo a transition assessment. In Minnesota, this must occur by the age of 14 or by the start of ninth grade. Included in this is a focus on self-determination skills. Carter, Lane, Pierson, and Stang (2008) referred to self-determination skills as the “capacity to steer one's own life in personally meaningful ways and valued directions” (p. 56). Self-determination skills include seven domains: choice-making, decision-making, problem-solving, goal-setting, self-advocacy, self-management, and self-awareness.

Teaching self-determination skills has important implications for post high school outcomes. As noted in a study done by Wehmeyer and Schwartz (1997), 90% of the students in the study still lived with their parents 1 year after graduating from high school. Self-determination skills play an important role for students with disabilities that attend post-secondary institutions. Getzel (2014) explained that 46% of students with disabilities enroll in post-secondary institutions, compared to 63% of non-disabled students. Of those 46%, only 35% elect to disclose their disability and seek services. Although instructors realize the importance of self-determination skills for students with disabilities, instructional opportunities do not always occur for students (Wehmeyer & Schalock, 2001).

### **Historical Background**

Federal funding for special education began in 1975 with the passage of P.L. 94-142, known as the Education for all Handicapped Children Act (EAHCA). This established educational rights of a student with a disability. This included the right to a free appropriate public education in the least restrictive environment, established requirements of an

Individualized Education Program (IEP), and established procedural safeguards. In 1990, the EACHA was reauthorized and was named the Individuals with Disabilities Education Act (IDEA). This established the transition requirement for students on an IEP aged 16 or older. In Yell (2012), transition services refer to a “coordinated set of activities for a student, designed within an outcome-oriented process that promotes movement from school to post-school activities, including postsecondary education, vocational training, and integrated employment” (p. 56). Transition planning continued its development in the IDEA amendments of 1997 and 2004, and it continues to be an important part of a student’s education today. Current policy in Minnesota is that students develop a transition plan by age 14 or the beginning of ninth grade.

### **Research Question**

One question guides this literature review:

1. How does self-determination affect post-school outcomes for transition age youth with disabilities?

### **Importance of Topic**

As a high school special education teacher, a high value is placed on transition planning and self-determination skills for students. Students with disabilities need to be prepared to take control of their life after high school as they move on to a career or college. Self-determination is an important concept for individuals with disabilities. Self-determination is addressed with transition planning in a student Individualized Education Program (IEP). Wehmeyer and Schwartz (1997) noted “self-determination is an important educational outcome if youth with disabilities are to achieve positive adult outcomes after they leave high school” (p. 245). Despite the importance of self-determination, students with disabilities tend to have weak skills in these

areas. Special education teachers attempt to address self-determination through the IEP process and goal writing with more than two-thirds of teachers stating that some or all of their students had goals addressing self-determination skills (Carter et al., 2008).

### **Focus of Paper**

The Academic Search Premier, JSTOR, and SAGE Journals Online were used as a starting point for my literature review of peer-reviewed studies related to self-determination and transition age youth. I used several keywords and combinations of keywords to locate appropriate studies: secondary, transition, self-determination, special education, and post school outcomes. To locate the most current information, I also utilized: the Journal of Special Education and Exceptional Children.

### **Summary of Chapter 2 Research to be Reviewed**

Eleven studies were chosen for review that evaluated the effects of self-determination on post-school outcomes and the effects of self-determination curriculum. Table 1 presents these studies in the same chronological order in which they appear in Chapter 2.

**Table 1**

### **Summary of Chapter 2 Findings**

AUTHOR(S)	STUDY DESIGN	PARTICIPANTS	PROCEDURE	FINDINGS
Wehmeyer & Schwartz (1997)	Quantitative	80 students with cognitive disabilities receiving special education services.	Students who were given self-determination training in high school were surveyed after graduation.	High number of students were living at home (72) However, students who rated higher on self-determination scale reported higher levels of desire to live outside the home (31%)

Table 1 (continued)

AUTHOR(S)	STUDY DESIGN	PARTICIPANTS	PROCEDURE	FINDINGS
Ankeny & Lehmann (2011)	Qualitative	Four participants were selected that demonstrated successful program completion, were gainfully employed, and lived self-sufficiently.	The participants were asked to discuss their life's events. Narrative research was conducted.	The four students who were selected were successful due to goal directed behavior, supportive environments at home and school, and high involvement in the IEP process during their time in school. This fostered self-determination and led to positive post school outcomes.
Lachapelle, Wehmeyer, Haelewyck, Courbois, Keith, Schalock, & Walsh (2005)	Quantitative	182 Adults with a mild intellectual disability living in community settings	Participant quality of life was assessed using the Quality of Life Questionnaire. Self-determination was measured using an adult ARC self-determination scale.	Participants who scored higher on the self-determination scale scored higher on the quality of life scale.
Nota, Ferrari, Soresi, & Wehmeyer (2007)	Quantitative	141 individuals with intellectual disabilities living in Italy.	Participants were given measures of self-determination, quality of life, and social skills.	Individuals with more severe intellectual disability had the lowest quality of life, self-determination, and social skills. Individuals that attended day centers had greater quality of life, self-determination, and social skills.
Carter, Lane, Pierson, & Stang (2008)	Quantitative	340 educators working within 8 different high schools. 255 were general education teachers and 55 were special education teachers and 30 reported other teaching responsibilities.	Instructors rated seven domains associated with self-determination. They rated the importance of teaching each skill and also how often each skill was taught.	Educators rated moderate to high levels of importance to each of the seven components of self-determination. Educators reported that they only sometimes or often taught each of the seven skills.



