

*Deborah Russo
Jameson
Self-Determination
and Success
Outcomes of
Two-Year College
Students with
Disabilities*

This two-phase study integrated quantitative and qualitative research methods to investigate the relationship between success outcomes of two-year college students with disabilities and self-determination, and how students with higher and lesser degrees of self-determination understand and describe the outcomes of their post-secondary experience. The ARC Self-Determination Scale (Wehmeyer & Kelchner, 1995) and the Demographic and Outcomes Survey (researcher developed) were used in the quantitative phase. In the qualitative phase, follow-up interviews were conducted with four participants using Wehmeyer's framework of self-determination. Results suggest that individuals with higher degrees of self-determination describe highly self-determining behaviors and have more positive success outcomes than those with lesser degrees of self-determination.

Two major movements have occurred in the last 20 years in the name of equality of opportunity in a democratic America. One is the Disabilities Movement in higher education (Adelman & Vogel, 1990); the other is the Self-Determination Movement (Ward & Meyer, 1999); Wehmeyer, 2000. To date, the Self-Determination Movement has made little impact in higher education. As such, any relationship between the success of college students with disabilities and self-determination remains largely unexamined.

Throughout the history of our country, young adults with disabilities have maintained minority status on college campuses. Nonetheless, the

passages of Section 504 of the Rehabilitation Act of 1973, the Education for All Handicapped Children's Act of 1975 (now called the IDEA-Individuals with Disabilities Act), and particularly the Americans with Disabilities Act (ADA) of 1990 have led to increases in the percentage of freshmen entering college with reported disabilities. Further, requests for "reasonable accommodations" for those with physical, learning, or emotional disabilities have become commonplace. These students, too, are in search of the American Dream. In America, it is believed that every individual should have equality of opportunity to pursue the American Dream of individual advancement and upward mobility. It is taken for granted that "higher education should provide ladders of upward mobility" (Brint & Karabel, 1989, p. 5).

Yet, despite efforts in this direction, are students with disabilities in higher education experiencing real success and a real chance at the American Dream? Few post-secondary studies have dealt with such outcomes. Those studies that do exist remain unclear about the reasons for successful outcomes for students with disabilities, and report mixed results (Greenbaum, Graham, & Scales, 1995; Horn & Bobbitt, 1999; Vogel & Adelman, 1990; Vogel, Hubrey, & Adelman, 1993;). The emergence of self-determination research has attempted to respond to the challenge of understanding positive and negative success outcomes in disabled populations (Durlak & Rose, 1994; Wehmeyer, 1995a, 1997).

The primary goal of this study was to investigate success outcomes of two-year college students with disabilities and determine whether or not self-determination might be linked to positive success outcomes (Wehmeyer, 1997) and successful pursuit of the American Dream. Although there is not universal agreement on the meaning of self-determination, the following definition will be used for purposes of this study:

The attitudes and abilities required to act as the primary causal agent in one's life and making choices and decisions, regarding one's quality of life, free from undue external influence or interference... An act or event is self-determined if: a. The person acted *autonomously*; b. The behaviors were *self-regulated*; c. The person initiated and responded to events in a *psychologically empowered* manner; and d. The person acted in a *self-realizing* manner. (Wehmeyer, 1995b, p. 17)

Success outcomes were defined in both measurable and experiential terms. Measurable outcomes in Phase I were defined as retention success in college, successful GPA at the time of the study, and employment success (for participants who had either graduated or departed from college). Experiential Outcomes in Phase II were based on follow-up interviews that focused on selected participants' description of their post-secondary experiences within the construct of Wehmeyer's framework for self-determination.

Methods

As Hathaway (1995) suggested, the best approach, especially for institutional researchers at colleges and universities, is to combine qualitative and quantitative paradigms in order to strengthen the results of research endeavors and enhance the ability to understand “what is going on” (p. 555). Kenneth Howe (1992) pointed out that “...human beings are neither wholly passive and determined, nor wholly active and self-creating...” (p. 243). Thus an integrated study would serve as a compromise to help explain and provide a better account of what is going on. Such an approach helps to “make educational research serve a democratic society” (p. 255). In a society such as ours, which embraces the notion of democracy and equal opportunity, disabled populations of post-secondary students must also *speak* to the empirical findings, which result from the traditional positivist approach. This study, then, will be separated into two phases in an attempt to tap the relative strength of both approaches in order to add breadth and depth to the findings (Jick, 1979; Mathison, 1988; Rossman & Wilson, 1985).

Research Site

The college from which the data were gathered was founded in 1900. It is a private, primarily two-year, open-access, career-oriented, post-secondary institution. It is representative of other private junior colleges and many public ones as well. Its founder believed in providing individual encouragement and assistance to all students, and this tradition is still part of the college's mission today. The college consists of one “traditional” day division campus in a small city. It serves primarily traditional-age college students (recent high school graduates). The college also has five continuing education campuses. Records of documented disabilities are housed in the learning center, as are Basic Skills Assessments, mandatory for incoming day division students. Accordingly, these records were accessed in order to identify students who disclosed either formally or informally since 1993.

