

Long-term Outcomes of Services for Two Persons with Significant Disabilities with Differing Educational Experiences: A Qualitative Consideration of the Impact of Educational Experiences

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Abstract: Though research exists related to effective services in inclusive general education settings for students with significant disabilities, there are no longitudinal investigations of adult outcomes for persons with significant disabilities who received services in inclusive general education settings. This study uses qualitative methods to describe two persons with significant disabilities across settings over time. After originally receiving special education services together in a self-contained special education class in middle school, these individuals then received services in different types of settings (i.e., one received services in self-contained special education settings and one received services in inclusive general education settings) for the remainder of their educational careers. Findings indicated that the individual who received services in inclusive general education settings appeared to have achieved better adult outcomes as reflected in performance in community living and work contexts, interactions with schoolmates and co-workers, independent participation in naturally-occurring activities, and quality and size of a natural support network. In addition, the findings suggest the importance of a “benefactor” on the quality of long-term outcomes achieved by individuals with significant disabilities.

The documented benefits of inclusive education for students with significant disabilities are many. Research reveals higher teacher expectations of students, increases in appropriate social behaviors, increased interactions with others, more positive affect, increased friendships, and improved communication skills, as well as improvements in academic behaviors and an increased likelihood of participation in other inclusive settings (e.g., McLaughlin, Ryndak, & Alper, 2008; Ryndak & Fisher, 2003). Although the literature includes critiques of various studies about inclu-

sive education and arguments suggesting that inclusive education may have a negative impact upon learners (e.g., Sandler, 1999), no investigations were found that provided performance data on students with significant disabilities or their general education classmates that argued against inclusive education. (For summaries of research regarding inclusive education for students with significant disabilities see Fisher & Ryndak [2001]; McGregor & Vogelsberg [1998]; Ryndak & Fisher.) In fact, Sharpe, York, and Knight (1994) found the opposite—that when serving students with significant disabilities in inclusive general education classes there was no detrimental effects on the educational outcomes of the general education students in the class. In addition, Peck, Staub, Gallucci, and Schwartz (2004) found that parents of general education stu-

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dents in classes that included students with significant disabilities indicated that placing their children in the inclusive classes resulted in several social benefits for their children.

Fisher, Sax, and Jorgensen (1998) noted that in the United States, the educational system is expected to contribute to the preparation of children for the demands of success as adults (see also Lipsky & Gartner, 1997). In addition, Turnbull, Turnbull, Wehmeyer, and Park (2003) suggested the use of a quality of life framework when considering post-school outcomes for adults with disabilities. Considering these concepts together the expectation is that, when students with disabilities exit school, they will be prepared for adult life, their lives will be enriched, and their participation in typical community activities, employment, and residences will be enhanced. Indeed, these assumptions still are reflected in current discussions about access to general education, curriculum, and assessment implications of No Child Left Behind and the Individuals with Disabilities Education Improvement Act (2004) (Browder, Spooner, Wakeman, Trela, & Baker, 2006; Lee et al., 2006; Wehmeyer, 2006).

Unfortunately, follow-up studies of special education graduates have indicated that the outcomes of schooling often were inconsistent with expectations for positive post-school adjustment (Blackorby & Wagner, 1996). The results of several researchers (e.g., Edgar, 1987; Haring & Lovett, 1990; Johnson et al., 1995) repeatedly have indicated that, following graduation, students with significant disabilities: (a) typically are socially isolated, with little contact with peers who do not have disabilities; (b) experience high rates of inactivity; (c) experience a low level of employment and that, even when they are employed, seldom work a full week and earn very low wages; (d) generally live with a parent, guardian, or relative; and (e) are seldom involved in activities outside of the home.

The National Organization on Disability (2000) issued a comprehensive report on adult outcomes for students with disabilities. The data cited in that report were dismal across all disability labels, but particularly for individuals with the most significant disabilities. These individuals were almost totally de-

pendent on IEP and transition teams during high school for present and future educational decisions, received limited instruction in decision-making, received very little training related to job skills either at school or in the community, and were uninformed about how to obtain continued services after exiting school. As a result, follow-up studies revealed social isolation, continued reliance on parents for residential needs, and unemployment or underemployment that resulted in reliance on Supplemental Security Income (SSI) and Medicaid waivers to bring incomes up to the poverty level.

Several researchers have identified strategies that can lead to more successful adult outcomes (Anderson-Inmann, Knox-Quinn, & Szymanski, 1999; Caldwell & Heller, 2003; Doren & Benz, 1998; Head & Conroy, 2005; McGlashing-Johnson, Agran, Sidlington, Cavin, & Wehmeyer, 2004; Wehmeyer & Palmer, 2003; White & Weiner, 2004). These strategies include access to general education settings (Ryndak, Morrison, & Sommerstein, 1999; Zafft, Hart, & Zimbrich, 2004), vocational training both at school and in community job settings (McGlashing-Johnson et al.; White & Weiner), instruction leading to self-determination (Caldwell & Heller; Head & Conroy; McGlashing-Johnson et al.; Wehmeyer & Palmer, 2003), and assistance to parents in learning how to advocate for their children and obtain and maintain services for them when exiting school (Wang, Mannan, Poston, Turnbull, & Summers, 2004).

Emphasizing access to general education settings and curricula, accountability, valued membership in peer groups, and facilitation of friendships that may lead to natural support networks, inclusive education has been considered not only a practice that is consistent with civil rights, but also a way to alleviate the shortcomings and discouraging outcomes of follow-up studies, such as those cited above. Although existing research indicates that inclusive education can benefit students with significant disabilities during their school years (Fisher & Meyer, 2002; Ryndak et al., 1999), there have been no longitudinal follow-up investigations of the lives of individuals with significant disabilities who experienced inclusive education over extended periods of time. There has been no research to date that

determines whether such individuals lead more satisfying lives after leaving school, than those whose educational experiences were in self-contained special education settings.