Table 1 (continued)

AUTHOR(S)	STUDY DESIGN	PARTICIPANTS	PROCEDURE	FINDINGS
Martorell, Gutierrez-Recacha, Pereda, & Ayuso-Mateos (2008)	Quantitative	Two groups of people with intellectual disabilities were selected. 69 workers from a sheltered employment program and 110 clients of programs in sheltered workshops.	Each individual was assessed to test their IQ, functioning, behavior problems, self-determination, and psychiatric problems.	IQ did not affect work outcomes. Behavior problems, functioning, psychiatric symptoms, and self-determination influenced work outcomes.
Powers, Geenen, Powers, Pommier-Satya, Turner, Dalton, & Swank (2012)	Quantitative	69 youth aged 16.5 to 17.5 in foster care were randomly assigned to experimental and control groups	Students were exposed to the TAKE CHARGE curriculum or to the foster care independent living program	Youth in the intervention group completed high school, were employed, and carried out independent living activities at higher rates than the control group.
Wehmeyer, Palmer, Shogren, Williams-Diehm, & Soukup (2013)	Quantitative	371 high school students (267) with learning disabilities	Students were involved in a 5-year longitudinal study and were assigned to a control group or experimental group that involved choices of research based self-determination curriculum. Students were given two pre-assessments.	Students showed significant positive gains in self-determination from pre to post assessment regardless of intervention strategy.
Wehmeyer, Shogren, Palmer, Williams-Diehm, & Little (2012)	Quantitative	312 high school students with cognitive disabilities.	Students were divided into control groups and experimental groups with experimental group given the Self-Determined Learning Model of Instruction. One year later, the control group was given the SDLMI.	Students in the experimental group showed significant gains from pre to post assessment over 2 years within groups. Between groups showed the control group had an initial level of self-determination that was higher, however, the experimental group increased self-determination at a much higher rate.

Table 1 (continued)

AUTHOR(S)	STUDY DESIGN	PARTICIPANTS	PROCEDURE	FINDINGS
Shogren, Wehmeyer, Palmer, Rifenbark, & Little (2013)	Qualitative	779 students with disabilities from 6 states and 50 school districts.	Students who were exposed to a research based self-determine curriculum in high school were given the ARC self-determination scale after high school to measure post intervention outcomes.	Data showed that self-determination impacts adult outcomes in complex ways. There is a consistent positive relationship post high school between self-determination and employment.
Farmer, Allsopp, & Ferron (2015)	Quantitative	7 college students with Learning Disabilities (LD) and or Attention Deficit/Hyperactivity Disorder (ADHD)	Students were given the Personal Strengths Program curriculum during one semester for one hour per week.	Students reported the ability to maintain self-determination levels throughout the semester as a result of the Personal Strengths Program (PSP)

## Chapter 2: Review of Literature

The purpose of this literature review was to examine the post-school outcomes for students with disabilities in regard to self-determination skills. In some of the studies, self-determination levels are surveyed and examined to see if higher levels of self-determination correlate with positive outcomes. In other studies, students are explicitly taught self-determination skills, and post school outcomes are compared with a control group. Studies within each group are presented in chronological order, beginning with the oldest study.

Wehmeyer and Schwartz (1997) sought to examine the link between levels of self-determination and post-school outcomes. They hypothesized that students who had higher levels of self-determination were more likely to have positive adult outcomes.

Participants selected for the study included 90 students with cognitive disabilities from Virginia, Connecticut, Alabama, and Texas. They were selected because they were receiving special education services and leaving school that year. Students selected for the study were age 17 to 22. Of the 80 participants, 45 were female and 35 were male. After selection, consent was obtained for students who were aging out or graduating to be given a survey that measured levels of self-determination and locus of control. Self-determination scores were obtained using the Arc's Self-Determination Scale. This is a 72-item self-report that provides data on autonomy, self-regulation, psychological empowerment, and self-realization. It also gives an overall self-determination score. Locus of control was measured using the adult version of the Nowicki-Strickland Internal-External Scale, which is a 40-item scale that assesses whether an individual has an internal or external locus of control.

A Chi-Square analysis was done for graduates living arrangements, student autonomy and independence, and employment outcomes. Students were separated into low self-

determination groups and high self-determination groups. In the area of living arrangements, participants were measured by: if they live with their parents, if they live outside of the home, and if they preferred to live elsewhere. A high number of participants (n=72) still lived with their parents. There were no significant differences between groups for this variable. In the area of living preference, significant differences existed between the high and low self-determination group. In the high self-determination group, 44% of the respondents reported wanting to live outside the home, whereas 19% of the low self-determination group reported they would like to live outside the home ( $\chi^2 = 8.13, p = .04$ ). In student autonomy and independence, students were measured on what percent paid their phone bill, had a checking and savings account, purchased groceries, and had their own transportation. Significant differences between the low and high self-determination groups existed in the area of a checking account ( $\chi^2 = 4.75, p = .03$ ) or a savings account ( $\chi^2 = 5.34, p = .02$ ). Overall, the mean scores for the high self-determination group were 103.38 and 86.4 for the low group.

Based on results from the study, data were gathered that supported self-determination as an important educational outcome for youth with disabilities when it comes to positive outcomes after high school. However, the data collected did not control for varying educational opportunities such as cognitive strategies and academic skills instruction versus functional skills curriculum for students. Limitations also exist due to the data only showing 1-year post high school for students. Important implications exist in regards to the study. Educator focus should move toward explicit instruction in self-determination skills for students. This would also include emphasis on student involvement in their educational planning.

Ankeny and Lehmann (2011) examined the experiences of college students attending a community college transition program. The study sought to find out what the students viewed as being “self-determined” using qualitative narrative methods.