Phase One: Quantitative

The following hypothesis guided the design and procedures of the quantitative phase: *Students with more positive post-secondary outcomes possess higher degrees of self-determination, as determined within the construct of Wehmeyer's framework, than those with less positive success outcomes.*

Procedures

From 1993 to February, 2002, the total population of students accepted at the college who either formally or informally disclosed a physical,

emotional, or learning disability was 303, (282, Day; 21, Continuing Education or CE). Two hundred and fifty-five students were selected to be part of the initial mailing; 48 students had only just begun their post-secondary program and there were no outcomes to analyze.

Instrumentation

The *Arc Self-Determination Scale* (Wehmeyer & Kelchner, 1995) is a 72-item self-report scale with 148 possible points within the 4 self-determination domains. Some items are weighted more than others. Table A1 in the appendix includes domain and sub-domain categories and possible points within each. The scale provides data on a global (total) self-determination score, as well as the four essential characteristics (called domains) of self-determination and their sub-domains. Below is a review of each major domain of the scale.

Domain 1. This measures *autonomy*, which involves an individual's independence and degree to which he or she acts on the basis of personal beliefs, values, interests, and abilities—more specifically self- and family-care activities, self-management activities, recreational activities, and social and vocational activities.

Domain 2. This measures individual *self-regulation* and is composed of two sub-domains: (a) interpersonal cognitive problem solving and (b) goal setting and task performance.

Domain 3. This measures *psychological empowerment* that involves the various dimensions of perceived control and whether the individual has an internal locus of control (an understanding of the relationship between actions and outcomes, as opposed to an external locus of control such as fate, luck, chance).

Domain 4. This measures student *self-realization* and a basic understanding of one's strengths, weaknesses, abilities, and limitations, as well as the ability to utilize these attributions to positively influence one's quality of life.

The Arc's Scale was normed with 500 students with and without cognitive disabilities in rural, urban, and suburban school districts in five states. Wehmeyer, Kelchner, and Richards (1996) empirically validated the definitional framework used in this scale with a sample of 408 adults with mental retardation and developmental disabilities. They found that self-determined individuals were significantly different from individuals who were not (indicated by performance or non-performance of behaviors generally agreed upon to reflect self-determination) on measures of each of the four essential characteristics. The scale's concurrent criterion-related validity was established by showing relationships between the *Arc's Self-Determination Scale* and conceptually related measures. It

had adequate construct validity established by factor analysis and discriminative validity as well as adequate internal consistency.

For purposes of this study, a few minor adaptations were made to the scale with the permission of Wehmeyer (2001). The main revisions included a change in some of the wording and phrases to reflect a more generic population rather than an adolescent population. Wehmeyer concluded that neither validity nor reliability was affected by these changes.

The Demographic and Outcomes Survey was researcher developed for the purposes of this study. It was the intent that the *demographic* section would collect background information about the participants. Questions included: year applied to the college, major, gender*, age*, ethnic origin*, high school diploma or GED, concerns about college financing*, motivation for attending college*, assignment to a developmental writing and/or math class, and type of disability. The starred information above has been shown to predict retention, though not necessarily for students with disabilities, at four-year colleges and universities (Astin, 1993).

The *outcomes* section was designed to gain information about the following success outcomes:

Retention status. Student was still enrolled in an Associate Program, graduated from an Associate Program, transferred to a Bachelor Program (all positive outcomes) or dropped out of college (negative outcome).

Self-reported cumulative GPA. This reflected the student's GPA at the time of graduation or departure, or, if still enrolled, present cumulative GPA. The self-reported GPA was verified with official records in the registrar's office. A GPA of 2.0 or higher was considered a positive outcome; below 2.0 was considered a negative outcome.

Employment and salary status. This was ascertained if the student was no longer enrolled due to graduation or departure). Full-time employment (either in the major area of study or non-major) was considered a positive outcome. Questions regarding part-time employment and salary were also asked for descriptive analysis only.

An initial "Invitation to Participate" was sent to the 255 students identified as possible participants. Lack of response and mailings returned with no forwarding address prompted the researcher to resend other mailing to 138 individuals. This mailing included an invitation to participate, a cover letter, a consent form to participate in the study, a form asking participants to select from a choice of three restaurants in appreciation for participating, and an invitation to participate in the qualitative phase of the design. In addition, the *ARC Self-Determination Scale* and the *Demographic and Outcomes Survey* were included with a postage-paid return envelope. All individuals received a follow-up phone

call to verify that they had received their package. Final returns yielded 48 completed scales and surveys.

Treatment of the Quantitative Data

All *Arc Scales* were corrected using the extensive scoring guidelines in *The Arc's Self-Determination Scale: Procedural Guidelines* (Wehmeyer, 1995). The researcher attached the *Arc* scoring sheet to each of the 48 scales returned. The results of each section of the test were color coded to identify different domains set forth in Wehmeyer's framework. The corresponding color codes were as follows: Maroon = *Global Self-Determination*; Orange = *Autonomy* and its sub-domains; Red = *Self-Regulation* and its sub-domains; Blue = *Psychological Empowerment*; Green = *Self-Realization*.

Once all *Arc Scales* were scored and analyzed, scores for all domains and sub-domains were organized into an Excel spreadsheet. Scores were recorded, using tables supplied by Wehmeyer, to reflect a raw score, a percentile score (to allow for comparison with the normed sample), and percentage scores which represented percentage of positive responses. Only the raw scores and the percentage scores were used in this study.