This investigation begins to address some of these questions by examining how two individuals with significant disabilities functioned across settings over time. These two individuals originally received special education services together in a self-contained special education class during Year One of this study. The last month of that academic year the young woman began receiving services in general education settings, and she remained in those settings during her last six years of educational services (see Ryndak et al., 1999, for a description of her services and performance in the self-contained and general education settings). The young man, however, remained in self-contained settings for the duration of his educational career. Having had no contact during the years they received special education services in different settings, these individuals met again as adults, developed a relationship, and married. Thus, this couple offered a naturally-occurring opportunity that might suggest long-term effects of instructional settings on their overall performance both immediately, 4 years, and 8 years after exiting school services.

Method

Two individuals with significant disabilities participated in this qualitative study. These individuals and the methods used to describe them and the services they received over time are described below.

Participants

Participants were selected using purposeful sampling because of their mutual experiences at different times in their lives. During Year 1 of this study the first author met both participants and the family of one of the participants, Melinda, because of her family's advocacy efforts for the development and implementation of effective services for her in general educational settings. At that time observations were conducted of Melinda's self-contained special education class, in which the other participant, Phillip, was also a student. At that time Melinda was 15 years of age

and was labeled as having cognitive disabilities or multiple disabilities, although school and district personnel consistently described her as having "severe disabilities." She was reading at a 2nd grade level, using math at a 3rd grade level, and used speech that was intelligible only to people who were familiar to her during interactions that frequently were inappropriate. Phillip was 16 years of age and was labeled as having cognitive disabilities, although school and district personnel described him as having "mild to moderate disabilities." He was reading at a 2nd grade level, using math at a 3rd grade level, and used speech that was intelligible to all peers and adults during frequent and appropriate interactions. During the observations field notes were written related to the services delivered to all of the students in the class, as well as the students' performances in the class.

Melinda and Phillip met again as adults when both were 25 years old, although Phillip was several months older than Melinda. Both were receiving support through the Medicaid Waiver. They and their parents and/or legal guardians were approached to determine whether they would be interested in participating in a study about: (a) the participants' educational experiences and performance during those experiences; (b) the participants' lives immediately after exiting school services; and (c) the participants' current lives. Great care was taken to ensure that the participants and their parents/guardians understood and approved every aspect of this study.

Data Collection

In his discussion of qualitative research methodology Patton (2002) stated that "meaningfulness and insights generated from qualitative inquiry have more to do with the . . . capabilities of the researcher than the sample size" (p. 245). Three of the researchers for this study have demonstrated expertise in qualitative research methodology, and two of these researchers were intimately involved with all aspects of this study. Three of the researchers collaborated to collect information on the participants using various qualitative methods.

First, consistent with qualitative research methodology related to the use of artifacts

TABLE 1

Summary Descriptors of Melinda Across Years (Note: Italics indicate more positive outcomes).

<i>Year 1: In Self-Contained Special Education Classes for 3 Documented Years</i>	<i>Exiting School After Inclusive Contexts for 6 Years</i>	<i>Meeting After Adult Living for 4 Years</i>	<i>After Adult Living for 8 Years, Married for 1 Year</i>
Walks with special education shuffle	<i>No longer walks with special education shuffle</i>	<i>Lives alone in own apartment</i>	<i>Shares an apartment with Phillip</i>
Needs high level of supervision	<i>Works independently</i>	<i>Has held part time job in the court system for 3 years</i>	<i>Has held part time job in the court system for 7 years; permanent employee with full benefits</i>
Demonstrates low maturity level	<i>Demonstrates excellent level of growth during high school and college years</i>	<i>Has an extensive natural support network</i>	<i>Has expanded her natural support network</i>
Is disruptive in segregated classroom	<i>Uses strategies to assist with processing difficulties</i>	<i>Uses coping strategies to assist with processing difficulties</i>	<i>Has increased the life spaces in which she participates</i>
Is regressing academically	<i>Growth/interest</i>	<i>Uses literacy at work and in daily life</i>	<i>Is self-assured and confident across contexts</i>

and records (Hammersley & Atkinson, 1995; Mason, 1996), the researchers worked with the participants and their parents and/or guardians to obtain records and artifacts relevant to the participants' educational and adult services, as well as the participants' performance levels over time. For this study records were collected starting with two years prior to Melinda and Phillip being placed in the same self-contained special education class during Year One of this study, at the age of 15 and 16 years, respectively. Melinda's earlier records indicated that for the previous two years she had been in self-contained special education classes. Her records after Year 1 indicated that her placement changed and she was included in general education classes, with supports and services, for the remainder of her educational experiences up through age 21. Phillip's earlier records indicated that for the two years prior to Year 1 he had received services in self-contained special education classes. His records after Year 1 indicated that he remained in self-contained special education classes through the remainder of his educational career, until age 22. In addition to determining their educational placement, the

participants' records and artifacts were collected for analysis related to performance levels in academic content, functional activities, interactions with others, and overall behavior.

Second, consistent with the use of interviews in qualitative research (Kvale, 1996; Mason, 1996; Rubin & Rubin, 1995; Strauss & Corbin, 1998), the researchers conducted interviews with the participants, their families and, when possible, their current service providers. For the purposes of this study, only interviews conducted with school personnel related to the performances of all students in the self-contained special education class were used from Year 1 (see Tables 1 and 2). After Melinda and Phillip remet as adults, however, interviews were conducted with them and their parents and/or legal guardians, related to their services and performance levels over time. Both retrospective and current information was requested. In addition interviews were conducted with their current Medicaid Waiver personnel who provided support in their independent living situations and community access. At the participants' request, no interviews were conducted with their co-work-

TABLE 2

Summary Descriptors of Phillip Across Years (Note: Italics indicate periods of hope for positive outcomes).