In the study, four participants that had successfully completed the college transition program were gainfully employed and living self-sufficient lives were selected. Each individual had received special education services while they were in public school. Three students were identified with an intellectual disability, and one student was identified with a learning disability. Qualitative measures were used in the study. A primary researcher who asked the participants to discuss their life events collected data, and these events were considered their life histories. The participants were told to think of their life as a book where they were asked a series of questions that were divided into chapters. Participants met individually with the researcher for three separate sessions that lasted for 1 hour.

After the interviews were conducted, three large themes emerged in the self-determination data. The first was personal factors associated with self-determination. The second was environments and experiences that foster self-determination. The third was the IEP meeting as a significant tool for building the skills that lead to self-determination. In personal factors associated with self-determination, the theme focused on participant dialogue about relevant supports, their own understanding of their disability, and their strategies for future success. Each of the participants identified individuals who supported them, identified their weaknesses in terms of their disability, and are involved in goal setting. The environments and experiences that fostered self-determination for the participants were places where they were allowed to practice making choices in their least restrictive environment. Each of the

participants identified the community college transition program as a challenging yet safe environment to take risks. Their positive choices were reinforced as they set and attained goals in this setting. Through the interview process, researchers also learned about the impact of the IEP process on self-determination for the participants. Only one of the four participants had run their own IEP meeting in high school. Each student was required to run his or her IEP meetings in the transition program, and each participant felt that they learned and implemented leadership skills by going through that process while in the program. They also felt that it was helping them in their current careers.

After interviewing the four students that were part of the transition program, researchers identified four areas of practice to build self-determination in students with disabilities. The first area of practice was promoting self-knowledge. The students interviewed were able to identify accommodations necessary to mitigate the effects of their disability. The second area of practice was complementing existing self-determination skills that they bring from home. The participants identified their home as the place that had the biggest influence on them for goal setting. This is an important idea to consider when teaching goal setting to students in the academic setting. Parents and teachers should work together to promote strategies that will be effective in the home and at school. The third concept was increasing opportunities to take risks. Students should have their strengths and weaknesses challenged in order to build self-determination. For some students, that may mean employment, living away from home, attending college, or attending a transition program. Finally, students should be offered opportunities for reflective practice. Each participant was given the opportunity to reflect on the

process of growth that they have been through. This allowed each participant to identify changes that they have made both internally and externally.

Lachapelle et al. (2005) evaluated the relationship between self-determination and quality of life for individuals with disabilities.

For their research, 182 adults identified with mild intellectual disabilities who were living in community settings were selected. These settings included living with family, living independently, or living in a supported environment. Participants selected were from Canada, the United States, Belgium, and France. Participants were given the Quality of Life Questionnaire, which is a 40-item rating scale designed to measure overall quality of life (QoL) for individuals with disabilities. It measures subscales on satisfaction, competence/productivity, empowerment/independence, and social belonging. Self-determination was measured using the Arc's Self-Determination Scale (SDS), which is a 72-item scale. This scale measures autonomy, self-regulation, psychological empowerment, and self-realization.

The researchers used the discriminant function analysis procedure, which indicated significant differences between the self-determination sub-scale scores based on quality of life group membership. Wilks' Lambda was also used and provided an indicator of differences between the means of identified groups on a combination of dependent variables for self-determination. For predictor variables, a single discriminant function was calculated with Chi-square = 48.241 ( $p=0.0001$ ) and Omnibus Wilks' Lambda = 0.76. Correlational analyses determined significant positive correlations between overall quality of life and self-determination scores ( $r=0.49$ ,  $p < 0.01$ ) on all but one subscale measure.

The data indicated that the four essential characteristics of self-determined behavior (autonomous functioning, self-regulation, psychological empowerment, and self-realization) predicted membership in the high quality of life group. Self-determination was suggested to enhance quality of life. Compared to previous studies, the mean quality of life scores were much higher, and the self-determination scores were much lower. One idea to be further explored is whether support services are effective at doing things for individuals with disabilities, but not effective at providing opportunities for individuals to do things for themselves. The low number of the participants was a limiting factor in the study. It is not possible to generalize the data between countries.

Nota, Ferrari, Soresi, and Wehmeyer (2007) examined the relationship among and between personal characteristics, self-determination, social abilities, and the environment of individuals with disabilities. This study followed past research on the correlation between self-determination and improved quality of life.

The study was conducted in Italy. It was part of a continued effort to examine self-determination across cultures. Participants involved were 141 individuals with intellectual disabilities. Of the participants selected, 98% were male. Participants selected ranged from individuals with mild intellectual disabilities to severe. Participants in the study ranged in age from 16 to 65. Participants varied in living conditions. Sixty-six participants lived in institutions, 24 lived in community-based assisted living or group housing, and 51 participants attended day centers. Quality of life data was collected for 90 of the participants, and three separate measures were used for the study. One measure included the Evaluation of Self-Determination Instrument (ESI); which is a 24-item survey used to assess self-determination



capacity. Another measure was the Evaluation of Quality of Life Instrument (EQLI), which consisted of 14 items that measured participants' quality of life within their institution. Healthcare workers and social workers that had known the participants for at least 1 year completed all measures. Each person responded to questionnaires for only one consumer after informed consent was obtained from the person or their family.

Preliminary analyses were conducted using an ANOVA to verify if self-determination, social abilities, and quality of life scores differed as a function of intellectual impairment. Discriminant function analysis was used to examine the degree IQ score, age, self-determination, and social abilities predicted quality of life status, as well as membership in high or low self-determination groups. Significant differences emerged on scores pertaining to self-determination as a function of the level of an individual's intellectual disability. This included self-determination in various daily activities, self-determination in activities and commitments, and self-determination in choices and desires. Significant correlations were found among IQ scores, self-determination, social abilities, and quality of life. The lower the participant scored on self-determination in their daily activities, emotional expression, and decision making indicators of higher self-determination, the higher their social abilities.