The data obtained from the outcomes section of the *Demographic and Outcomes Survey* were organized into Excel as well. The results were then sorted according to the three success outcomes: Successful (S)-Not Successful (NS) Retention; Successful (S)-Not Successful (NS) GPA; and Successful (S)-Not Successful (NS) Employment. These categories, as well as the total self-determination raw scores, were extracted from the Excel Database and imported into the (SPSS) statistical software system. Independent sample *t*-tests were performed for each success outcome (Retention, GPA, Full-Time Employment) and the Total Self-Determination Scores to determine whether the differences in the means of each outcome were statistically significant. This procedure enabled the researcher to examine whether the mean of the self-determination scores was higher for the group who experienced positive success outcomes in any of the three categories of success.

Results of Phase I

Descriptive analysis of the demographic section of the *Demographic and Outcomes Survey* revealed that the majority of the respondents were white (44), female (34), between the ages of 20-24 (28), single (38), and without children. Though the participants reported a variety of majors, the most commonly sought-after ones were Communications (7), Business (6), Early Childhood (4), and Criminal Justice (4). Thirty-eight had

entered college between 1997 and 2001, and 33 had submitted formal disclosures. Learning Disability (LD) was the most commonly reported disability with 12 reporting LD alone, and 16 more disclosing LD with Attention Deficit Hyperactivity Disorder (ADHD) or Emotional Disability (ED), 5 reporting ADHD alone, 3 reporting ADHD with ED or other, 5 reporting ED alone, and 2 ED or other: 2 with Orthopedic, 2 Speech and Language (S & P), and 1 Hearing Impaired (HI).

The outcomes section of this survey revealed that of the 48 participants, 76% had retention success, to include 15% who graduated from an Associate Program, 21% who went on to graduate from a bachelors program, and 40% who were still enrolled. Twenty-four percent had dropped out. Eighty-one percent of the 48 had successful GPA's above a 2.0. Of the 30 possible participants who could be working full-time (FT), approximately 47% were FT, 27% were Part-Time (PT), and 27% were unemployed.

Detailed *t*-test analysis of the relationship between higher degrees of self-determination and retention success revealed that of the 48 participants, 12 had no retention success and a mean self-determination score of 90.42, with a standard deviation of 29 and standard error of mean 8.37. The 36 individuals with retention success had a mean self-determination score of 110.78 with a standard deviation of 14.01 and standard error of mean 2.24. The relationship between higher degrees of self-determination and GPA success revealed that of the 48 participants, 9 had no GPA success and a mean self-determination score of 86.22, with a standard deviation of 30.79 and standard error of mean 10.26. The 39 individuals with GPA success had a mean self-determination score of 110.18 with a standard deviation of 14.57 and standard error of mean 2.33. In terms of the relationship between higher degrees of self-determination and employment success, of the 48 participants, 14 had no FT employment success and a mean self-determination score of 91.79, with a standard deviation of 26.45 and standard error of mean 7.07. The 16 individuals with employment success had a mean self-determination score of 118.38 with a standard deviation of 14.19 and standard error of mean 3.55.

Tabulation of statistical significance indicated a probability value of .002 for retention, a probability value of .001 for GPA, and a .002 for FT employment. The effect size of each success outcome was also important in that it strengthened the practical significance of the data (Gall, Borg, & Gall, 1996). Cohen (1988) suggests cut-offs for small, medium, and large effect sizes, .20, .50, and .80 respectively. Results of this analysis indicated a significant difference in the self-determination groups in each success category. Effect sizes of each outcome were as follows, with Retention and GPA having a fairly large effect size and Employ-

ment very large: Retention = .72; GPA = .78; Employment = 1. (See Table 1 below).

$$\text{Effect Size} = \frac{\text{Mean of S-Mean of NS (No Success)}}{\text{SD of NS}}$$

Table 1
Summary of Significance Tests

	Level of Significance	Effect Size
Retention	0.002	0.72
GPA	0.001	0.78
Employment	0.002	1

Finally, retention and GPA were found to yield a similar success outcome based on a Cross Tabulation Analysis. Only one of those with success in Retention had no success in GPA and four with no success in Retention had success in GPA, thus identifying, at least in this study, that GPA and Retention yield a similar success outcome.

Results indicate that students with more positive post-secondary outcomes possess higher degrees of self-determination, as determined within the construct of Wehmeyer's framework, than those with less positive success outcomes.

Phase Two: Qualitative

Once data were obtained and analyzed in Phase One, the qualitative phase (follow-up interviews) was designed and carried out based on the following question:

How do two-year college students with disclosed disabilities and varying degrees of self-determination describe their post-secondary experience within the construct of Wehmeyer's framework?

Procedures

Total Self-Determination scores on the *Arc Scale* ranged from 27 to 140. Using the data from the Retention Success Outcome, the 48 participants were placed into four categories: High Self-Determination with Retention Success (HSD/S); High Self-Determination with no Retention Success (HSD/NS); Low Self-Determination with Retention Success (LSD/S) and Low Self-Determination with no Retention Success (LSD/NS). (Note: GPA was not used for this phase because it yielded results similar to Retention, as found in a cross-tabulation analysis; the Employment Outcome

was not used because it was limited in population size to only 30 of the 48 participants).