<i>Year 1: In Self-Contained Special Education Classes for 3 Documented Years</i>	<i>Exiting School After Segregated Classes for 6 More Years</i>	<i>Meeting After Adult Living for 4 Years</i>	<i>After Adult Living for 8 Years, Married for 1 Year</i>
<i>Appearance and behaviors are age-appropriate and consistent with peers; looks average</i>	Is anxious with others and depressed	Lives with his family in the parents' house	<i>Shares an apartment with Melinda</i>
<i>Requires moderate level of supervision</i>	Demonstrates behaviors indicative of very low self-esteem	Has lost several jobs	<i>Has a part-time job in the community</i>
<i>Demonstrates moderate maturity level</i>	Fears making mistakes and displeasing others	Works in a sheltered workshop for tokens	<i>Has increased the life spaces in which he participates</i>
<i>Is compliant and not disruptive in segregated class</i>	Is reluctant to interact with others	Has only family members in his natural support network	<i>Uses members of Melinda's natural support network for his own support</i>
<i>Participates willingly in activities that require functional academics</i>	Is regressing academically	Has had difficulties in the community	<i>Uses advocates when in difficulty</i>
		Uses functional literacy only when necessary	Is anxious with others, requiring frequent reassurance

ers, employers, or employment support personnel.

Each interview was conducted by one or more of the researchers and audiotaped. While some interviews were conducted with one individual (e.g., a service provider), most interviews were conducted with more than one interviewee present. For instance, the parents and/or legal guardians participated in joint interviews. To accommodate for daily schedules and other responsibilities of the multiple interviewees, these interviews were conducted over two or three days, taking two to five hours to complete. Other interviews (e.g., interviews with single interviewees) were completed in one day, taking only one to two hours to complete. All of the interviews followed accepted qualitative research methodology guidelines (Creswell, 2003; Kvale, 1996; Rubin & Rubin, 1995; Strauss & Corbin, 1998). Each was conducted using guiding questions established in an initial protocol, but with several probing points per question to encourage the interviewees to give complete answers with meanings that were delineated clearly. Whenever possible the inter-

viewees were encouraged to expand their answers, give examples that illustrated a point being made, and reiterate answers in another way in order to clarify their points. The audiotapes then were transcribed, comprising over 400 pages of text. These transcriptions were submitted to the interviewees for verification and edits of the content. When appropriate, changes were made to the initial transcripts, reflecting feedback from the interviewees.

Third, consistent with case study research methodology (Bogdan & Taylor, 1975; Mason, 1996; Patton, 2002; Strauss & Corbin, 1998) the researchers conducted observations of Melinda and Phillip, and wrote field-notes during and after the observations. During Year 1 observations were conducted and field-notes were written by only one of the researchers in the self-contained special education class and other school contexts. After Melinda and Phillip met as adults, three of the researchers observed them with their family 'members in the community, with friends in the community, and alone with the researchers both at dinner in the community and in their apartment. At their request, no observa-

tions were conducted at their work sites. In most situations observations were conducted with multiple observers present, each taking notes independently. Observations were conducted on multiple days, across multiple contexts, across two weeks. After each observation when multiple observers were present, the observers finished their independent notes and then discussed what they had observed. The observers then returned to their independent notes and made additional comments when appropriate.

Data Analysis

Trustworthiness was addressed via collaborative efforts amongst all the researchers involved in this study (Merriam, 1998) in relation to both content analysis and triangulation. The researchers developed two teams. One set of two of the researchers completed the initial analysis of content from the records, artifacts, interviews, and observations, and organized the records and artifacts for each of the two participants chronologically. The set of records for each participant then was read several times by the team responsible for the initial analysis and, consistent with qualitative methodology (Kvale, 1996; Rubin & Rubin, 1995; Strauss & Corbin, 1998), thematic codes were developed related to the content of the records. Members of the initial team independently coded the content of the records, and then met to compare their codes. A few times differences were found in the manner in which specific content was coded, resulting either in the addition of a new code or clarification of the meaning of an existing code. The coding procedure used with the records and artifacts also was used with the content of the final transcripts of interviews and field-notes.

Information from this analysis then was shared with the second team of researchers as a second step to verify the findings. Suggestions or concerns were shared with the team that had completed the initial analysis, and that team made any decisions necessary related to editing the findings. Once the initial team members had agreed on how the content would be coded, sections of the files with similar codes were grouped and analyzed for meaning. The researchers then submitted

their findings to the participants' parents and/or guardians for further verification of the findings (Mertens, 2005).

Once the coding and analyses were completed for the content of each set of data (i.e., records, interviews, field-notes of observations), the content was used for triangulation to look for consistencies (Hammersley & Atkinson, 1995; Kvale, 1996; Mason, 1996; Silverman, 1993). Overall findings then were articulated and written. These findings again were submitted to the parents and/or legal guardians of the participants for review, with the option of reviewing the findings with the participants. Whether reviewed independently or with the participants, the parents and/or legal guardians were encouraged to make edits, additions, and deletions that would ensure that the findings were accurate.

Findings

The following sections describe several variables related to Melinda's and Phillip's engagement in activities across contexts and time. These variables include their (a) interactions with peers and adults; (b) participation in instructional activities on both academic and functional content; and (c) acquisition and use of both academic and functional content. These sections include perceptions of their engagement in activities and how their engagement changed, as reflected in interviews, observation field notes, and records from four time periods: Year 1 of the study, which was the one school year they received services in the same self-contained special education class; six years later, which was their last year of educational services; four additional years later when they met again as adults; and four additional years later after they had been married.