The study was helpful in investigating the role of IQ and age on self-determination, social abilities, quality of life, and residential or day activity living status of individuals with intellectual disabilities. Many limitations exist in the study. Individuals who knew the participants, and not the participants themselves determined self-determination, social abilities, and quality of life status. This means that there will be bias included based on the stereotypes and biases they hold in relation to individuals with disabilities. The study was also limited to

participants who were living or attending residential or semi-residential facilities. It did not include activities of employment, and the facilities labeled as residential or semi-residential in Italy may not be labeled the same or offer the same activities as those in another country.

Despite these limitations, significant correlations were found among IQ scores, self-determination, social abilities, and quality of life. IQ scores significantly correlated with self-determination in daily activities, commitments, and decisions, and with social abilities.

Participants' severity of intellectual disability was also a significant predictor of self-determination. Participants with more severe levels of intellectual disability showed the lowest levels of self-determination, QoL, and social abilities.

Carter et al. (2008) examined the efforts of educators to promote self-determination in high school classrooms. They looked at four different questions:

1. How do high school teachers evaluate the importance of providing instruction in each of the seven skill domains of self-determination?
2. To what extent do high school teachers actually deliver instruction in each of these domains?
3. Do general and special educators share similar priorities in the area of self-determination?
4. Are similar opportunities for receiving self-determination instruction available across diverse curricular areas?

Participants selected for the study were 340 educators working within eight ethnically and economically diverse high schools in a western state. Of the 340 educators, 255 were general educators. District size ranged from 6,193 to 30,901 students in urban and suburban

communities. Student enrollment averaged 1,417 students. The schools selected were representative of other secondary schools nationally with regard to size and poverty rate. However, Hispanic students were overrepresented and Caucasian and African American students were underrepresented. For the study, educators rated each of seven instructional skill domains related to self-determination: 1) choice-making, 2) decision-making, 3) goal-setting and attainment, 4) problem-solving, 5) self-advocacy and leadership skills, 6) self-awareness and self-knowledge, and 7) self-management and self-regulation skills. Teachers rated the importance of teaching each skill domain relative to other instructional priorities within the classroom. A 6-point Likert-type scale was used that ranged from low (1) to high (6). They then rated how often they explicitly taught each skill in the classroom. This ranged from never (1) to often (6).

Descriptive and correlational statistics were used to summarize the ratings of importance and actual instruction across survey respondents. Repeated measures of analysis of variance (ANOVAs) with simple contrasts compared to educators' ratings of importance and actual instruction across self-determinations were used with an adjusted alpha level of .002 using the Bonferroni correction procedure to adjust for the number of comparisons. One-way fixed-effects multivariate analyses of variance (MANOVAs) using the general linear model to evaluate differences in ratings of importance and actual instruction associated with teacher type and curricular area were used. Multivariate analyses were tested using Wilks's Lambda criterion produced the same decisions regarding statistical significance. ANOVAs were corrected for Type I error rate using Bonferroni adjustment based on the number of ANOVAs computed subsequent to each MANOVA, which produced a required significance level of .007.

For the first question of “how do teachers view the importance of providing instruction in self-determination?” educators attributed moderate to high levels of importance to each of the seven component elements of self-determination. More than two-thirds of educators rated problem-solving, self-management/self-regulation, decision-making, and goal-setting/attainment as being very important. ANOVAs revealed significant differences in ratings of importance among the seven domains. Follow-up contrasts indicated that problem-solving was rated significantly higher than all other domains. For “how often do teachers provide instruction in self-determination?” problem-solving was the only domain that more than two-thirds of educators reported frequently teaching. Self-advocacy/leadership was taught significantly less than all other domains. In response to the question of “what is the relation between importance of self-determination and actual instruction?” significant positive correlations existed for ratings of domain importance and instructional time for all seven domains. Finally, to answer the question of “do general and special educators share similar priorities related to self-determination?” MANOVA indicated a significant multivariate effect for program type. Special educators rated providing instruction in these areas as significantly more important than general educators for self-advocacy/leadership skills and self-awareness/self-knowledge skills. There were no significant differences on remaining items when using the 0.007 criterion. Implications for practice are that general education courses need to identify effective strategies that fully capitalize on opportunities to teach self-determination. Limitations are that findings were based on educator self-report; which introduced the potential for social desirability in ratings.

Martorell, Gutierrez-Recacha, Pereda, and Ayuso-Mateos (2008) aimed to determine which variables (sociodemographic variables, intelligence quotient, presence or absence of a

psychiatric disorder, functioning, self-determination, and behavior problems) could most reliably account for access to remunerated employment of individuals with intellectual disabilities.

Participants in the study were two groups of people with intellectual disabilities. Group 1 was 69 workers in a sheltered employment setting. Group 2 was 110 clients of sheltered work programs run by the Pardo-Valcarce Foundation in Madrid, Spain. Participants were assessed for IQ, functioning, behavioral problems, self-determination, and presence of psychiatric problems. Participants included 117 men and 62 women ranging in age from 20 to 65 years of age. The dependent variable was sheltered workshop versus sheltered employment program. Independent variables that were assessed were: IQ, using the Wechsler Adult Intelligence scale, functioning using the World Health Organization Disability Assessment Schedule-Second Version, behavioral problems using the Inventory for Client and Agency Planning, Self-Determination using the Arc's Self-Determination Scale, and psychiatric symptoms using the Spanish version of the Psychiatric Assessment Schedule for Adults with Developmental Disability.