Given the results of the previous phase, the goal was not only to tap into what students with degrees of high and low self-determination understood about their degree of success, but also to gain an understanding of those participants who could be described as Low Self-Determination with success (LSD w/S) and High Self-Determination with no success (HSD w/NS). Within the two High Self-Determination groups, students with the highest scores were selected for an interview. Within the Low Self-Determination groups, the students with the lowest scores from each were selected, taking into consideration the participants from the quantitative phase who said they were interested in participating in the qualitative phase. Pseudonyms were given to each participant for confidentiality.

Table B2 in the appendix shows scores and retention outcomes of the final selection of the four interviewees. Included are Global (Total) Self-Determination and major domain scores (both raw and percent of positive responses) on the *Arc Scale*, as well as Retention Success Outcomes as reported on the *Demographic and Outcomes Survey*.

The Interview Structure

Seidman (1998), in *Interviewing as Qualitative Research*, presented what he referred to as the "Three Interview Series." This series represents a model of in-depth phenomenological interviewing that is conducted in three separate interviews: (a) Interview One: Focused Life History; (b) Interview Two: The Details of the Experience; and (b) Interview Three: Reflection on Meaning.

Seidman recommended doing the three separate interviews on three separate days for 90 minutes each. However, he suggested alternatives to this structure could include conducting the three interviews in the same day. In an attempt to maintain the integrity of a separate interview series, Seidman's framework was adapted to three 30-45 minute intervals, with 3-5 minute breaks.

Interview Questions

The following questions guided the interview series:

Interview one: Focused life history. Reconstruct your early educational experience as it relates to your disability. Give as many details and tell as many stories as possible. How did this all lead you to enroll in college?

Interview two: The details of the experience. What is/was your college experience like as a college student with disabilities? Give as many details and tell as many stories as possible.

Interview three: Reflection on the meaning. Given what you have said in these last two responses, how do you understand where you are now in terms of your experience as a college student with a disability and your feelings of success in your present life?

Follow-up and clarifying questions within each interview by the interviewer maintained the integrity of the above questions and stayed within the structure of the interview. At no time during the interviews was the term *self-determination*, or any of its domains or sub-domains, introduced directly by the interviewer.

All interviews were tape-recorded to reduce bias (Gall et al., 1996, p. 320) using two separate tape-recorders. One tape-recorder broke during the last interview and the back-up was invaluable. Each participant signed a consent form.

Treatment of the Qualitative Data

Each interview was transcribed verbatim (Creswell, 1994; Denzin & Lincoln, 2000; Miles & Huberman, 1984; Seidman, 1998; Strauss & Corbin, 1998; Wolcott, 1994) using a tape-recorder with a foot pedal for facilitation of a process that is estimated to take 4 to 6 hours for each 90-minute tape (Gall et al., 1996; Seidman, 1998). Such "word for word" transcription was used in accordance with the thinking of Vygotsky (1987), who believes that each word a participant speaks reflects his/her consciousness. To reduce bias, no attempts to analyze data were made during the interviews or during the transcription phase. Once transcriptions were complete, the researcher read them several times and then carefully color-coded responses in each interview that related to any of the domains and sub-domains of self-determination. The color-coding matched the coding in the quantitative section: Orange = *Autonomy*; Red = *Self-Regulation*; Blue = *Psychological Empowerment*; Green = *Self-Realization*. All coding was initially done on paper, rather than from the computer, because, as Seidman suggested, there can be a significant difference between what one sees in text on paper and the same text shown on screen.

The researcher then read the interviews again, this time on the computer, and began the "winnowing out" process in order to craft a profile of each participant's story (Seidman). These stories were used as a way of understanding the individuals, their behavior, and finally their understanding of their post-secondary experiences within the construct of Wehmeyer's self-determination framework. The three-series interview structure was used in crafting the profiles to tell the participants' stories. This structure helped in understanding the early experiences of these individuals. This is particularly important to research on self-determi-

nation because as Wehmeyer suggested, the development of a person's ability to act in a self-determined manner cannot happen overnight or in only one environment. It can vary across time based on changes in environments, circumstances, and learning or development that are affected by variables across multiple environments, such as home, school, and community, and across the life span (Wehmeyer, 1997). This interview structure, then, allowed for an understanding of the individual's behavior, as it related to self-determination and success, through the years, not just for one moment in time, as would have been the case had the research design ended at the quantitative phase, or if the interview questions had related only to present circumstances or actions.

Summative Findings: Qualitative Phase

Individual findings were recorded and analyzed. Then, results of the individual profiles were combined into a broader scope to compare and contrast the descriptions of their post-secondary experiences.

Carol and Ed, despite having different genders and very different types of disabilities, were identified as having low self-determination (by the *Arc Scale*) and described their post-secondary experiences in negative terms. Their profiles suggest that their *autonomous behavior* is limited. Carol (LSD/S), a 22-year-old Caucasian female, has changed her major multiple times in the last year. She has both learning and emotional disabilities, including Bi-Polar Disorder and Post-Traumatic Stress Syndrome. Ed (LSD/NS), a 21-year-old Caucasian male, has an orthopedic disability, a self-proclaimed "chip on his shoulder," and is wheel-chair bound. He described a supportive family, although he reported that his mother had left years ago. Ed's is the only disability that is not "hidden," yet he rarely uses any local support systems in place for him. Though both Carol and Ed recognized the right choices to obtain more positive success outcomes in their post-secondary lives, both find themselves unable to follow through consistently on those choices. The negative outcomes seem to feed feelings of failure, which in turn leads to making additional negative choices. Carol and Ed described a vicious cycle of negative choices and negative outcomes.