Year One: Services in a Self-Contained Special Education Classroom

During Year 1 of this study Melinda and Phillip attended the same self-contained special education classroom in Melinda's neighborhood middle school. The class comprised eight students ranging from 13 years-10 months to 15 years-9 months of age. At the beginning of that school year Melinda was 14 years-6 months old and Phillip was 15 years old.

Melinda. During interviews both school personnel and family members stated that Melinda was the “lowest functioning” student in the class. Her records indicated that on norm-referenced assessments Melinda scored a 2nd grade 4th month performance in reading, and a 3rd grade performance in math. Upon reviewing the norm-referenced scores of her classmates, it was noted that Melinda’s scores were not the lowest; rather she had the third lowest score for reading and the fifth lowest score for math in the class of eight students. Her performance in class, however, gave the impression of a lower capability both because of her inappropriate behaviors and the tasks assigned to her. For example, Melinda consistently refused to do independent seatwork (e.g., math worksheets), read aloud, or summarize reading content. Records indicated that Melinda’s reading instruction incorporated the same materials, at the same performance level, for 3 consecutive years. Specifically, her reading instruction would begin at level 50 of Distar, progress to level 75, and then return to level 50 because of her inability to complete the tasks. Her work in reading, writing, and math incorporated 2nd grade worksheets, and her annual goals included reading at the 2nd grade 5th month level, writing short lists, memorizing math facts, completing simple computations, and adding and subtracting amounts of change. When comparing her current and past records a clear pattern of regression was observed in her use of reading, writing, and math.

In relation to social development there was a clear difference in Melinda’s behaviors in self-contained versus inclusive settings. When participating in activities within settings that included schoolmates who did not have disabilities (e.g., at chorus, during assemblies, in the hallways) Melinda modeled her schoolmates; therefore, her behavior was comparable to her non-disabled peers. In addition, she demonstrated independent functioning during school-related activities, such as navigating the campus to complete tasks. On the other hand, when in the self-contained classroom, Melinda demonstrated more age-inappropriate behaviors than her classmates with disabilities. She frequently disrupted instruction and learning. She would make off-task and age-inappropriate comments at any moment,

loudly enough for the entire class to hear; she would interrupt the seatwork of classmates who were near to her by kicking them under the table; she would sweep away her class materials to stop her instructional activities. In addition to these disruptive behaviors in the self-contained class, Melinda demonstrated no interest in using her knowledge, or in learning new knowledge, when she interpreted a situation as either academic or evaluative in nature. For instance, whether at school, at home, or in the community, when Melinda was asked a question or asked to complete an activity that required reading, writing, or math, she responded in a defensive and street-wise manner that extricated her from the situation. If she then was pushed to answer the question or complete the activity, Melinda would either tantrum (i.e., yell, gesticulate broadly, walk away briskly) or “shut down” by being totally unresponsive and unmovable. She might sit on the floor or sidewalk for up to 30 minutes, without speaking or responding to any verbalizations from others.

In response to Melinda’s inappropriate behaviors in the self-contained classroom, including refusals to do work, tantrums, and “shutting down,” her records indicated that she required a high level of adult supervision. Although Melinda demonstrated appropriate behavior when she was with classmates who did not have disabilities (e.g., chorus, physical education, lunch) her records indicated that she was not allowed to participate in additional activities with these classmates until she consistently demonstrated appropriate social and learning behaviors in the self-contained classroom.

In addition to challenging behaviors Melinda had significant difficulty with speech. Her speech was unintelligible to strangers and only fully understood by the few people who spent a great deal of time with her. Constant requests to have her repeat herself, frequently without better understanding of her speech, frustrated Melinda and resulted in her reluctance to respond verbally in most situations. In response, Melinda developed many coping mechanisms for her unintelligible speech, including the use of gestures and reliance on friends and family members to interpret her speech for others. She also used a handful of high frequency phrases and words that helped

her function more independently within her school and community. For example, when ordering food in a restaurant, Melinda would place her order with one clear word (e.g., hamburger) instead of using a complete sentence. She then would wait for questions from the wait person, to which she could respond in one or two words (e.g., yes/no; ketchup).

In physical appearance, Melinda had acquired over her 10 years in self-contained classes what her parents called “the special ed shuffle.” Specifically, she had poor posture, consistently looked down at the floor when walking, and shuffled her feet along the floor. Overall she projected a downtrodden appearance both at school and in the community.

Phillip. Phillip was described by both school personnel and Melinda’s family members as the highest performing student in the class. In several interviews he was described as the model learner with disabilities, the one that parents of other students with disabilities wanted their child to be like. Phillip’s records indicated that on norm-referenced assessments he scored a 2nd grade 6th month performance in reading, and a 3rd grade 9th month performance in math. He knew word families, used word attack skills, independently read and followed directions, and performed basic computation with a calculator. When compared with his classmates, Phillip’s norm-referenced scores for math were indeed the highest. In reading, however, his scores were the fifth lowest in the class of eight. In the self-contained classroom Phillip attended to the teacher, followed directions, remained on-task, and completed all assignments.

In relation to social development, records indicated that Phillip had a high self-concept and that his independent functioning during school-related activities was appropriate. When functioning within settings that included peers without disabilities, as well as in his self-contained classroom, Phillip’s interactions were described as “moderately appropriate” when compared with his classmates both with and without disabilities. There were no references to differences in his appropriateness or maturity across various settings.