Chi-square and t-tests were used for data analysis. For sociodemographic variables in both groups of participants, significant differences were found for age ( $p < 0.01$ ) and pension benefits ( $p < 0.001$ ). IQ showed no significant differences between the two groups of participants. Behavioral problems ( $p < 0.02$ ), Self-determination ( $p < 0.001$ ), and Functioning ( $p < 0.001$ ) showed significant differences. The presence of a psychiatric disorder ( $p < 0.002$ ) was also significant. Variables of presence or absence of a psychiatric disorder and self-determination were significant. Behavioral problems were not significant. Two additional analyses were performed to determine if functioning or self-determination subscales better explained work outcome. It

was found that work skills and participation in society were the most significant functioning domains. The autonomy domain of self-determination was the most significant area.

Results of the study show that work skills in the area of functioning and autonomy in the area of self-determination were the most significant for determining employment outcomes. Emphasis should be placed on enhancing work skills for individuals and reducing possible barriers in order to improve work outcomes for individuals with disabilities. Limitations of the study include the cross-sectional nature. This means it is not possible to validly determine causes and consequences. This makes it difficult when considering the role of self-determination. Participants selected were only diagnosed with a mild to moderate intellectual disability. This means the results do not generalize to individuals with more severe intellectual disabilities. Finally, the study was conducted in a single setting, which also limited the generalizability of the study.

Powers et al. (2012) looked at youth in foster care programs who were receiving special education services. Students in foster care disproportionately receive special education services and are at significant disadvantages. The goal of the research was to evaluate the efficacy of the TAKE CHARGE self-determination intervention for improving the transition outcomes of those highly at risk youth who are in both foster care placement and receiving special education services.

Two independent groups and three repeated measures were used. Sixty-nine youth (33 intervention and 36 comparison) were enrolled in three different study waves using random assignment to treatment or comparison group. They were assessed for baseline data, post-intervention, and 1-year post intervention. The criteria for selection were: students must be

receiving special education services, must be age 16.5 to 17.5 years of age, must be under the guardianship of Oregon Department of Human Services with at least 90 days in foster care, and attending a large school district in the study target area. The comparison condition was the Foster Care Independent Living Program (ILP) that provided independent living services and education to youth age 16 and older in foster care. Youth in the intervention group participated in TAKE CHARGE for 12 months. The intervention included two elements: weekly individual coaching sessions for youth in the application of self-determination skills to achieve self-identified goals and to carry out a youth-led transition planning meeting and quarterly workshops for youth with young adult mentors who were formerly in foster care.

Measures used were the Arc Self-Determination Scale, Quality of Life Questionnaire, Transition Planning Assessment, and the Outcome Survey. The outcome survey measured perceptions about their readiness for independent life. At baseline, 69 youth were assessed. At post-intervention, 60 youth were assessed. At 1-year follow-up, 61 youth were assessed. At post-intervention, 38% of the intervention group and 26% of the comparison group had completed their secondary education. One year later, this increased to 72% of the intervention group and 50% of the comparison group. In the area of employment, baseline data indicated that 14% of the intervention group and 19% of the comparison group were employed. Post intervention data showed that 34% of the intervention group was working in a paid job, while 16% of the comparison group was working a paid job. Finally, on the Arc self-determination scale, no difference in self-determination in the intervention and comparison group existed at baseline. However, the intervention group scored significantly higher on post-intervention and 1 year follow-up tests compared to the control group.

After the results were obtained, the TAKE CHARGE curriculum was shown to increase self-determination, quality of life, employment, high school completion, and independent living status of youth in foster care that were receiving special education services. This was the first study to use both experimental and longitudinal methods to document transition outcomes for any specific self-determination intervention. Caution should be used when drawing conclusions about the study due to the small sample size. However, the positive outcomes measured indicate the need to further explore more standardized forms of curriculum when it comes to transition planning for individuals with disabilities.

Wehmeyer, Palmer, Shogren, Williams-Diehm, and Soukup (2013) conducted research on curriculum designed to improve self-determination in students with disabilities. They wanted to establish a causal relationship between efforts to improve self-determination and the enhancement of self-determination for individuals with disabilities through the use of curriculum interventions.

The participants selected for the study consisted of 371 high school students receiving special education services in the areas of intellectual disability or learning disability. Participants were selected from six states: Arkansas, Kansas, Missouri, Nebraska, Oklahoma, and Texas. Participants ranged in age from 14 to 20 years old. Of the participants selected, 43% were female and 57% were male. The majority of the participants selected were Caucasian (54%). Teachers were also selected from 80 different high schools from the states involved in the study. The control group used a curriculum that would not directly affect scores on the dependent variables. The intent was to control for differential effects as a function of the intervention group receiving training and support on the various curriculums. The intervention groups were



randomly assigned and teachers selected from various research-based interventions designed to promote student self-determination. The first curriculum option was the ChoiceMaker Curriculum. This included three sections: Choosing Goals, Expressing Goals, and Taking Action. Each section has two to four teaching goals addressing six transition areas. The second option was the Self-Advocacy Strategy. In this curriculum, students progress through a series of lesson plans that focus on seven instructional stages: orient and make commitments, describe, model and prepare, verbal practice, group practice and feedback, individual practice and feedback, and generalization. The third curriculum is called Steps to Self-Determination. Students are taught lessons involving modeling, cooperative and experiential learning, lecture, and discussions. The fourth curriculum is called Whose Future Is It Anyway? It is 36 lessons introducing students to transition, transition planning, and self-directed instruction. The categories taught are: self and disability awareness, making decisions about transition related outcomes, identifying and securing community resources to support transition, writing and evaluating transition goals and objectives, communicating effectively in small groups, and developing skills to become an effective team member, leader, or self-advocate. The fifth curriculum option was the Self-Determined Learning Model of Instruction (SDLMI). This curriculum teaching is based on self-determination, the process of self-regulated problem solving, and research on student-directed learning. Finally, the sixth curriculum option was the NEXT S.T.E.P. Curriculum. This curriculum uses video and print materials to help students become involved in transition planning, self-evaluate transition needs, identify and select transition goals and activities, conduct their own transition planning meeting, and monitor their own transition plans.