In contrast, both Mary and Harry, despite having different disclosed disabilities, gender and age, described more positive post-secondary outcomes than did Carol and Ed. Mary (HSD/NS), a 20-year-old Caucasian female majoring in Criminal Justice, indicated that she has ADHD. Mary's respect for her parents is evident throughout her stories. She reported that she feels like she has let them down by her recent decision to drop out of college. However, Mary stated that she is moving toward her goals, despite the fact she dropped out. Harry (HSD/S), a

36-year-old Caucasian male in the Physical Therapy Assistant Program, transferred and graduated from another similar program in the state. Harry indicated that he has severe dyslexia and LD. Harry's stories show that he has support and encouragement from many people through the years, which he willingly accepted. Both Mary's and Harry's stories reflect *highly autonomous behavior*. They seem to know what choices would yield more positive results and are able to follow through on those choices and learn from them. For Mary and Harry, the cycles of independent choice, despite the outcomes, provide opportunity to make and follow through on additional independent choices to reach their goals the next time around.

The findings of Mary's and Harry's profiles clearly show us what sets them apart from those of Carol and Ed, particularly in terms of *self-regulatory behavior*. Their stories suggest the importance of having a "clear path" and being able to identify problems, think through those problems, craft a plan to solve those problems, and then follow through on that plan. Harry remarked, "I have pushed through every obstacle that has been in my way so far...I push when I need to push and re-group and move on." His and Mary's stories are in sharp contrast to the stories told by Carol and Ed. Carol stated, "I'd like to be successful, but I don't have a plan and I don't find myself successful." Though Carol and Ed seem able to identify the problems and even to think through them, they seemed less able to craft a plan to solve them, and even when they do, they are unable to follow through. Within the context of the research question, Carol and Ed further described post-secondary experiences that lack such problem-solving and goal-setting components. Carol and Ed have an excuse for not taking any opportunity that came their way. Carol feels that solutions to her problems are not possible, and Ed frequently blames others for not being able to solve his.

Regarding *psychological empowerment*, Carol and Ed, who, though on the surface recognize that their actions have outcomes, albeit negative, told stories which suggest they lack the control or feelings of empowerment to change those actions. Mary and Harry, on the other hand, generally believe that if they put their "mind to it" or "keep pushing" and "re-grouping," they will have positive outcomes as such. They described their post-secondary experiences as fairly positive. Carol vacillates between understanding the relationship between her actions and outcomes and behaving totally "out of control." "I am a quitter basically," she said. In sharp contrast, Mary emphasized, "I don't let my disability hold me back...if I want to do it...if I put my mind to it, I'm gonna do it...I am not a quitter." She claims nothing will stop her from reaching her goals, "unless I die." Harry's stories made it clear that he perceives control

over many of his outcomes by “pushing...and re-grouping,” but he is also cognizant of the fact that he has had tremendous support systems throughout his life. And although Ed recognizes that his behaviors have alienated others, he has failed to effect any changes within himself to control his actions. “My way is my way and that’s it...it’s just a case of being Ed...that’s how I am.”

Finally, though all four participants have a general understanding of their disabilities and consequent limitations, the biggest difference in terms of *self-realization* is Mary’s and Harry’s ability to make attempts to use such understanding to effect positive outcomes. Further, Mary, despite her young age and her decision to withdraw from college, described a more positive post-secondary experience than not only Ed and Carol, but also, to some extent, Harry, due in large part to her acceptance and self-realization of the limitations of her disability. “I learn better hands-on, getting in there and doin’ it...so I’m doing that.” Harry, at least, admitted that he had “tried to live a normal life” and doesn’t want to accept the limitations of his disability. He now wants wanted to try to make that acceptance a priority. Carol and Ed, perhaps because of their general lack of self-determination, do not seem to be at that point with their final stories, although Ed does conclude that “flunking out of college” made him realize he has to “try and figure something out...to get the ball rolling...I feel success coming.” Carol, on the other hand, maintained that “It’s just a big mess.”

Overall, these broader findings, that combine all four individuals within Wehmeyer’s framework and in the context of the research question, show that Carol and Ed, with low self-determination, shared stories of behaviors that are less autonomous, less self-regulating, less psychologically empowering, and less self-realizing than did Mary and Harry, with high self-determination. As a result, Carol’s and Ed’s post-secondary experiences were generally described negatively and without much hope, while Mary’s and Harry’s were described in more positive, hopeful terms.

Phase 1/II: Integrated Results

The researcher integrated the results to determine whether *complementarity*, *development*, *initiation*, or *expansion* had occurred. *Complementarity* seeks elaboration, enhancement, illustration, or clarification of the results from one method with the results from the other method. *Development* seeks to use the results from one method to help develop or inform the other method, where development is construed to include sampling and implementation, as well as measurement decisions. *Initiation* seeks the discovery of paradox and contradiction, new perspectives

of frameworks, the recasting of questions or results from one method with those from the other method. *Expansion* seeks to extend the breadth and range of inquiry by using different methods for different inquiry components (Greene et al., 1989, p. 258).