In relation to behaviors, Phillip was described as compliant, very friendly, and always eager to help. His eagerness to help was so extreme, however, that at times adults were annoyed with

him. His behavior, however, did not interfere with instruction or learning. Instead, he was described as demonstrating “poor judgment” at times. With his appropriate social and instructional behaviors, Phillip rarely required adult intervention beyond initial directions for classroom activities. Because of his “poor judgment,” however, he was described as requiring “moderate adult supervision”.

Phillip’s speech was intelligible to everyone, demonstrating no easily recognized speech impairment. In addition he was very communicative with both adults and fellow students, whether or not he knew them. The content of his comments was perceived as relevant to the contexts in which he was interacting.

Physically Phillip was not distinguishable in appearance from his peers without disabilities. When walking down a hallway at school, Phillip was described as having an appropriate gait, wearing age-appropriate clothing, and making appropriate eye contact with those he passed. He also frequently stopped and spoke with others between classes.

Six Years Later: Last Year of Educational Services

For the following six years Melinda received special education and related services in inclusive settings. Five of those years she attended 8th–12th grade with the same set of students without disabilities. In the sixth year, as well as her first year of adult services, Melinda audited classes and lived in a dorm at a private four year college out-of-state. In contrast, during the remainder of his educational experiences Phillip continued to receive special education services for six years in self-contained academic and vocational classes.

Melinda. During her last year in educational services Melinda consistently used math and reading during activities that were meaningful to her both in the college courses she audited and throughout her daily life (e.g., shopping, navigating the community, work experiences, laundry, dorm activities). She was willing and able to read familiar content aloud across settings (e.g., reading aloud at a national conference a college newspaper article she had written with support, reflecting a 9th grade reading level) and to complete tasks independently in and out of class with accommodations. With support Melinda was able to write several paragraphs for reports, articles

for the school newspaper, and letters to her family and friends. For example, a peer or service provider would assist her in transforming independently-typed phrases and short sentences to hand-written sentences and paragraphs that expressed her thoughts, allowing her to copy the sentences in longhand or enter them into a computer. After using reading, writing, and math successfully to complete meaningful activities over several years in inclusive settings, Melinda accepted the idea that she did not know everything, and that it was alright. Her defensiveness about participating in academic or evaluative activities had changed to an interest in learning. Over the years she had acquired a lot of the common knowledge addressed in her classes. Because of these changes in her use of reading, writing, and math across inclusive educational and community settings, Melinda's parents decided to have her take a norm-referenced reading test. They expected there would be a dramatic increase in her scores, commensurate with her increase in use of reading across meaningful inclusive contexts. Her test scores, however, remained the same as those of her last norm-referenced tests seven years earlier.

Melinda's speech was intelligible both to people with whom she interacted regularly and to strangers. She was noted to have significant growth in her vocabulary and conversation skills when compared with her previous performance. Most notable was Melinda's willingness to interact verbally with peers and adults in both academic settings and social situations, as well as the ease with which she did so.

Melinda's maturity and responsibility were markedly improved. She was reported to make friends easily and to have a well-developed natural support network. Melinda volunteered twice a week at an elementary school, taught a class in country line dancing, and enjoyed watching movies with friends in her dorm. In most situations Melinda's activities, and interactions during those activities, were comparable to those of her peers. Her natural support network had determined that, when Melinda was irritable, she appeared to have difficulty responding to auditory information (e.g., verbal directions or questions). To accommodate for this, Melinda learned coping strategies to use when she needed more time

to respond to auditory information (e.g., saying "Give me a minute. I am thinking about that"). As part of her disability awareness presentations for dorm mates, classmates, and co-workers, Melinda described this difficulty and requested that when people gave her directions, provided feedback, or asked her questions, that they walk away and leave her alone for a few minutes. They then could return and anticipate a response from her. In addition, Melinda requested that, if she said something that was inappropriate, people offer suggestions of more appropriate things to say. This reaffirmed her own awareness of her difficulties and desire to improve her interactions with others. Her final IEP noted that Melinda had many strengths, including good nonverbal reasoning abilities, logical thinking, good common sense, and problem-solving skills.

Melinda's physical appearance also had changed significantly. She had lost the "special ed shuffle." She now walked with good posture, holding her head up and making eye contact with people she passed. Overall, she appeared confident, ready to interact with people, and ready to participate in any activity at school and in the community.

Phillip. During his last year of educational services, Phillip's records indicated that he was performing in reading at the 3rd grade 1st month level (an increase from 2nd grade 6th month), and in math at the 4th grade 6th month level (an increase from 3rd grade 9th month). Though math was considered a strength, records indicated that he continued to work on basic computations with a calculator. In addition, his IEP stated that he needed to improve word recognition, reading comprehension, and use of reading in his daily life. Most significantly, school personnel indicated that Phillip did not generalize the skills he learned in school to activities outside of school.

In relation to social development, Phillip's records indicated that he demonstrated "very low self-esteem" and a "poor self-concept". He was reluctant to interact with peers at school and was very depressed. He was fearful of making mistakes and demonstrated a lot of anxiety when doing assignments in school and when participating in activities in the community. Although he had a well-developed vocabulary and his speech was intelligible to others, Phillip was

reluctant to engage in interactions. Records indicated that he needed to improve the appropriateness of his interactions with adults and peers, as well as improve logical thinking, problem solving, and decision making. Records and observations reflected a major regression in his use of social skills over time. There was no information available in the records that was related directly to his need for supervision or his physical appearance.

Four Additional Years Later: Meeting as Adults

Four years after exiting school services, Melinda and Phillip met again as adults while riding a bus in their home community. Though neither of them remembered the other from the self-contained special education class they had attended together, they began to interact and establish a relationship.