Data were collected using the Arc's Self-Determination Scale and the AIR Self-Determination Scale. The AIR Self-Determination Scale assesses student capacity and opportunity for self-determination. The student self-report version (AIR-S) contains 24 questions. Data showed an increase in AIR-S scores over time, a significant intervention group effect, and a significant intervention group by time interaction. The intervention group showed significantly more positive increases over time. On the Arc's Self-Determination Scale, data showed an overall increase in self-determination scores over time, but a nonsignificant intervention group effect, and group by time interaction, which suggests no initial mean-level differences between intervention and control groups. It also showed a consistent pattern of increasing scores on the self-determination scale over time. This was regardless of intervention or control group assignment.

This study suggests that implementing self-determination interventions results in significant changes to student self-determination. Students who participated in the study over a 3-year period showed significant positive patterns of growth in self-determination scores compared to the control group. There were differences in projected growth between both the AIR-S and Arc's Self-Determination Scale. The AIR-S showed significant growth over the 3 years of the study. This is due to the AIR-S measuring different constructs of self-determination when compared to the Arc scale. For instance, the AIR-S measures opportunity for self-determination; which would increase for all students being exposed to a self-determination curriculum. Within the study, a limiting factor was the use of several different curricula. More research is needed to compare the curriculum in order to identify differential effects.

Wehmeyer, Shogren, Palmer, Williams-Diehm, and Little (2012) studied a self-determination curriculum model. They looked specifically at the Self-Determined Learning Model of Instruction (SDLMI), and its impact on self-determination in students with disabilities in various disability categories.

Participants selected for the study were 312 high school students identified as having either an intellectual disability or learning disability. Students were selected from 20 districts in three states: Kansas, Missouri, and Texas. Participants were age 13.5 to 21.3 years old. Of the participants selected, 137 were female, and 175 were male. The majority of participants selected were Caucasian (55%). The study was conducted over 2 years in order to examine the impact of the SDLMI on student self-determination. Random assignment was used to select the treatment and control groups. In the control group, students received their regular instruction within their program at their respective school. The treatment group instructors were trained in the SDLMI, and taught it to their students. The second year of the study, the control group used the SDLMI and the treatment group continued instruction with SDLMI. The SDLMI teaches students how to reach self-directed goals. There are three phases in the SDLMI. Students must work to solve a sequence of problems that move them from where they are to where they want to be. Students must set goals to meet needs, create a plan to meet the goals, and make adjustments to their plans. The students use a 4-step problem-solving sequence where they: 1) Identify the problem, 2) Identify potential solutions, 3) Identify barriers to solving the problem, and 4) identify consequences to each solution.

Data were analyzed using the Arc's Self-Determination Scale and the AIR Self-Determination Scale. Statistics were explored using the structural equation modeling (SEM)

technique. This was done in order to represent latent constructs without measurement error in order to reduce bias in the estimate of both latent means and effect sizes. This also allows for statistical comparisons of similarities in means, variance, correlation, and regression relationships measured. For each construct, parcels are used for indicators. Parceling combines scale items into a single parcel using the mean of the items. Latent mean comparisons were done, and there were significant differences across measurements for the treatment and control groups. Within group comparisons, the intervention group showed significant improvement on the AIR Self-Determination Scale and the Arc's Self-Determination Scale. Intervention participants went from .00 to .30 units on the AIR scale and from .00 to .24 on the Arc's Self-Determination Scale. Chi-square difference tests showed that both scores were significantly different from zero. Between groups analysis showed that on the AIR scale, the control group initially showed higher self-determination levels, but the intervention groups' levels improved at a much faster rate.

Results of the study indicate that the SDLMI was effective at increasing levels of self-determination for individuals with disabilities. When separated by disability category, students with intellectual disabilities had overall lower self-determination scores than individuals with a learning disability. These differences were only significant on the AIR Self-Determination Scale. Because the study was conducted 1 and 2 years post high school for students, there was a level of attrition in participation. Student data were also limited to self-report measures on the AIR and Arc's Self-Determination Scales.

Shogren, Wehmeyer, Palmer, Rifenbark, and Little (2013) looked at the efficacy of self-determination interventions in secondary school to examine the relationship between reported

self-determination status when exiting high school and adult outcomes 1 and 2 years post high school.

Participants were 779 students with disabilities from Arkansas, Kansas, Missouri, Nebraska, Oklahoma, and Texas. Students were from 50 school districts. Participants were involved in a previous study examining the impact of self-determination curricula. All participants have Individualized Education Programs (IEPs) while in high school. The participants were part of the previous 3-year study and were given either the ChoiceMaker, NEXT S.T.E.P., Self-Advocacy Strategy, Self-Determined Learning Model of Instruction, Steps to Self-Determination, or Whose Future Is It Anyway curriculum. Students were given the Arc's Self-Determination Scale, as well as an adult outcomes survey. This measured employment, community access, financial independence, independent living, and satisfaction with life.

For the study, all items being analyzed were rescaled to the same metric using proportion of maximum scoring (POMS). This is where its maximum possible score divides the given value. Statistics were extracted using the structural equation modeling (SEM). This was done because the SEM does not inform the latent construct and because longitudinal and cross-group factorial invariance can be tested. It also allowed the data to be analyzed beyond single indicators of outcomes and examine outcome constructs that are defined by multiple indicators. Test results measured 11 constructs intended to examine the relationship between self-determination and post school outcomes.