In all cases, where the interview participants had a higher self-determination score on the *Arc Scale*, the participant's interview profile related behaviors that could be described as highly self-determining. Conversely, for those students with low self-determination scores, their stories showed characteristics of low self-determination based upon Wehmeyer's framework.

The quantitative phase showed that college students with disabilities and more positive success outcomes have higher self-determination. The profiles, however, told us a lot more about the complexity of the issue of self-determination and success. Based on the findings in the *Demographic and Outcomes Survey* and the *Arc Scale*, Carol had retention success, but very low self-determination, (LSD/S), thus representing a seemingly negative case in terms of the results of the quantitative analysis. However, the qualitative phase complements the findings of the quantitative analysis in that the outlook for potential future positive success for Carol, despite her present surface retention success, seems bleak. What looked like retention success in the quantitative phase is not perceived as that by Carol. She had the worst semester ever, thinks that her GPA has recently fallen below a 2.0, and will likely be on probation. In addition, she stated that she does not "feel successful" at all. Had she participated in the quantitative phase three months later, the results may have been low self-determination and no success. However, without the qualitative phase such conclusions could not have been made.

Conversely, Mary did not have college retention success, but did have high self-determination (HSD/NS), again representing a negative case in terms of the results of the quantitative analysis on retention. However, Mary did have success in the quantitative findings regarding FT employment. There is again *complementarity* of results with the qualitative findings; Mary did not experience success in retention; she dropped out of college. Nor did Mary describe herself as successful in college. However, in terms of employment, Mary did have positive success outcomes and thus she did "fit" with the research hypothesis. She does have an FT job and is pursuing positive goals toward her chosen career, despite the fact that she did not have retention success.

Harry had both success in college and high self-determination (HSD/S), as found in the *Survey* and the *Arc*. Again there is *complementarity* of results with the analysis of the qualitative phase. Harry reported success in his college experiences. He graduated with a Bachelors Degree in

Sports Management and an Associates Degree in Physical Therapy. Yet his profile showed that he was experiencing negative success outcomes in employment. Although he was able to find an FT job in something other than his major, he was not experiencing success, at least according to him, in his chosen profession. In terms of employment then, Harry's profile does not complement the findings of the quantitative results, nor does it *initiate* the findings. Rather, *expansion* of the findings of the quantitative phase adds to the breadth and range of the inquiry by showing the complexities of what it means to be successful within Wehmeyer's framework.

Ed, with low self-determination and no college success (LSD/NS), experienced negative success in all three outcomes. Though the quantitative phase of the design did not clearly investigate this relationship, the fact that there was a relationship between high self-determination and success leads us to speculate that the reverse—low self-determination and no college success with negative success outcomes in all three areas—could be proven. In any case, the findings of this phase, using just the results of the *Survey* and the *Arc*, show there exists *complementarity* of results in the qualitative phase. Ed clearly expressed his lack of success in all areas of his life to date.

Discussion

In terms of the quantitative phase, because the study was not experimental and lacked controls inherent in more sophisticated research designs (Gall, Borg, & Gall, 1996), a cause-effect relationship was limited. Further, as a primary participant in the research site, the researcher may be considered biased and students still currently enrolled may have felt it a requirement to participate. For the majority of the participants who were no longer enrolled, either due to graduation or departure; the researcher assumed less of a position of power over their responses. Another limitation was that since participation was voluntary, "the subjects are likely to be biased" (Gall, Borg, & Gall, 1996, p. 238). This limitation affects both the qualitative and the quantitative phases. However, the two-phase design helps reduce bias since there is no monopoly on inference (Denzin, 1970; Trow, 1957).

In the qualitative phase, the researcher's consciousness played a major role in the interpretation of interview data; however, because the interviews were tape-recorded and transcribed word for word, that consciousness was integrated with the participants' words as fully and as accurately as possible, thus reducing bias (Seidman, 1998). Although there was danger, as suggested by Seidman, in forcing the excerpts of interview text into pre-determined categories, care was taken to

thoroughly review the interview data, keeping as true as possible to the detailed descriptions of each of the domains and sub-domains as outlined by Wehmeyer. Further, at no time during the interviews was the framework mentioned, thus allowing for the three-part interview structure to do its job in eliminating forced responses to fit a pre-determined framework.

Although the findings of this study will provide implications for further study, generalization on any large scale was limited by the use of only one research site (in the quantitative phase) and the underlying assumptions of qualitative research. However, within the context of this study, the findings of the quantitative phase found that college students with disclosed disabilities and more positive success outcomes have higher degrees of self-determination. And although qualitative research does not lend itself to large-scale generalization within the context of this study and within the construct of Wehmeyer's self-determination framework, some "naturalistic generalizations" can be made (Stake, 1995, p. 85). The researcher believes that the in-depth "three interview series" and the extensive methods used to craft and analyze each participant's profile lend themselves to such naturalistic generalizations and conclusions. As previously mentioned, Wehmeyer suggested that the development of a person's ability to act in a self-determined manner cannot happen overnight or in only one environment (Wehmeyer, 1997, p. 7). Input variables across multiple environments and across the life span seem to be evident in the development of the participants' self-determination and the way they understand and describe their success.