Melinda. Upon returning to her home community after 2 years auditing classes at the out-of-state college, Melinda was living in her own apartment with periodic support through a Medicaid Waiver. When she and Phillip met again as adults, Melinda was taking the bus to her part-time job with the court system, which she had held for 3 years. Her job required the use of literacy and math skills on computers and in filing activities. In addition, Melinda used her literacy across many activities in her life in the community, including: (a) reading bus schedules, newspapers, and popular books and magazines; (b) using email; and (c) following and participating in activities related to WWF wrestling. She also used her math skills to manage her household budget, pay bills, travel by bus and train locally, and travel by air for special trips.

Upon returning to her home community, Melinda developed and used an extensive natural support network. With members of her support network, Melinda participated in preferred leisure activities (e.g., attending WWF wrestling matches; going to the movies), as well as less preferred activities (e.g., working out at the gym). Her support network was intimately involved in supporting her both during routine activities and in crisis situations (e.g., the death of a long-term friend). With her support network, Melinda continued to use and develop new coping strategies to assist her when she was having difficulty responding to verbal information. Melinda con-

tinued to model the behaviors of individuals with whom she had contact, and had begun to recognize the connection between diet, exercise, weight, grooming, and how others sometimes reacted to physical appearance.

Although self-sufficient when using the bus and train locally, as well as when participating in typical daily activities (e.g., shopping), Melinda required support through the Medicaid Waiver program for activities that were completed with less frequency, such as budgeting, cleaning, and caring for her clothing. She also had weekly support from a job coach who watched for changes in her tasks at work, and changes in co-workers or supervisors with whom she needed to interact. When such changes occurred, the job coach assisted Melinda in adapting to the new variables.

Melinda's speech across contexts in the community was intelligible, and her vocabulary had increased dramatically to reflect her experiences and interactions with others. Her appearance continued to reflect that of a confident and capable individual with erect posture and eye contact with others, though she periodically needed reminders about her self-care and clothing.

Phillip. When he re-met Melinda on the bus, Phillip was living in his parents' home. He had been terminated from numerous food service jobs in the community and was working in a sheltered workshop, earning five tokens a day. According to Phillip, the tokens could be spent at the workshop store for candy, toys, puzzles, or used clothing.

Phillip used literacy skills across every day activities, such as using lists and reading bus schedules. His activities at the sheltered workshop, however, did not require either literacy or math abilities. While Phillip might have used his math abilities in activities like riding the bus and purchasing items at stores, he frequently did not have money to spend due to unemployment. Since he was living with his family, Phillip also had no need to pay bills or maintain a household budget. In spite of these limitations Phillip had experience independently accessing resources that were beyond his local community. For instance, he had used a long distance bus company to get to an amusement park approximately one hour from his home community.

Phillip's natural support network consisted

of his family members and individuals who were paid to provide a service for him, such as the support personnel at the sheltered workshop. He had no friends or acquaintances with whom he regularly visited, conversed, or shared activities when at leisure. The only leisure activity in which he participated on a regular basis was going to BINGO with his parents once a week. Phillip continued to be very social, both with individuals he knew and with strangers. When interacting with others, however, he was anxious and eager to please others. Over time his interactions increasingly were described as immature, demonstrating a slow rate of growth in reading social cues and using social skills. Consistent with this, Phillip did not differentiate between (a) people who were trustworthy and untrustworthy, and (b) behaviors that were appropriate and inappropriate. This resulted in him using poor judgment and making decisions that frequently resulted in conflict with others in the community, in spite of the supervision he had at home and at the sheltered workshop.

In appearance Phillip had become distinguishable from those around him. Though he continued to have an appropriate gait and make appropriate eye contact with those he passed, his clothing was ill-fitting and mismatched, resulting in a consistently disheveled and unkempt appearance.

Four Additional Years Later: Married Life

After dating for three years, Melinda and Phillip married. As a result, they shared an apartment, along with all of the responsibilities inherent in maintaining a household, including budgeting, paying bills, cleaning the apartment, cooking, shopping, and clothing care. In addition, Melinda's parents had become the legal guardians for both Melinda and Phillip.

Melinda. By this time Melinda had been an employee of the court system for seven years. Because of her longevity in a part time civil service position, she had become a permanent part-time employee with full benefits. She continued to use her literacy and math abilities across activities at work, at home, and in the community.

Her relationship and marriage with Phillip resulted in two main changes in Melinda's life. First, her natural support network had been

expanded to include Phillip's family, while existing members of her network were shared with Phillip. Second, she was exposed to additional contexts, or life spaces, in which she participated in activities independently. Melinda continued, however, to receive periodic support for budgeting, cleaning, and clothing care through a Medicaid Waiver.

Phillip. Because of Phillip's relationship and marriage with Melinda, there were numerous changes in his life. One of these changes involved his employment status. At one point during the three years they were dating, Melinda was eating at one of the restaurants she frequented after work. She observed the owner putting a "Help Wanted" sign in the restaurant window, indicating that a dishwasher was needed. Melinda picked up the sign, took it to the owner, and said "I have a dishwasher for you." She then arranged for Phillip to be interviewed, after which he was hired. Phillip did not stay in this position long and, in fact, had held several jobs before and after he was married. During the last observation, Phillip recently had been offered a position at a local grocery store where he would assist patrons as they took groceries to their cars and retrieve carts from the parking lot.

A second change that occurred was in Phillip's living arrangements. He no longer lived with his family; rather, he shared an apartment with Melinda and, for the first time in his life, he shared responsibility for maintaining a household both financially and logistically. Like Melinda, Phillip received periodic support for budgeting, cleaning, and clothing care through a Medicaid Waiver.