Data indicated that post school outcomes are very complex to measure. When examining the data from the study, it was shown that a student's current levels of self-determination predicted their future levels of self-determination. Data also showed that self-determination

status at Year 3 predicted community access at Trial 4 and 5. It was also found that self-determination status at time three did not predict independent living or life satisfaction, and also showed a significant negative relationship with financial independence at Trial 5. A relationship was also not found between self-determination and life satisfaction. In differences based on exposure to self-determination interventions, the control and treatment group students in the study showed reduction in community access and employment 2 years post school. The reductions were lower in the treatment group. Although a negative relationship existed for financial independence and self-determination, the treatment group still had higher levels of independence than the control group. It is important to understand that self-determination and post-school outcomes are very complex and have many variables. Transportation is often an issue for individuals with disabilities that affects employment, independent living, and community access.

Farmer, Allsopp, and Ferron (2015) researched the impact of the Personal Strengths Program (PSP) on self-determination levels of students with learning disabilities (LD) and/or Attention Deficit Hyperactivity Disorder (ADHD) at the college level.

Participants were seven students identified as having LD and/or ADHD, and who were enrolled full time in college. Five of the students were enrolled in undergraduate courses and two were enrolled in graduate programs. The study used a multiple baseline design that included fixed baseline and intervention phase lengths to evaluate the effectiveness of the PSP. The study was conducted over the course of one semester. The PSP is designed to be an 8-week program that teaches students how to identify their strengths and use them to achieve weekly goals related to their academics. Sessions for the PSP occur 1 time per week for 1 hour. Students meet with a

personal strengths coach who facilitates the curriculum. Each session follows the components of goal setting, planning, progress monitoring, and reflection on progress. Session topics include: self-awareness, character strengths, learning strengths, assertive communication and negotiating skills, using feedback appropriately, and generalizing and maintenance. The curriculum is based off of research from positive psychology, self-determination, and effective interventions for students with LD and/or ADHD. Data sources used include time series data, the Self-Determination Student Scale (SDSS), session notes, and participant interviews. The SDSS is a 92-item self-report measure of cognitive aspects related to self-determination.

For the time series data, non-parametric effect sizes—percentage of non-overlapping data (PND) and percentage of data points exceeding the median (PEM) were used. For the SDSS, descriptive and inferential statistics were used. Inferentially, the Wilcoxon Rank-Sum Exact Test and Wilcoxon Signed-Rank Exact Test were used. The Wilcoxon Rank-Sum Exact test compares scores from two groups and was used for differences in scores from pre to mid assessment from rank ordered scores of 1 to n, with 1 being the lowest and n being the highest. The Wilcoxon Signed-Rank Exact Test compares dependent scores from a group. It was used to examine if a statistical difference exists between pre and post-assessment for each participant. Session notes and participant interviews were coded independently.

Results of the study showed little overall intervention effect across participants on time series data. For the PND values, it was indicated that there were no intervention effects associated with participation in the PSP. The PEM individual values showed that there was an intervention effect for participants. When PEM values were compared to the mean across participants, there was little evidence of an intervention effect. On session notes and participant

interviews, six of the seven participants felt like their data showed that they had improved their levels of self-determination. Three patterns came up. They were: 1) increase in self-determination levels from a typical semester; 2) responded differently to questions at different points in the study; and 3) uneasiness with new skills. Even though the traditional analyses of time series data results showed little to no treatment effect, the results indicate a social validity to participation in the PSP. Participants reported improved self-awareness and self-regulation. They also reported that learning about strengths, goal setting, and planning to achieve goals were the most beneficial. Limitations of the study are the short time period of the study and small sample size.



### **Chapter 3: Conclusions and Recommendations**

The purpose of this research paper was to examine how self-determination affects post school outcomes for individuals with disabilities. Chapter 1 provided background information on the topic, and Chapter 2 presented a review of the research literature. In this chapter, I discuss conclusions, recommendations and implications from research findings.

#### **Conclusions**

Six of the 11 studies focused on self-determination as a predictor for positive adult outcomes (Ankeny & Lehmann, 2011; Lachapelle et al., 2005; Martorell et al., 2008; Nota et al., 2007; Shogren et al., 2013; Wehmeyer & Schwartz, 1997). Five of the studies focused on curriculum designed to increase self-determination (Carter et al., 2008; Farmer et al., 2015; Powers et al., 2012; Wehmeyer, et al., 2012; Wehmeyer et al., 2013).

In the six studies that examined self-determination as a concept that predicted post school outcomes, the studies shared positive outcomes. Two studies focused on the transition from high school to adulthood (Shogren et al., 2013; Wehmeyer & Schwartz, 1997). It was found in Wehmeyer and Schwartz that self-determination levels positively affected the desire to live independently even if the student did not live outside of the home after high school. Shogren et al. showed that higher self-determination levels upon leaving high school predicted positive outcomes in achieving employment and community access. In Lachapelle et al. (2005) and Nota et al. (2007), self-determination levels were shown to be a predictor for high or low quality of life based on the Quality of Life Questionnaire. In Martorell et al. (2008) self-determination was one of the predictors for sustained employment in a work program.

Some of the studies that measured the concept or construct of self-determination levels differed from the target transition population I sought to examine. For instance, Lachapelle et al.

(2005) and Martorell et al. (2008) both examined populations that were already in a group living situation. Individuals were not assessed while in school for self-determination levels. This was similar to Nota et al. (2007). That study focused on factors for sustained employment for individuals who were already placed in a sheltered work environment. Also, Ankeny and Lehmann (2011) used qualitative research to determine themes related to self-determination, but they did not use any specific scale such as the Arc Self-Determination Scale to measure levels of self-determination for the individuals in the study.