The combined findings of the four participants suggest that despite the age, gender, and type of disability of each participant, the two individuals with low self-determination described more negative post-secondary experiences than the two individuals with high self-determination within the framework established by Wehmeyer.

The profiles crafted tell us a lot more about the complexity of the issue of self-determination and success than does the quantitative phase. First, a positive success outcome within the framework of low self-determination may not necessarily be "positive." Second, though the ability to behave in highly self-determined ways appears to be positive, it didn't guarantee success for all participants in this study in the same way or at the same time. Finally, though statistical evidence does not support the conclusion that students with negative success for all three outcomes (as defined in this study) have lower degrees of self-determination, one of the participants selected for an interview fell into this category, the results of which are compelling and should not be ignored.

In sum, the results of the integration of phases suggest that in all cases

there has been *complementarity* of findings and in one there has been *elaboration* of findings. What the qualitative phase accomplished was to help demonstrate a better understanding of the relationship between self-determination and success outcomes, as well as to explore the complexities of success for college students with disabilities. The strength of the integration, then, lies in the fact that it has provided, "...a better philosophical account . . . so as to serve a democratic society" (Howe, 1992, p. 254).

Final Thoughts

American schools and colleges, and society, in general, should look at the link between self-determination and success, particularly among those in the disabled populations. Such attention could lead to the exploration of better advising systems and programs to assist individuals not only in the development of self-determining behavior, but also in crafting a clear path for their future based upon their strengths and limitations. Such systems must include multiple environments across the life span and should begin in elementary school, continue through middle, high school, and post-secondary environments, and include all aspects of the individual's environments. Future research in this area might include a study to determine if the type and severity of disability has any correlation to the success outcomes of college students with disabilities, despite degrees of self-determination. Another important study would be one to determine if having a clear "path" or goal prior to enrolling in college, which takes into account the individual's strengths and limitations, affords more opportunity for successful post-secondary outcomes. And finally, most important for this researcher, a qualitative follow-up study to the qualitative phase of this present study to determine how the four interview participants have come to understand and describe their success outcomes over time, within Wehmeyer's (2000) self-determination framework, would strengthen this study's conclusions.

References

- Americans with Disabilities Act of 1990., 2, 3, 42 U.S.C.A § 12132 U.S.C. § 12182a.
- Adelman, P., & Vogel, S. A. (1990). College graduates with learning disabilities employment attainment and career patterns. *Learning Disability Quarterly*, 13, 154-166.
- Arc. Feb. 2007. Retrieved {Month, day, year, from <http://www.thearc.org>
- Astin, A. W. (1993). *What matters in college: Four critical years revisited*. San Francisco: Jossey-Bass.
- Brint, S., & Karabel, J. (1989). *The diverted dream: Community colleges and the promise of educational opportunity in America, 1900-1985*. New York: Oxford University Press.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: L Erlbaum Associates.

- Creswell, J. W. (1994). *Research design: Qualitative & quantitative approaches*. Thousand Oaks, CA: Sage.
- Denzin, N. K. (1970). *The research act in sociology*. London: Butterworth.
- Denzin, N. K., & Lincoln, Y. (2000). *Handbook of qualitative research* (2nd ed.). Thousand Oaks, CA: Sage.
- Durlak, C.M. & Rose, E. (1994). Preparing high school students with learning disabilities for the transition to post-secondary education: Teaching the skills of self-determination. *Journal of Learning Disabilities*, 27(1), 51.
- Education for Handicapped Children Act, Public Law § 94-142 (S. 6) (1975) (now codified as Individuals with Disabilities Act -IDEA).
- Gall, D. M., Borg, W. R., & Gall, J. P. (1996). *Educational research*. White Plains, NY: Longman.
- Greenbaum, B. Graham, S., & Scales, W. (1995). Adults with learning disabilities: Educational and social experiences during college. *Exceptional Children*, 61(5), 460.
- Greene, J. C., Caracelli, V., & Graham, W. F. (1989). Toward a conceptual framework for mixed-method evaluation designs. *Educational Evaluation and Policy Analysis*, 11(3), 255-274.
- Hathaway, R. S. (1995). Assumptions underlying quantitative and qualitative research: Implications for institutional research. *Research in Higher Education*, 36(5), 535-562.
- Horn, L., & Bobbitt, L. (1999). Students with disabilities in post-secondary education: A profile of preparation, participation and outcomes. *National Center for Education Statistics*. Washington, D.C.: U.S. Department of Education.
- Howe, K. (1992). Getting over the quantitative debate. *American Journal of Education*, 236-256.
- Individuals with Disabilities Act (IDEA) of 1997. (1997). Public Law 105-17.
- Jick, T. D. (1979). Mixing qualitative and quantitative methods: Triangulation in action. *Administrative Science Quarterly*, 24, 602-611.
- Mathison, S. (1988). Why triangulate? *Educational Researcher*, 14.
- Miles, M. B. & Huberman, A. M. (1984). *Qualitative data analysis: A sourcebook of new methods*. Beverly Hills, CA: Sage.
- Rehabilitation Act of 1973 (1973). U.S.C. § 794(a).
- Rossmann, G. B., & Wilson, B. L. (1985). Numbers and words: Combining quantitative and qualitative methods in a single large scale evaluation study. *Evaluation Review*, (9)5, 627-643.
- Seidman, I. (1998). *Interviewing as qualitative research* (2nd ed.). New York: Teachers College Press.
- Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Thousand Oaks, CA: Sage.
- Trow, M. (1957). Comment on Participant observation and interviewing: A comparison. *Human organization*, 16, 33-35.
- Vogel, S., & Adelman, P. (1990). Intervention effectiveness at the post-secondary level for the learning disabled. In T. Scruggs & B. Wong (Eds.), *Intervention research in learning disabilities* (pp. 329-344). NY: Springer-Verlag.