A third change that occurred was in the composition of Phillip's natural support network. Although he had not developed his own network, he did participate with Melinda and members of her natural support network. As this progressed, however, Phillip increasingly initiated interactions and activities with members of Melinda's network and, while initially appropriate, his efforts to engage these members often were found to be objectionable. For example, he would call one individual 10 times a day to obtain reassurance that something he was doing (e.g., clothes he was wearing) was appropriate; he would call an individual and ask the same question repeatedly, to be certain he had the correct answer. These

behaviors were consistent with Phillip's anxiety and need for constant reassurance and approval; however, they began to have a negative impact on group members and they began to avoid Phillip and, therefore, avoid interactions with Melinda.

A fourth change for Phillip was in relation to the life spaces, or contexts, to which he was exposed. Since Melinda frequently participated in experiences that were complex and worldly (e.g., traveling overseas; attending concerts, plays, and formal parties), Phillip began to share these experiences when he and Melinda began their relationship.

Upon initially meeting Phillip, people usually perceived a very social and interactive person who wanted to please people. Only after observing Phillip in numerous contexts over time did it become apparent that his interactions often occurred in a stereotypic manner; that is, he consistently used phrases and sentences that others used or that he had used in the past. His speech had a repetitive and unimaginative quality that eventually irritated people. As people became irritated, Phillip then would begin to apologize profusely and repeatedly seek approval, exacerbating the discomfort and frustration of others.

Differences in Melinda's Engagement over Time

There are several ways in which differences were evident in Melinda's experiences and performance over time. First, in relation to appearance, Melinda initially walked with a "special education shuffle" and used unintelligible speech. This is in contrast to Melinda later walking with good posture and speaking in a manner that allowed strangers to understand her speech. Second, in her last self-contained special education class Melinda was disruptive, while when she was in inclusive settings she attended to verbal cues from her teachers and schoolmates without disabilities. She also modeled the behaviors of her schoolmates during instructional and noninstructional times. Third, initially Melinda demonstrated inappropriate behaviors that helped her avoid instructional tasks in the self-contained class, while she demonstrated an interest in learning and participated in activities across classes and community contexts with individuals who did not have disabilities. Fourth, initially Melinda was described as

needing a "high level of supervision across settings," while with schoolmates and co-workers in inclusive settings she completed instructional tasks and work activities with minimal or no supervision. She also lived independently in the community with periodic support from her natural support network and Medicaid Waiver personnel. In addition, Melinda worked for the same employer for seven consecutive years with only periodic job coach support. Fifth, while in her last self-contained special education class, Melinda showed regression academically and refused to use the academic skills she had acquired (e.g., reading, writing) in either instructional or functional activities. After transitioning to inclusive contexts, Melinda freely used academic skills in both instructional and functional activities. Finally, Melinda initially had a natural support network that was limited to her family, paid individuals, and a few friends from her activities in the community. While in inclusive contexts Melinda developed an extensive natural support network comprised of individuals from her ongoing educational, work, leisure, and community experiences.

When considering her educational experiences, two variables are significant. First, prior to being included in general education classes Melinda's IEP focused on the development of academic skills at the "next grade level" (e.g., from the 2nd grade 3rd month level to the 2nd grade 4th month level), behavior issues (e.g., compliance), and social issues (e.g., interacting appropriately with adults and classmates). Upon moving to inclusive general education classes, Melinda's IEP focused on the acquisition of general education content and skills acquired through participation with classmates during general education activities, and the use of both general education knowledge and functional skills during ongoing general education and real life activities. When receiving services in a self-contained special education class Melinda's educational records predicted that as an adult she would be placed in a sheltered workshop and in a congregate care living facility. After receiving services in inclusive contexts, Melinda's education program shifted to prepare her for supported competitive employment in the community and supported apartment living.

Overall, as there was an increase in Melin-

da's participation in general education and meaningful functional activities within general education contexts with classmates who did not have disabilities, she demonstrated a higher level of self-assurance and self-confidence. Melinda also responded to both instructional and social cues available from her classmates, resulting in more appropriate behavior and appearance. Throughout her inclusive educational experiences Melinda developed skills that allowed her to independently access the community-at-large through local, national, and international travel. Finally, Melinda developed the ability to use coping skills to compensate for her disabilities and to use good judgment when making decisions.

Differences in Phillip's Engagement over Time

There also were several ways in which differences were evident in Phillip's experiences and performance over time. First, in relation to appearance, Phillip initially was described in a manner that was consistent with that of his peers without disabilities (e.g., clothing, posture, speech, interaction style, confidence level). As he remained in a self-contained special education class over time, however, Phillip increasingly became disheveled, wore mismatched clothing, and was described as having low self-esteem. Second, when observed initially Phillip was attentive and compliant during both instructional and non-instructional activities. Through the remainder of his educational experiences and beginning of his adult life, however, Phillip was anxious, fearful of mistakes, and in need of constant reassurance. Third, when observed initially Phillip was described as needing a "moderate level of supervision" during unstructured times. Over time, however, he increasingly required constant supervision at work (i.e., in sheltered workshop), he lost several jobs in the community, he was involved in several problematic situations in the community, and he continued to live with his parents. Fourth, when observed initially Phillip appeared to be developing additional academic skills due to his attention and compliant behavior in school (e.g., reading, writing, math). Over time, however, it became apparent that his skill level was not increasing and he required encouragement to use his academic skills and constant

reinforcement across contexts. Finally, Phillip initially had numerous peers without disabilities with whom he interacted during school and school-sponsored activities. As an adult, however, Phillip's natural support network included only family members and paid individuals. As his relationship with Melinda developed, Phillip accessed members of Melinda's natural support network, instead of developing his own network. His inappropriate interactions with members of Melinda's natural support network led to their decreased interactions with both Phillip and Melinda.