For the studies that measured curriculum interventions, Powers et al. (2012), Wehmeyer et al. (2012), and Wehmeyer et al. (2013) all found that student levels of self-determination show a significant increase from baseline to post-intervention when a research-based self-determination curriculum was used. Each study used a different curriculum, and the results were positive across the studies. The three studies were also conducted over the course of 2 to 3 years. Wehmeyer et al. (2012) conducted surveys 1 and 2 years post high school as well. These students continued to show high levels of self-determination compared to the control group of students who participated. These three studies strongly support my research question and indicate that self-determination positively affects post school outcomes for transition age youth with disabilities.

Besides the three studies that showed positive growth for students who received self-determination curriculum instruction, one study did not show significant growth for students. In Farmer et al. (2015), students were given the Personal Strengths Program (PSP). This was a specific self-determination curriculum that worked on identifying personal strengths and setting goals with a program coach. There was no significant intervention effect for the participants of

the study. The sample size for the study was small; only seven students participated in the study. The study was also conducted during one semester of college. It is interesting to note that in the exit interviews, six out of seven of the participants reported feeling more self-determined after completing the personal strengths program even though there was no intervention effect. In Carter et al. (2008), a specific curriculum was not measured. The study sought to get the input of special educators and general educators and examine their views on the importance of self-determination skills and rate how often they currently teach the skills. General education teachers taught the skills most frequently that were related to their content area such as problem solving and decision-making. Special education teachers had a more balanced approach and valued self-advocacy more than general educators.

Overall, eight of the 11 studies contained positive outcomes for individuals with disabilities in regards to high self-determination levels. In the studies that measured self-determination levels and examined outcomes (Ankeny & Lehmann, 2011; Lachapelle et al., 2005; Martorell et al., 2008; Nota et al., 2007; Shogren et al., 2013; Wehmeyer & Schwartz, 1997), individuals showed higher levels of employment, community access, and a stronger desire to live independently than individuals who scored lower on self-determination measures. In studies that examined self-determination curriculum (Powers et al., 2012; Wehmeyer et al., 2012), students showed increased levels of self-determination, increased quality of life, higher rates of graduating high school, higher rates of attending college, and higher rates of employment than students who were not exposed to a specific self-determination curriculum.

## **Recommendations for Future Research**

Within the research, six studies listed the complexity of self-determination as a limitation. In some studies, self-determination was viewed more as a construct or set of beliefs. In other studies, it was listed as a set of skills and beliefs that could be taught explicitly through a curriculum. The studies also included difficulty with identifying how much other variables, like environment, influenced self-determination levels of individuals. Additional research is needed with a more concrete set of skills and attitudes for self-determination.

Another issue in six of the studies was the measures used for self-determination. Many of the research articles included self-report measures for self-determination. This can be problematic if the individual does not understand how to interpret the self-report data. Parent report data was also used in some of the studies. This introduces the same predicament as the self-report data. Self-report and parent report data can also include bias. Future research should aim to develop more reliable measures of self-determination, including observational methods.

Three studies cited the sample size as being inadequate. Ankeny and Lehmann (2011) conducted their study with four participants. Farmer et al. (2015) conducted the research with seven participants. Powers et al. (2012) completed their study with 69 participants; however, the study focused specifically on individuals with disabilities receiving special education services in a foster care setting. This limits the generalizability of the studies. Additional research should replicate existing studies with larger sample sizes.

In addition, four studies suggested more research needed to be done on the effectiveness of specific self-determination curricula. Carter et al. (2008) suggested that specific interventions

needed to be looked at more closely. Wehmeyer et al. (2012) completed a longitudinal study with several curricula, but could not attest to the effectiveness of one over the other. Powers et al. (2012) completed research on a specific curriculum, as well as Wehmeyer et al. (2012). Future research should focus on specific interventions and examine the effectiveness for diverse groups of individuals with disabilities as well as students that do not have disabilities.

Because only one study (Farmer et al., 2015) examined self-determination curriculum interventions at the college level, future research should also explore the effects of self-determination for college students with disabilities. Research in this area would provide a better look into what developmental education programs at colleges could do to help struggling learners at the collegiate level. It would have the potential to keep students in school and on track to graduate if an effective intervention is found.

### **Implications for Current Practice**

As a high school special education teacher, transition planning is an integral part of the IEP process for a student's educational programming. It is an area that is extremely important because it maps out a student's future. In order to best serve students, I feel it is highly important to teach self-determination skills. I do not look at it as functional skills or non-academic skills. Self-determination skills are a part of every class, and they are a part of everyday life. The studies I selected supported what I sought to find out. I wanted to know how self-determination affects post school outcomes for students with disabilities. Eight out of 11 studies showed that self-determination levels and self-determination skills are beneficial to individuals.

Throughout this process, I learned that self-determination skills are extremely important to teach. I began exploring the curricula listed. Some of the older versions are available online

for free. Some of the newer curricula are fairly expensive, but they would be empowering to have in the classroom as part of an academic skills class. I feel one of the bigger challenges moving forward will be trying to get support from the administration that self-determination skills are valuable to teach and should be invested in because self-determination skills still seem like functional skills to many people.

To me, self-determination skills are not a fad or a trend. In my future practice, I will be working with students more closely in our transition courses and will be teaching more seminar courses. I would like to teach one of these curriculum strategies because they have been shown to be effective. The transition process and self-determination skills match up for all students. Students can use these skills if they are going to college, and they can use them just as readily if they are planning to enter the workforce after high school.

### **Summary**

Overall, the findings of these studies were positive. The curriculum-specific studies were especially promising. Students who were taught a specific self-determination curriculum experienced higher self-determination levels, higher quality of life ratings, higher levels of employment, and higher levels of community access. Teaching self-determination skills and curriculum can change the way we approach education for individuals with disabilities by allowing us to look at the whole person and examine how we can help individuals become the happiest and most successful they can be, regardless of if they are on a college or career track.

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