- Vogel, S., Hubrey, P., & Adelman, P. (1993). Educational and psychological factors in successful and unsuccessful college students with learning disabilities. *Learning Disabilities Research and Practice, 8*, 35-43.
- Vygotsky, L. (1987). *Thought and language* (A. Kozulin, Ed.). Cambridge, MA: MIT Press.
- Ward, M. J. & Meyer, R. N. (1999). Self-determination for people with developmental disabilities and autism: Two self-advocates' perspectives. *Focus on Autism and Other Developmental Disabilities, 14*(3), 133-140.
- Wehmeyer, M. L., & Kelchner, K. (1995). *The ARC's self-determination scale*. Arlington, TX: The ARC.
- Wehmeyer, M. L. (1995b). The ARC's self-determination scale. *Procedural Guidelines*. Arlington, TX: The ARC.
- Wehmeyer, M. L., Kelchner, K., & Richards, S. (1996). Essential characteristics of self-determined behavior of individuals with mental retardation and developmental disabilities. *American Journal on Mental Retardation, 5*, 291-305.
- Wehmeyer, M. L. (1997). *Whose future is it anyway?* Final report and field-test results. Arlington, TX: The ARC.
- Wehmeyer, M. L. (2000). Riding the third wave: Self-determination and self-advocacy in the 21st century. *Focus on Autism and Other Developmental Disabilities, 15*(2), 106-116.
- Wehmeyer, M. L. (2001). Permission to use ARC Self-Determination Scale.
- Wolcott, H. F. (1994). *Transforming qualitative data*. Thousand Oaks, CA: Sage.

Appendix: Table A1 The Arc Self-Determination Domains/Sub-Domains

	Raw score-possible points
Global (Total) Self Determination Score	148
Domain 1: Autonomy	96
Sub-domain. Independence I: Acting Independently	18
Sub-domain. Independence 2: Acting on Basis of Preferences, Beliefs, Values and Abilities	12
Sub-domain. Choice: Leisure and recreation	18
Sub-domain. Choice: Community Involvement	15
Sub-domain. Choice: Post School Direction	18
Sub-domain. Choice: Personal Expression	15
Domain 2: Self-Regulation	21
Sub-domain. Interpersonal Cognitive Problem Solving	12
Sub-domain. Goal Setting and Task Performance	9

Domain 3. Psychological Empowerment 16

Domain 4. Self-Realization 15

Appendix: Table B2 Self-Determination Scores/ Retention Outcomes of Interview Participants

	Raw scores	% Positive response	Retention
Global(Total) Self-Determination			
Carol LSD/S	80	54%	S
Mary HSD/NS	134	91%	NS
Harry HSD/S	140	95%	S
Ed LSD/NS	63	43%	NS
Autonomy			
Carol	50	52%	
Mary	85	88%	
Harry	96	100%	
Ed	48	50%	
Self-Regulation			
Carol	13	62%	
Mary	19	90%	
Harry	15	71%	
Ed	6	31%	
Psychological Empowerment			
Carol	12	75%	
Mary	16	100%	
Harry	16	100%	
Ed	5	31%	
Self-Realization			
Carol	5	33%	
Mary	14	93%	
Harry	13	87%	
Ed	4	27%	

Deborah Jameson is currently the Director of Graduate Teacher Education Programs and Teacher Certification Officer, Division of Graduate Studies, at Franklin Pierce College in Manchester, New Hampshire. She was formerly the Associate Dean of the Center for Teaching, Learning and Assessment at Hesser College in Manchester, New Hampshire, a two year, private post-secondary institution. She holds a B. A. in English/Secondary Education, and an M.Ed. in Reading. She received her Ph.D in Education with concentrations in Administration/Supervision and Disabilities Studies from the University of New Hampshire. She may be contacted at: Franklin Pierce College, 670 North Commercial St., Jefferson Building, Center Tower-Second Floor Suite 206. Manchester, NH 03101, (603) 669-3596, Fax: (603) 626-4815, E-mail: jamesond@fpc.edu. This two-phase study integrated quantitative and qualitative research methods to investigate the relationship between success outcomes of two-year college students with disabilities and self-determination, and how students with higher and lesser degrees of self-determination understand and describe the outcomes of their post-secondary experience. The ARC Self-Determination Scale (Wehmeyer & Kelchner, 1995) and the Demographic and Outcomes Survey (researcher developed) were used in the quantitative phase. In the qualitative phase, follow-up interviews were conducted with four participants using Wehmeyer's framework of self-determination. Results suggest that individuals with higher degrees of self-determination describe highly self-determining behaviors and have more positive success outcomes than those with lesser degrees of self-determination.