When initially observed, Phillip's Individualized Education Program (IEP) focused on the development of academic skills to the "next grade level" (e.g., from the 2nd grade 3rd month level to the 2nd grade 4th month level). Over time, however, Phillip's IEP increasingly focused on appropriate behavior, following rules, and working with less supervision. His records consistently predicted and focused on preparing Phillip to enter a sheltered workshop and a congregate care living facility.

Overall, as Phillip continued in self-contained special education classes, he demonstrated a lower level of self-assurance and a higher level of anxiety across contexts. Phillip also increasingly required approval and reinforcement for the slightest behavior, resulting in more inappropriate behavior and interactions. Phillip developed skills that allowed him to independently access frequently used contexts in his community, but he did not develop the skills required to independently access other contexts in local, state, or international communities. Finally, Phillip's coping skills and poor judgment frequently resulted in negative outcomes, such as losing jobs, getting into trouble in the community, or alienating members of Melinda's natural support network.

Discussion

Providing special education services in inclusive general education contexts has had multiple goals for students with significant disabilities. First, it has been considered a practice that is consistent with civil rights, focusing on equal access to educational content, highly qualified teachers, instructional activities, and overall contexts for students with significant

disabilities. Second, it has promoted the modification of educational services so that they emphasize (a) facilitating the students' access to general education curriculum and contexts, (b) supporting the students' participation in district and state accountability systems, (c) fostering the students' valued membership in peer groups, and (d) facilitating friendships between same-aged peers with and without disabilities that may lead to stronger and broader natural support networks. Third, it has been considered a way to alleviate the shortcomings of self-contained special education services, as well as the negative long-term outcomes revealed by follow-up studies.

This descriptive study examined how two individuals with significant disabilities functioned across settings over time when, after receiving services together in a self-contained special education class in middle school, one remained in self-contained classes for the remaining six years of educational services, and the other changed to educational services in general education contexts. Melinda, the student who received services in inclusive general education settings, demonstrated more skills that were critical to interacting and functioning across contexts in her life, including at school, at home, at work, and in the community. As she became a young adult, she developed and maintained a life that more closely matched society's perceptions of a satisfying and high quality life, even though her IQ and achievement test scores were lower in comparison to many individuals served in self-contained special education settings. Melinda achieved more positive outcomes than Phillip in relation to her use of knowledge and skills in meaningful contexts, interactions and relationships with peers without disabilities, and access to and use of the various natural environments in her community. In conjunction with studies reported by Fisher and Meyer (2002) and Ryndak et al. (1999), this demonstration of better long-term outcomes adds support for the field's current focus on the provision of educational services in inclusive general education settings.

It must be considered, however, that the comparison of outcomes for the two participants addressed in this study was based on events that occurred naturally in their lives. That is, no effort was made to control for

other variables that might have accounted for differences between the two individuals' adult outcomes. For instance, limited information was gathered in relation to either the specific services provided in either the self-contained special education classes or the inclusive general education settings, or any activities completed by their school district to influence the quality, type, or amount of those services. It is possible, therefore, that the services provided at any point during the students' educational experiences in either setting were either exemplary or less than exemplary. Further research is needed to determine any differences in adult outcomes that might result from variations in quality, type, or amount of special education and related services across settings.

Similarly, no effort was made to control for the availability or quality of the adult services for Melinda and Phillip in their home communities. The same adult services were available for both, since geographically they lived in the same community. Although differences in services they were utilizing as adults were evident, these differences could not be interpreted as related to differences in their home community, county, or state.

It might be argued that the presence of a deeply involved parent advocate who was knowledgeable about inclusive education and the rights of students with disabilities could have accounted for differences between the educational experiences and progress made by Melinda and Phillip. In his classic study of adults with disabilities who had moved from institutional to community living environments, Edgerton (1967) discussed the influence of a "benefactor" on the lives of those individuals. The results of this study appear to support his concept. Undoubtedly, the ongoing involvement of parents and other advocates who ensure that special education, related, and adult services provided for individuals with significant disabilities reflect individual needs and preferences and assist individuals in acquiring and maintaining a high quality of life is critical. Additional research is required to understand the influence of the presence or absence of a "benefactor" in lives of individuals with significant disabilities.

Another variable that might have influenced the outcomes achieved by the individ-

uals in this study was their access to and participation in activities that fostered the development of self-advocacy and self-determination. While not specifically considered in this study, the individual included in general education contexts had access to role models without disabilities who were developing and using self-advocacy and self-determination in their daily lives. The mere access to these role models may have facilitated Melinda's development of these skills. Additional research, however, is needed to assist in our understanding of the role of such models in inclusive settings and the long-term outcomes achieved.

It seems probable that successful adult outcomes for persons with significant disabilities are not the result of any one factor. Rather, it is likely that best practices in inclusive education, the ongoing presence of a benefactor and/or advocate, training in self-determination, and the availability of quality adult services in the community all interact to produce more positive post-school outcomes.

While the findings of this investigation suggest that, when compared with services in self-contained special education settings, providing special education in inclusive general education settings may lead to better outcomes for students with significant disabilities, these results must be viewed with the limitations mentioned above. Considerably more research, involving many more individuals with significant disabilities over several years, is needed before widespread conclusions can be reached about the differential impact of inclusive general education and self-contained special education settings on adult outcomes. Until such research is conducted, however, this study suggests that the current trend to provide services for students with significant disabilities in inclusive general education contexts may be one factor that facilitates more positive adult outcomes.

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